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Paul VI Redevelopment

Traffic Impact Study

April 18, 2017
Revised: November 15, 2017

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PAUL VI REDEVELOPMENT
TRAFFIC IMPACT STUDY
CITY OF FAIRFAX, VIRGINIA

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TABLE OF CONTENTS

PAUL VI REDEVELOPMENT
TRAFFIC IMPACT STUDY
CITY OF FAIRFAX, VIRGINIA

TABLE OF CONTENTS
(Continued)

PAUL VI REDEVELOPMENT
TRAFFIC IMPACT STUDY
CITY OF FAIRFAX, VIRGINIA

LIST OF FIGURES

PAUL VI REDEVELOPMENT
TRAFFIC IMPACT STUDY
CITY OF FAIRFAX, VIRGINIA

LIST OF TABLES

LIST OF APPENDICES

SECTION 1
INTRODUCTION

This report presents the results of a traffic impact study conducted in support of the proposed redevelopment of the Paul VI Catholic High School (Paul VI) in the City of Fairfax, Virginia, and presents an evaluation of the existing and future transportation network.

This study was conducted in accordance with a scoping agreement developed with City of Fairfax staff. The study scope was determined with City staff based on a review of key study intersections and roadways that would potentially be affected by the implementation of the proposed redevelopment and the number of new trips expected to be generated.

The subject site is located south of Fairfax Boulevard, east of Oak Street, and west of McLean Avenue, in the City of Fairfax, Virginia, as shown on Figure 1-1.

The subject property is comprised of three parcels located at 10675 Fairfax Boulevard, 10600 Cedar Avenue, and 10606 Cedar Avenue, totaling 18.5 acres. The parcel located at 10675 Fairfax Boulevard is zoned CR (Commercial Retail) and the two Cedar Avenue parcels are zoned RM (Residential Medium Density).

The applicant, IDI Group Companies, proposes to develop the site with 184 residential condominium units, 137 town homes, 20,000 square feet (SF) of local serving retail and 24,000 SF of community center space. The site plan is shown on Figure 1-2.

According to the 24VAC30-155 ("Chapter 870") regulations, all development proposals which meet certain specific trip generation thresholds are subject to the regulations as outlined in the Virginia Department of Transportation's (VDOT) Traffic Impact Analysis Regulations Administrative Guidelines ("Administrative Guidelines"). In January 2012, an amendment to the Administrative Guidelines took effect, which determined a development proposal is considered to substantially impact the transportation network if it generates 5,000 or more net new daily vehicle trips located on, or within 3,000 feet of, a VDOT maintained roadway. Based on the trips anticipated to be generated by the subject development, the development would not require a VDOT Chapter 870 compliant traffic study.

Although a traffic impact analysis is not required per 24VAC30-155, the City of Fairfax requires the submission of a traffic study in conjunction with any development application.

This traffic study was completed in accordance with the City of Fairfax policies and guidelines and is intended to address the following issues:

1. Estimation of the net new vehicle trip ends generated by the planned land uses during the AM and PM commuter peak hours and during the PM school peak hour.

2. Determination of the effects of the proposed development on the surrounding local roadway network.

3. Identification of potential road and/or operational improvements necessary to accommodate the project.

Based on the traffic study scoping form provided in Appendix A, tasks undertaken to prepare this study included the following:

1. A review of the applicant's conceptual plans for the subject site.

2. A field review of the subject site in order to determine existing roadway and intersection geometrics and traffic controls, access opportunities and/or constraints, and general traffic conditions.

3. Peak hour turning movement counts obtained at the following study intersections:

    - Lee Highway/Fairfax Boulevard/Main Street
    - Fairfax Boulevard/Fairchester Drive, Walnut Street
    - Fairfax Boulevard/Meredith Drive/Oak Street
    - Fairfax Boulevard/The Shops at Fairfax Entrance-Future Site Entrance.
    - Fairfax Boulevard/Paul VI Entrance (Future Site Entrance)
    - Fairfax Boulevard/McLean Avenue/Warwick Avenue
    - Walnut Street/Cedar Avenue
    - Oak Street/Cedar Avenue
    - McLean Avenue/Cedar Avenue

4. Calculation of existing AM and PM commuter peak hour and PM school peak hour intersection levels of service at the study intersections.

5. Identification of the number of net new peak hour trips that would be generated by the proposed mixed-use development based on standard Institute of Transportation Engineers (ITE) Trip Generation Manual, 9th Edition equations less trips currently generated by the existing Paul VI Catholic High School determined from traffic counts.

6. Determination of future background traffic forecasts based on regional traffic growth and estimates of traffic that would be generated by other approved/planned developments in the site vicinity.

7. Calculation of future levels of service with and without the proposed development at the key study intersections for a proposed build-out year of 2027.

Sources of data for this analysis include traffic counts conducted by Wells + Associates Inc., information obtained from the City of Fairfax, the Institute of Transportation Engineers (ITE), VDOT, the Highway Capacity Manual 2000 (Synchro software, version 9.1), IDI Companies Group, and the files and library of Wells + Associates.

Conclusions

Based on the results of this traffic impact study, the following may be concluded:

1. The Lee Highway/Fairfax Boulevard/Main Street intersection currently operates at or near capacity at level of service (LOS) "E" during each of the three (3) studied peak periods.

2. All other signalized intersections currently operate at an overall LOS D or better during each of the three (3) studied peak periods based on Highway Capacity Manual calculations, however, substantial queues were observed along Fairfax Boulevard during the peak periods. Specifically, substantial queues along eastbound Fairfax Boulevard were observed during the AM peak period and substantial westbound queues were observed during the PM peak period.

3. Historic VDOT traffic data indicates that average daily traffic counts along Fairfax Boulevard and Main Street have decreased by 0.7% to 1.7% per year between 2008 and 2016.

4. The Novus Fairfax Gateway and Mount Vineyard pipeline developments are anticipated to generate 395 AM commuter peak hour trips, 418 PM school peak hour trips, and 576 PM commuter peak hour trips at full buildout.

5. Under future 2027 traffic conditions, without redevelopment of the Paul VI site, minimal increases in delay at the study intersections are expected due to the trips generated by pipeline development in the vicinity of the site and overall levels of service would remain generally consistent with existing conditions.

6. The existing Paul VI Catholic High School currently generates 1,005 trips during the AM commuter peak hour, 563 trips during the PM school peak hour, and 132 trips during the PM commuter peak hour.

7. The Applicant proposes to redevelop the site with 184 residential condominium units, 137 town homes, 20,000 SF of local serving retail, and 24,000 SF of community center space.

8. The project is estimated to generate 789 ***fewer*** AM peak commuter hour trips, 148 ***fewer*** PM school peak hour trips, and 294 ***more*** PM peak commuter hour trips than are currently generated by the high school.

9. Under future 2027 traffic conditions, with the development of the subject site, intersection levels of service would remain generally consistent with existing and background conditions. The analyses show that the Lee Highway/Fairfax Boulevard/Main Street will continue to operate at LOS E during all three peak periods studied. All other intersections will operate at LOS D or better during each of the studied peak periods.

10. A full turning movement site driveway is proposed along Fairfax Boulevard to align with the existing Shops at Fairfax entrance. The full access signalized intersection would operate at an overall LOS "D" or better during each of the studied peak periods.

11. A full turning movement, side-street stop-controlled entrance is proposed along Fairfax Boulevard between the Shops at Fairfax intersection and McLean Avenue. This unsignalized intersection will operate at LOS "C" or better during each of the studied time periods.

Figure 1-1
Site Location
Paul VI Redevelopment
City of Fairfax, Virginia

NORTH

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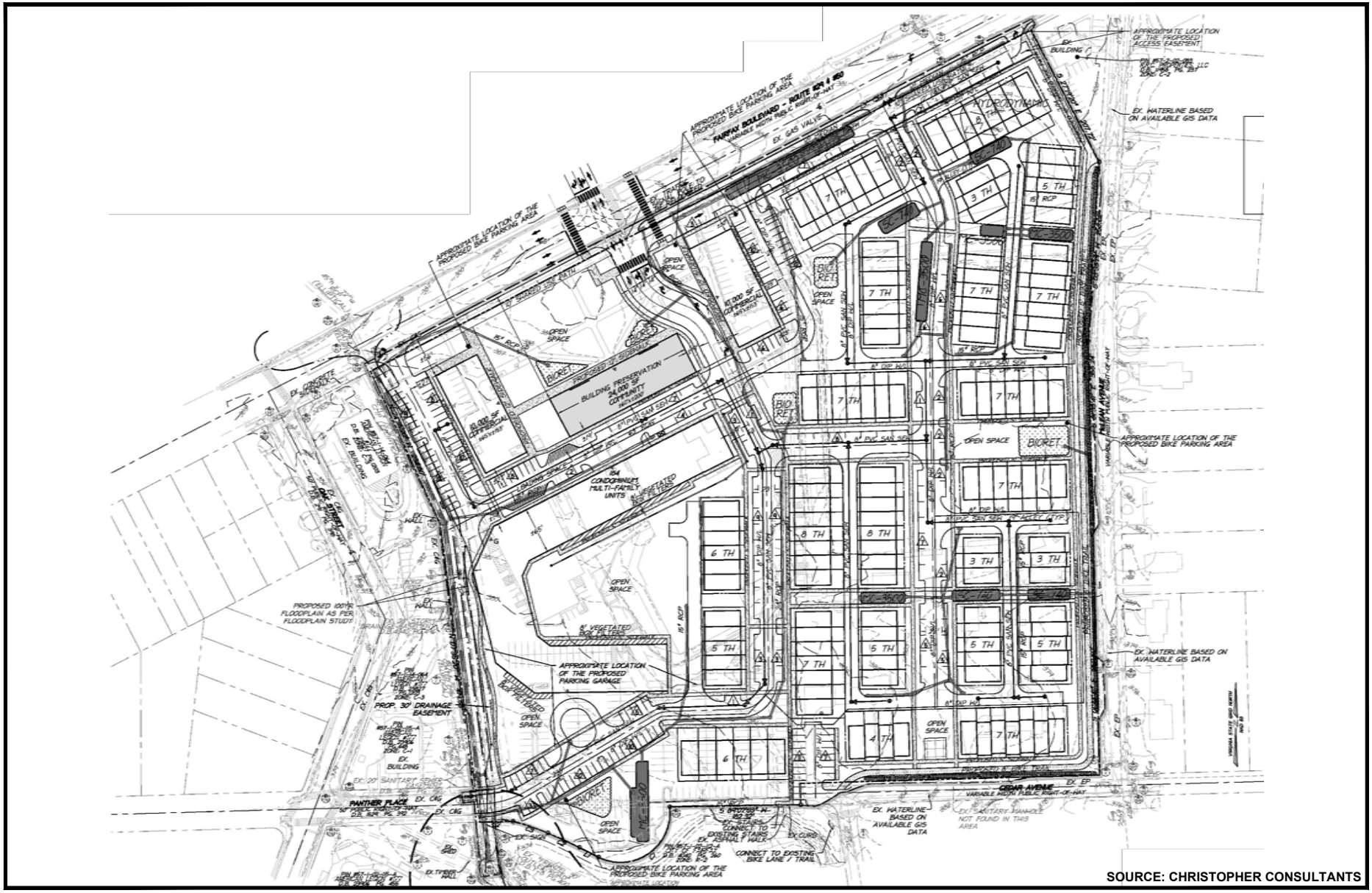


SOURCE: CHRISTOPHER CONSULTANTS

Figure 1-2
Site Plan
Paul VI Redevelopment
City of Fairfax, Virginia

JCP

NORTH

SECTION 2
BACKGROUND INFORMATION

Location and Surrounding Uses

As shown in Figure 1-1, Paul VI is regionally located approximately ½ mile east of Main Street on Fairfax Boulevard in the City of Fairfax. Regional Access is provided by I-66 via Lee Jackson Memorial Highway/Main Street and Chain Bridge Road. Fairfax Boulevard/Arlington Boulevard provides access to/from I-495 (the Capital Beltway).

Properties immediately west and south of the site are generally residential in nature while commercial uses are predominant along Fairfax Boulevard. An existing McDonald's restaurant and a daycare facility are located immediately west of the site and south of Fairfax Boulevard.

Comprehensive Plan Land Use Recommendations

The City's Comprehensive Plan shows the subject parcels as institutional and residential on the Future Land Use Map.

Existing Transportation Network

Existing Road Network. The following are descriptions of the roadways in the vicinity of the proposed development.

Route 29/50 (Fairfax Boulevard). Fairfax Boulevard is classified as an arterial roadway according to the City of Fairfax Comprehensive Plan. Within the vicinity of the subject site, Fairfax Boulevard is constructed as a five-lane, undivided roadway with a center two-way left turn lane and a posted speed limit of 35 miles per hour. Traffic signals are provided at major cross-streets including Main Street, Fairchester Drive/Walnut Street, Meredith Drive/Oak Street, and McLean Avenue/Warwick Avenue. The intersection of Fairfax Boulevard and the driveway to The Shops at Fairfax is also signalized. The Lee Highway/Fairfax Boulevard/Main Street intersection (referred to as Kamp Washington) is a critical signalized intersection within the City of Fairfax. Based on 2016 VDOT average annual daily traffic (AADT) data, Fairfax Boulevard east of Main Street carries approximately 36,000 vehicles per day (vpd).

Route 236 (Main Street). Main Street is also classified by the Comprehensive Plan as an arterial roadway and is constructed as a four-lane, median-divided roadway with a posted speed limit of 35 miles per hour. Based on 2016 VDOT AADT data, Main Street east of the Kamp Washington intersection carries approximately 35,000 vpd.

Cedar Avenue. Cedar Avenue is a two-lane east-west discontinuous roadway. The section of Cedar Avenue west of Paul VI is approximately 30 feet in width, operates as a collector roadway, and provides access to the parking lot in the rear of Paul VI. The section of Cedar Avenue east of Paul VI operates as a residential street and does not provide access to or from the school.

Oak Street. Oak Street is a two-lane north-south undivided roadway with a width of approximately 33 feet. Oak Street provides access to residential and commercial properties south of Fairfax Boulevard and to Paul VI Catholic High School via Cedar Avenue.

Walnut Street. Walnut Street is a two-lane north-south undivided roadway with a width of approximately 33 feet. Walnut Street provides access to residential and commercial properties south of Fairfax Boulevard.

McLean Avenue. McLean Avenue is a two-lane undivided north-south residential street that provides access between Fairfax Boulevard and Cedar Avenue, east of Paul VI Catholic High School.

Existing lane use and traffic control at each of the study intersections is shown on Figure 2-1.

Public Transit Service. The site is served by the City of Fairfax's City-University Energysaver (CUE) Bus "Gold Route" along Main Street and Warwick Avenue and provides access between the George Mason University (GMU) campus and the Vienna/Fairfax-GMU metrorail station, via University Drive, Chain Bridge Road, West Street, Main Street, Lee Highway, Jermantown Road, Orchard Street, Bevan Drive, Warwick Avenue and Fairfax Boulevard. Additionally, the site is served by the "Green Route" which provides service between the GMU campus, Old Town Fairfax, and the Vienna/Fairfax-GMU metrorail station via University Drive, Chain Bridge Road, Eaton Place, Fairfax Boulevard, Fairfax Circle, Arlington Boulevard, Nutley Street, Virginia Center Boulevard, Old Pickett Road, Pickett Road, Main Street, North Street, and George Mason Boulevard.

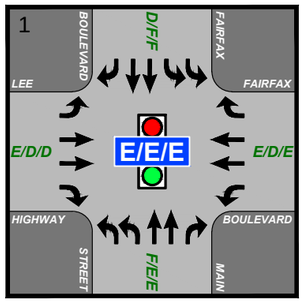
Pedestrian Facilities. Concrete sidewalks are provided along both sides of Fairfax Boulevard and Oak Street, and along the north side of Cedar Avenue east of Oak Street. Marked crosswalks are provided across the north, south, and east legs of the Fairfax Boulevard/ Meredith Drive/Oak Street intersection; across the west leg of the Fairfax Boulevard/McLean Avenue/Warwick Avenue intersection; and across the east leg of the intersection of Fairfax Boulevard and The Shops at Fairfax driveway.

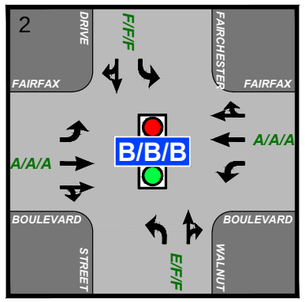
Future Transportation Network

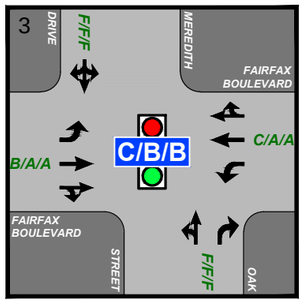
The City of Fairfax's Comprehensive Plan provides recommended strategies for the improvement of the City's transportation network. In general, the Plan recommends that the City should strive to achieve a balance between allowing for the efficient movement of traffic and providing safe and convenient access to City businesses and residences for vehicles, pedestrians, bicycles, and other modes of transport. In terms of roadway operational improvements, the Plan recommends that through traffic should be encouraged to utilize the City's arterial system (cf. Comprehensive Plan, Strategy T-7.4.1). Therefore, no specific capacity improvements (i.e., roadway widening) are recommended for the collector streets that immediately surround the subject site. Any improvements to these streets should focus on enhancing safety and the mobility of pedestrians, bicycles, and public transit.

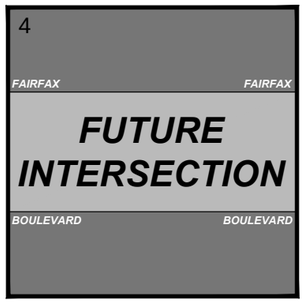
The Comprehensive Plan recommends that Fairfax Boulevard be configured with landscaped medians, where possible, and enhanced streetscape features to encourage pedestrian activity. Slow lanes (with on-street parking), separated from the main travel lanes by landscaped medians should be considered within or adjacent to portions of the Kamp Washington and Northfax Centers if the nature of adjacent redevelopment activity is such that those features would be appropriate.

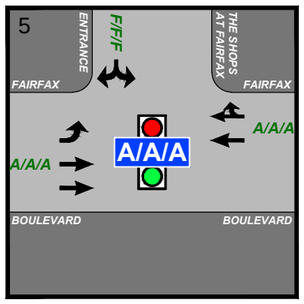
Based on the location of the site, adjacent to the Kamp Washington and Northfax Centers, and the Comprehensive Plan recommendations, a slow lane with on-street parking is proposed along a portion of the site frontage of Fairfax Boulevard.

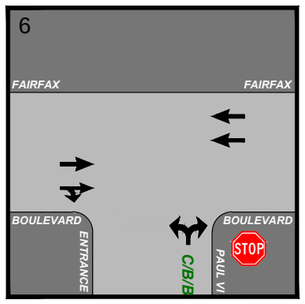


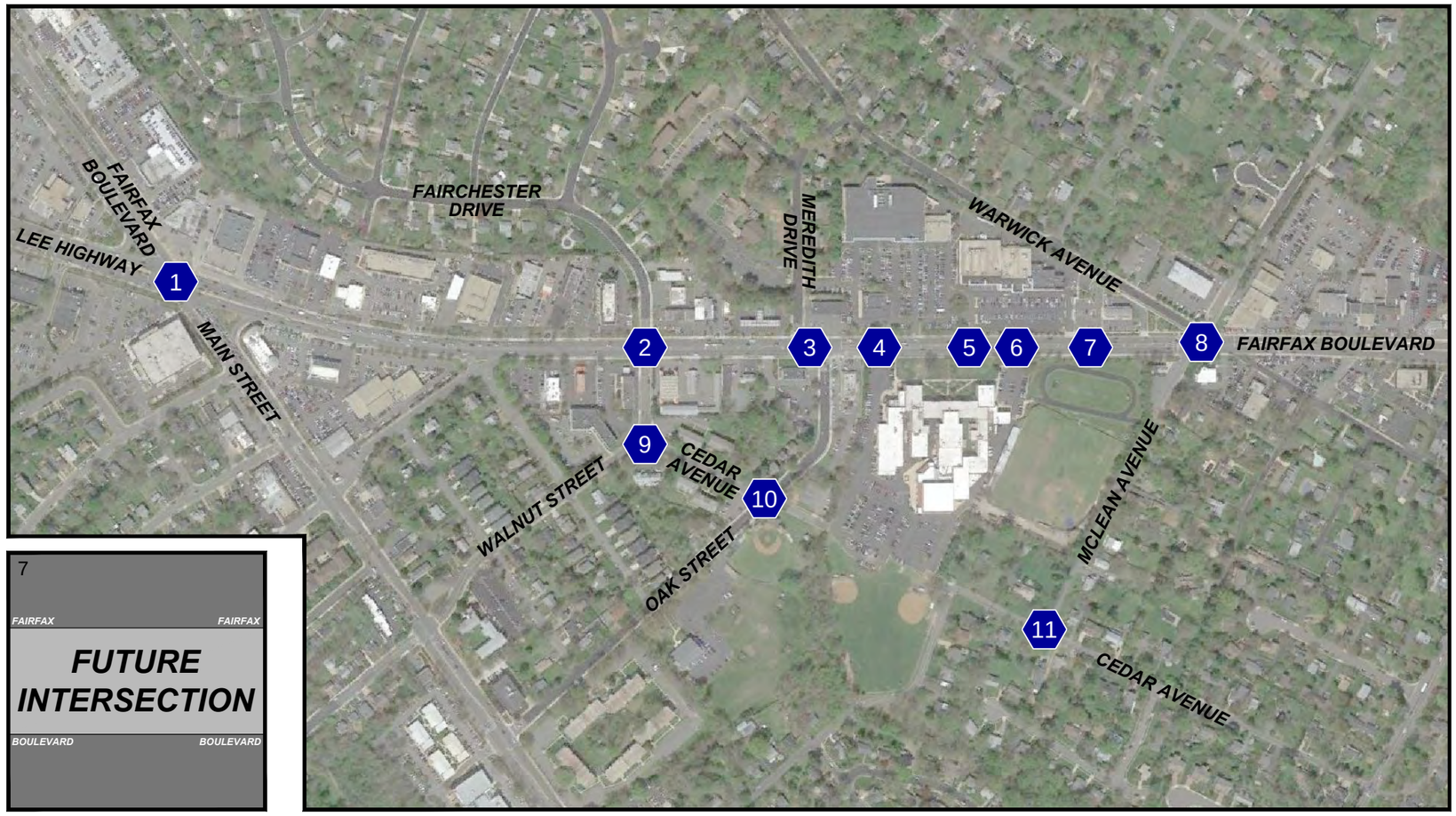


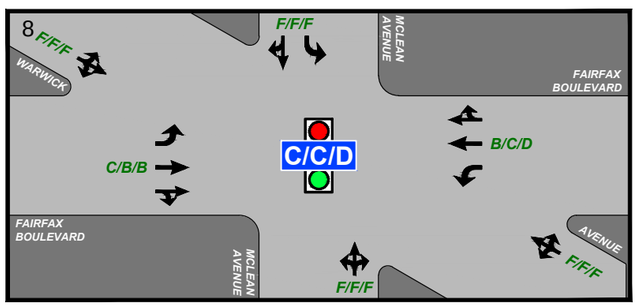


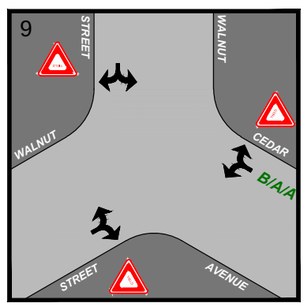


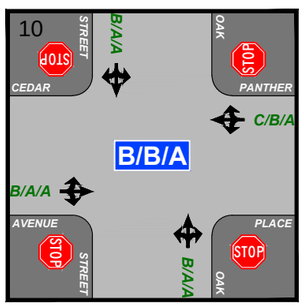


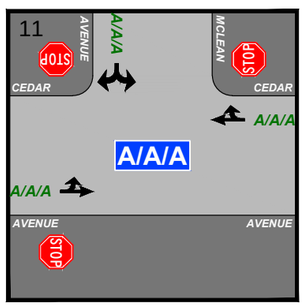


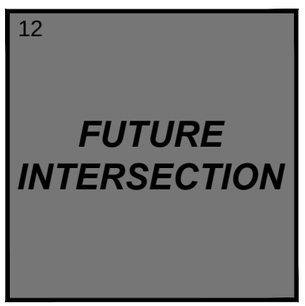












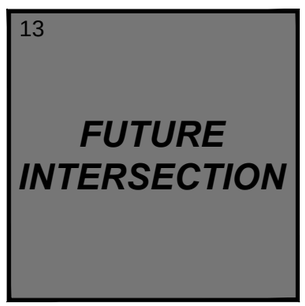


Figure 2-1
Existing Lane Use, Traffic Controls, and Levels of Service

Paul VI Redevelopment

Fairfax County, Virginia

X/X/X Approach Levels of Service

X/X/X Overall Intersection Levels of Service

Represents One Travel Lane

Signalized Intersection

Stop Sign

Yield Sign

NORTH

SECTION 3
STUDY SCOPE AND ANALYSIS PARAMETERS

Overview

The subject site is located south of Fairfax Boulevard, east of Oak Street, and west of McLean Avenue in the City of Fairfax, Virginia. The subject property is comprised of three parcels located at 10675 Fairfax Boulevard, 10600 Cedar Avenue, and 10606 Cedar Avenue totaling 18.5 acres. The parcel located at 10675 Fairfax Boulevard is zoned CR and the two Cedar Avenue parcels are zoned RM.

The primary objective of this study is to assess the impacts of the proposed development plan on the surrounding street system.

This traffic study was conducted in accordance with the scoping document and discussions with Wells + Associates, City staff, and the Applicant. The traffic study scope was approved by the Applicant and City staff on January 12, 2017 and is provided in Appendix A.

Study Area

The study area was determined based on the intersections and roadways that potentially would be affected by implementation of the proposed development plan. The following intersections were selected for analysis and evaluation:

- Lee Highway/Fairfax Boulevard/Main Street
- Fairfax Boulevard/Fairchester Drive, Walnut Street
- Fairfax Boulevard/Meredith Drive/Oak Street
- Fairfax Boulevard/The Shops at Fairfax Entrance-Future Site Entrance.
- Fairfax Boulevard/Paul VI Entrance (Future Site Entrance)
- Fairfax Boulevard/McLean Avenue/Warwick Avenue
- Walnut Street/Cedar Avenue
- Oak Street/Cedar Avenue
- McLean Avenue/Cedar Avenue

Site Development Program

The Applicant proposes to develop the site with 184 residential condominium units, 137 town homes, 20,000 SF of local serving retail and 24,000 SF of community center space.

Analysis Study Periods

The intersections within the study area were analyzed under AM and PM commuter peak hour conditions and under the PM school peak hour condition.

Existing Traffic Volumes

Existing AM commuter, school PM, and PM commuter peak hour turning movements and pedestrian counts were conducted on Wednesday, February 3, 2016, and Thursday, January 5, 2017, at the study intersections from 6:00 AM to 9:00 AM and from 2:00 PM to 7:00 PM.

The existing vehicular traffic volumes used in the analyses are provided on Figure 3-1. All existing count data are included in Appendix B.

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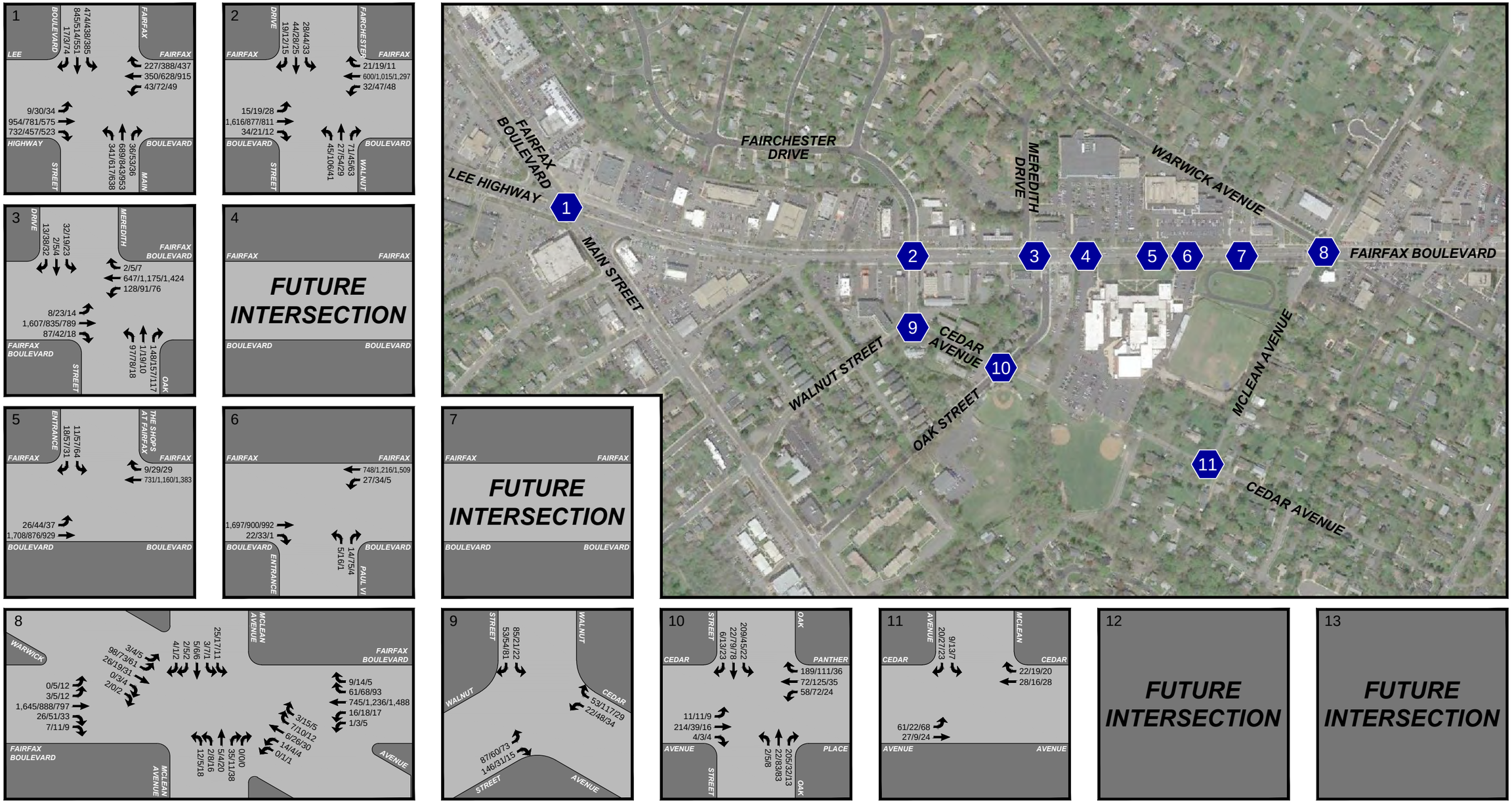

Figure 3-1
Existing Peak Hour Traffic Volumes

Paul VI Redevelopment

Fairfax County, Virginia

AM PEAK HOUR
SCHOOL PM PEAK HOUR
PM PEAK HOUR
000 / 000 / 000

NORTH

SECTION 4
EXISTING CONDITIONS ANALYSIS

Existing Intersection Levels of Service

Peak hour levels of service were calculated for the study intersections based on the existing lane use and traffic controls shown on Figure 2-1, the existing traffic volumes shown on Figure 3-1, and the 2000 Highway Capacity Manual (HCM) analysis procedures for signalized and unsignalized intersections. The results are presented in Appendix C and summarized on Table 4-1.

The analyses show that the Lee Highway/Fairfax Boulevard/Main Street intersection currently operates at or near capacity at LOS "E" during each of the peak hours (AM commuter peak, School PM peak, and PM commuter peak) with an average delay per vehicle of between 62.3 and 71.5 seconds.

Other signalized intersections along Fairfax Boulevard in the vicinity of the site operate at adequate overall LOS "D" or better during each of the three peak periods studied. However, the side street approaches operate at LOS "E" and "F" with average delays between 76.1 seconds and 128.0 seconds. The volume-to-capacity (v/c) ratios for the side street approaches at intersections along Fairfax Boulevard east of Main Street are well below 1.0, indicating that the lengthy delays are the result of long cycle lengths (190 seconds during the AM commuter peak hour and 220 seconds during the PM school peak and PM commuter peak hours) and the assignment of the predominance of the green time to the Fairfax Boulevard approaches, rather than insufficient capacity.

All approaches at the unsignalized intersections of Walnut Street/Cedar Avenue, Oak Street/Cedar Avenue, and McLean Avenue/Cedar Avenue operate at LOS "C" or better during each of the peak periods.

Table 4-1

Paul VI Redevelopment

Existing Intersection Capacity Analysis Summary[1]

	Intersection	Intersection Control	Approach	Existing		
				AM Peak	PM School Peak	PM Peak
1.	Lee Highway & Fairfax Boulevard & Main Street[2]	Signal	EB Appr	D (54.0)	F (87.3)	F (91.3)
			WB Appr	F (96.0)	E (70.1)	E (76.3)
			NB Appr	E (74.9)	D (45.1)	D (39.1)
			SB Appr	E (57.4)	D (49.5)	E (71.5)
			Overall	**E (71.5)**	**E (62.3)**	**E (69.8)**
2.	Fairfax Boulevard & Fairchester Drive/Walnut Street	Signal	EB Appr	A (8.2)	A (1.4)	A (1.4)
			WB Appr	A (5.3)	A (2.6)	A (1.7)
			NB Appr	E (76.1)	F (87.5)	F (90.9)
			SB Appr	F (88.8)	F (93.7)	F (118.8)
			Overall	**B (14.1)**	**B (13.0)**	**B (10.1)**
3.	Fairfax Boulevard & Meredith Drive/Oak Street	Signal	EB Appr	B (15.7)	A (4.3)	A (3.3)
			WB Appr	C (23.3)	A (7.4)	A (8.3)
			NB Appr	F (83.8)	F (100.1)	F (100.0)
			SB Appr	F (89.5)	F (102.4)	F (102.5)
			Overall	**C (25.1)**	**B (18.1)**	**B (14.1)**
4.	Fairfax Boulevard & Site Entrance	Free	EB Appr	Future Intersection		
			NB Appr			
5.	Fairfax Boulevard & Shops at Fairfax Entrance/Site Entrance (Future)	Signal	EB Appr	A (2.0)	A (1.0)	A (1.4)
			WB Appr	A (0.6)	A (1.2)	A (0.5)
			NB Appr	Future Approach		
			SB Appr	F (84.1)	F (104.7)	F (103.9)
			Overall	**A (2.6)**	**A (6.4)**	**A (4.8)**
6.	Fairfax Boulevard & Paul VI Entrance	Stop	NB Appr	C (21.1)	B (13.6)	B (12.6)
7.	Fairfax Boulevard & Site Exit	Stop	NB Appr	Future Intersection		
8.	Fairfax Boulevard & McLean Avenue & Warwick Road[3]	Signal	EB Appr	F (115.4)	F (117.3)	F (128.0)
			WB Appr	F (90.4)	F (103.7)	F (103.2)
			NB Appr	F (88.2)	F (106.5)	F (115.4)
			SB Appr	F (85.3)	F (104.4)	F (93.1)
			NE Appr	C (21.9)	B (12.3)	B (11.5)
			SW Appr	B (19.7)	C (23.3)	D (39.1)
			Overall	**C (28.5)**	**C (26.6)**	**D (37.9)**
9.	Walnut Street & Cedar Avenue[4]	Stop	WB Appr	B (10.1)	A (9.4)	A (9.5)
10.	Oak Street & Cedar Avenue	Stop	EB Appr	B (13.9)	A (8.5)	A (7.8)
			WB Appr	C (15.6)	B (10.9)	A (8.0)
			NB Appr	B (12.6)	A (9.0)	A (8.0)
			SB Appr	B (14.8)	A (9.4)	A (8.1)
			Overall	**B (14.3)**	**B (10.0)**	**A (8.0)**
11.	Cedar Avenue & McLean Avenue	Stop	EB Appr	A (7.7)	A (7.4)	A (7.7)
			WB Appr	A (7.1)	A (6.9)	A (7.1)
			SB Appr	A (7.0)	A (6.9)	A (7.0)
			Overall	**A (7.4)**	**A (7.0)**	**A (7.4)**
12.	Internal Road & Frontage Road	Stop	NB Appr	Future Intersection		
13.	Internal Road & Frontage Road	Stop	NB Appr	Future Intersection		

Notes:
1. Capacity analysis based on Highway Capacity Manual methodology, using Synchro 9.1.
2. Fairfax Boulevard/Main Street analyzed as east-west road; Lee Highway/Fairfax Boulevard analyzed as north-south roadway.
3. Warwick Road analyzed as east-west road; McLean Avenue analyzed as north-south roadway; Fairfax Boulevard analyzed as northeast-southwest roadway.
4. Analyzed with northbound and southbound as free movements along Walnut Street, and westbound movements along Cedar Avenue as stop-controlled.

SECTION 5
ANALYSIS OF FUTURE CONDITIONS WITHOUT SITE DEVELOPMENT

Overview

Forecasts for traffic conditions without the redevelopment of Paul VI were estimated at the study intersections based on a composite of existing traffic and pipeline development trips as described in Section 3 of this report. Future levels of service under these forecasted conditions were evaluated at the study intersections.

Regional Traffic Growth

A review of VDOT AADT volumes along Fairfax Boulevard and Main Street in the vicinity of the site indicates a modest reduction in traffic volumes over the past eight (8) years. AADT volumes along Fairfax Boulevard east of Main Street fell from 38,000 vehicles in 2008 to 36,000 vehicles in 2016, an average annual decrease of approximately 0.7% per year. AADT volumes along Main Street south of Fairfax Boulevard fell from 40,000 vehicles in 2008 to 35,000 vehicles in 2016, an average annual decrease of approximately 1.7% per year.

In order to present a conservative (or worst case) analysis, no continuing decrease in regional traffic volumes was assumed in this analysis.

Traffic from Other Approved/Pending Developments

At the request of City staff, the following approved/pending developments were included as approved (i.e., "pipeline") developments:

- Novus Fairfax Gateway
  - 4,000 SF Office
  - 5,000 SF Quality Restaurant
  - 7,400 SF High Turn-Over Sit-Down Restaurant
  - 12,600 SF Shopping Center
  - 395 Residential Apartments

- Mount Vineyard
  - 132 Residential Condominiums/Townhouses

As shown in Table 5-1, these pipeline developments are anticipated to generate 395 AM peak commuter hour trips, 418 PM school peak hour trips, and 576 PM commuter peak hour trips at full buildout.

Background Traffic Forecasts

The existing traffic volumes depicted on Figure 3-1 and the pipeline trip assignments shown on Figure 5-1 were added together to yield the background future traffic forecasts at the study intersections, shown on Figure 5-2.

Background Future Levels of Service

Peak hour levels of service were calculated for the study intersections based on the existing lane use and traffic controls, background future traffic forecasts, and the 2000 Highway Capacity Manual (HCM) analysis procedures for signalized and unsignalized intersections. The results are provided in Appendix D, shown on Figure 5-3, and summarized in Table 5-2.

As shown on Table 5-2, the Lee Highway/Fairfax Boulevard/Main Street intersection will continue to operate at or near capacity at LOS "E" during each of the peak hours (AM commuter peak, School PM peak, and PM commuter peak). When compared to existing conditions, the average delay per vehicle at this intersection will increase to between 64.0 and 75.0 seconds during the peak hours, an increase of between 1.7 seconds per vehicle and 3.6 seconds per vehicle.

Other signalized intersections along Fairfax Boulevard in the vicinity of the site continue to operate at an adequate overall LOS "D" or better during each of the three peak periods studied. As with the existing conditions analysis, the side street approaches will continue to operate at LOS "E" and "F" due to the combination of long cycle lengths (190 seconds during the AM commuter peak hour and 220 seconds during the PM school peak and PM commuter peak hours) and the assignment of the predominance of the green time to the Fairfax Boulevard approaches. The side street approaches at signalized intersections east of Main Street will continue to operate with v/c ratios well below 1.0.

All approaches at the unsignalized intersections of Walnut Street/Cedar Avenue, Oak Street/ Cedar Avenue, and McLean Avenue/Cedar Avenue will continue to operate at LOS "C" or better during each of the peak hours.

Table 5-1

Paul VI Redevelopment

Pipeline Development Trip Generation

Development	ITE Land Use Code[1]	Amount	Units	AM Peak Hour			School PM Peak Hour			PM Peak Hour			Average Daily Trips
				In	Out	Total	In	Out	Total	In	Out	Total	
Novus Fairfax Gateway													
Office	710	4,000	SF	5	1	6	1	2	3	1	5	6	44
Quality Restaurant	931	5,000	SF	2	2	4	5	5	10	25	12	37	450
High Turnover Restaurant	932	7,400	SF	44	36	80	9	9	18	44	29	73	941
Shopping Center	820	12,600	SF	27	17	44	69	78	147	72	78	150	1,767
Apartments	220	395	DU	39	158	197	102	79	181	153	82	235	2,517
Total Novus Fairfax Gateway Trips				**117**	**214**	**331**	**186**	**173**	**359**	**295**	**206**	**501**	**5,719**
Mount Vineyard													
Condominiums/Townhomes	230	132	DU	**11**	**53**	**64**	**33**	**26**	**59**	**50**	**25**	**75**	**819**
Total Background Development Trips				**128**	**267**	**395**	**219**	**199**	**418**	**345**	**231**	**576**	**6,538**

Notes: 1. Institute of Transportation Engineer's (ITE), Trip Generation Manual, 9th Edition

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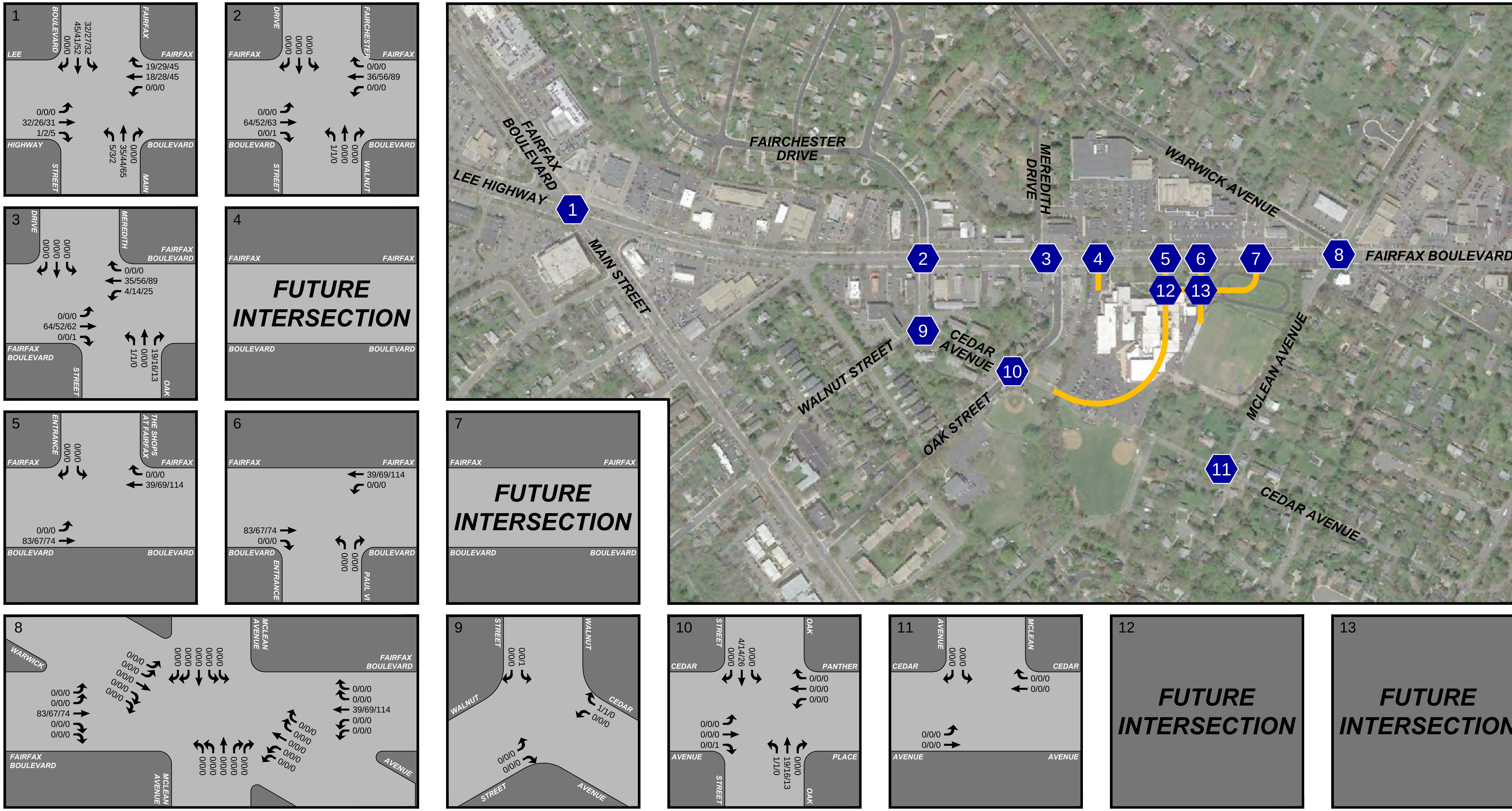

Figure 5-1
Pipeline Development Site Generated Traffic Assignments

Paul VI Redevelopment

Fairfax County, Virginia

AM PEAK HOUR
SCHOOL PM PEAK HOUR
PM PEAK HOUR
000 / 000 / 000

NORTH

JCP

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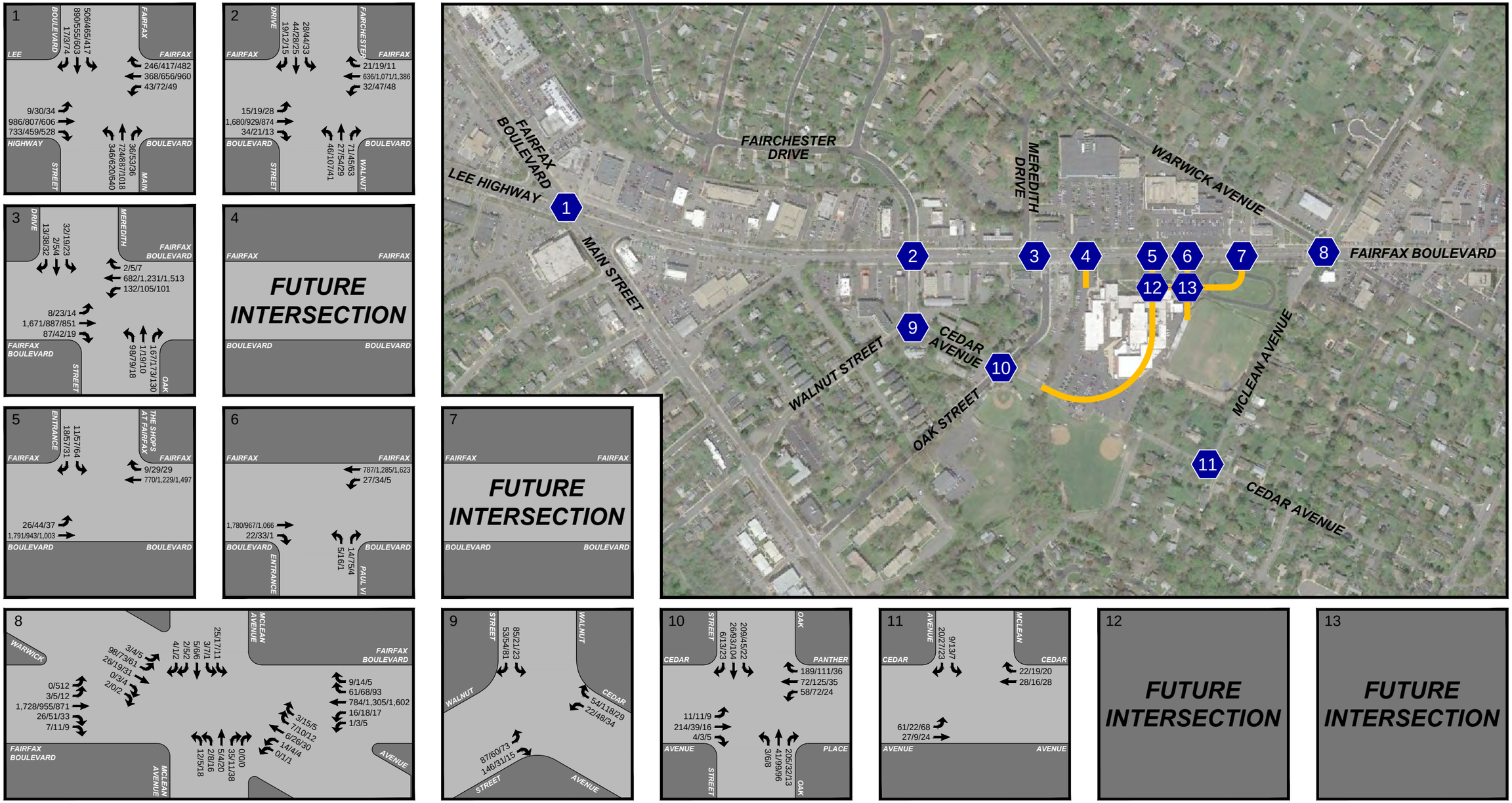


Figure 5-2
2027 Background Future Peak Hour Traffic Forecasts

Paul VI Redevelopment

Fairfax County, Virginia

AM PEAK HOUR
SCHOOL PM PEAK HOUR
PM PEAK HOUR
000 / 000 / 000

NORTH

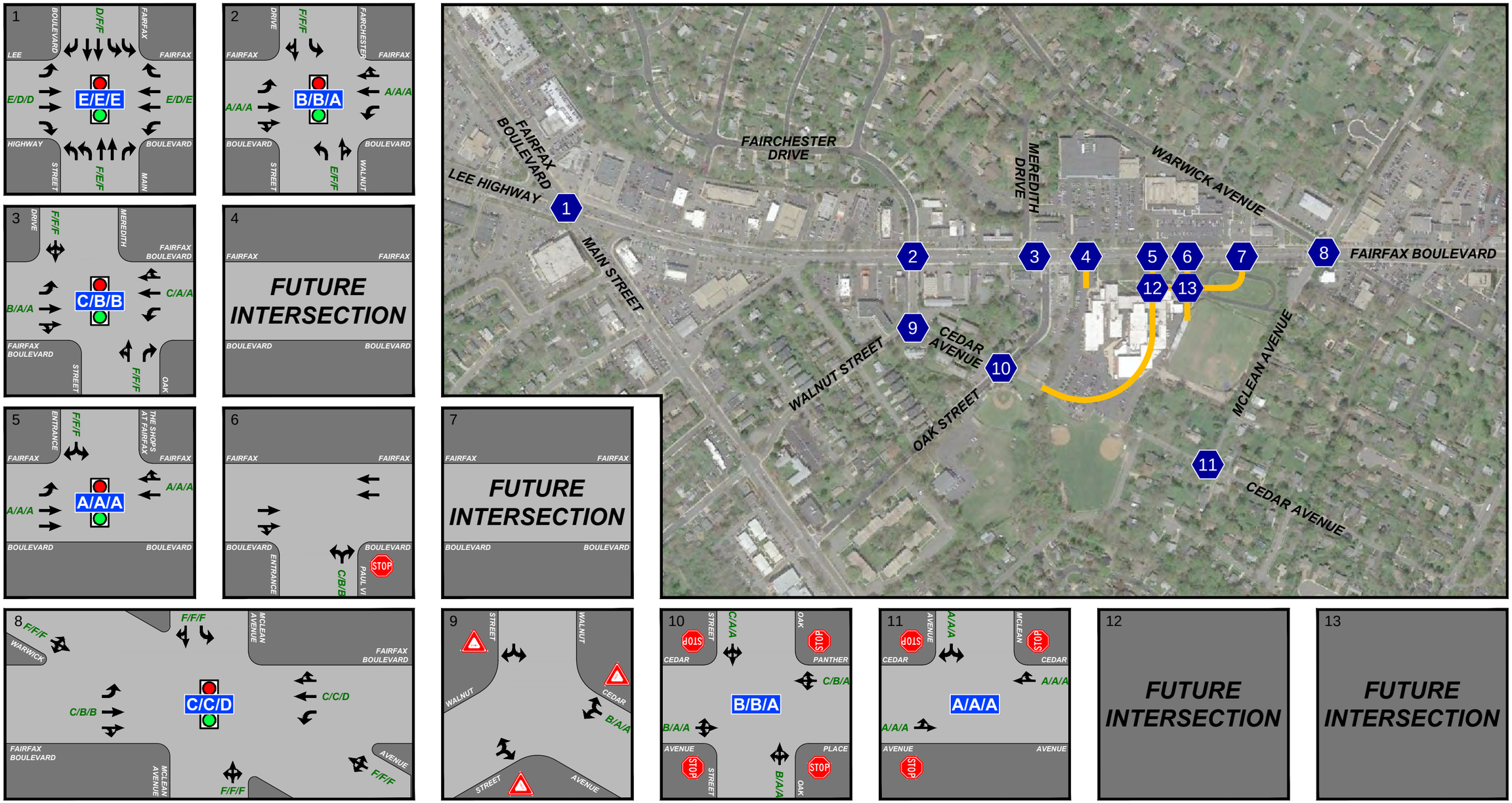


Figure 5-3
Existing Lane Use, Traffic Controls, and Background Future Levels of Service

Paul VI Redevelopment

Fairfax County, Virginia

X/X/X Approach Levels of Service

X/X/X Overall Intersection Levels of Service

Represents One Travel Lane

Signalized Intersection

Stop Sign

Yield Sign

NORTH

Table 5-2

Paul VI Redevelopment

Background Future Intersection Capacity Analysis Summary[1]

	Intersection	Intersection Control	Approach	Existing			Background Future		
				AM Peak	PM School Peak	PM Peak	AM Peak	PM School Peak	PM Peak
1.	Lee Highway & Fairfax Boulevard & Main Street[2]	Signal	EB Appr	D (54.0)	F (87.3)	F (91.3)	D (54.8)	F (89.0)	F (95.6)
			WB Appr	F (96.0)	E (70.1)	E (76.3)	F (106.3)	E (72.0)	F (82.9)
			NB Appr	E (74.9)	D (45.1)	D (39.1)	E (78.4)	D (46.0)	D (40.0)
			SB Appr	E (57.4)	D (49.5)	E (71.5)	E (56.5)	D (51.1)	E (72.4)
			Overall	**E (71.5)**	**E (62.3)**	**E (69.8)**	**E (75.0)**	**E (64.0)**	**E (73.4)**
2.	Fairfax Boulevard & Fairchester Drive/Walnut Street	Signal	EB Appr	A (8.2)	A (1.4)	A (1.4)	A (9.0)	A (1.4)	A (1.5)
			WB Appr	A (5.3)	A (2.6)	A (1.7)	A (5.4)	A (2.6)	A (1.8)
			NB Appr	E (76.1)	F (87.5)	F (90.9)	E (76.0)	F (87.6)	F (90.9)
			SB Appr	F (88.8)	F (93.7)	F (118.8)	F (88.7)	F (93.6)	F (118.8)
			Overall	**B (14.1)**	**B (13.0)**	**B (10.1)**	**B (14.4)**	**B (12.6)**	**A (9.6)**
3.	Fairfax Boulevard & Meredith Drive/Oak Street	Signal	EB Appr	B (15.7)	A (4.3)	A (3.3)	B (19.2)	A (4.3)	A (3.4)
			WB Appr	C (23.3)	A (7.4)	A (8.3)	C (23.3)	A (7.5)	A (9.5)
			NB Appr	F (83.8)	F (100.1)	F (100.0)	F (83.7)	F (99.7)	F (99.8)
			SB Appr	F (89.5)	F (102.4)	F (102.5)	F (89.5)	F (102.4)	F (102.5)
			Overall	**C (25.1)**	**B (18.1)**	**B (14.1)**	**C (27.4)**	**B (18.1)**	**B (14.8)**
4.	Fairfax Boulevard & Site Entrance	Free	EB Appr	Future Intersection			Future Intersection		
			NB Appr						
5.	Fairfax Boulevard & Shops at Fairfax Entrance/Site Entrance (Future)	Signal	EB Appr	A (2.0)	A (1.0)	A (1.4)	A (2.4)	A (1.0)	A (1.4)
			WB Appr	A (0.6)	A (1.2)	A (0.5)	A (0.6)	A (1.3)	A (0.5)
			NB Appr	Future Approach			Future Approach		
			SB Appr	F (84.1)	F (104.7)	F (103.9)	F (84.1)	F (104.7)	F (103.9)
			Overall	**A (2.6)**	**A (6.4)**	**A (4.8)**	**A (2.8)**	**A (6.2)**	**A (4.5)**
6.	Fairfax Boulevard & Paul VI Entrance	Stop	NB Appr	C (21.1)	B (13.6)	B (12.6)	C (22.4)	B (14.2)	B (13.1)
7.	Fairfax Boulevard & Site Exit	Stop	NB Appr	Future Intersection			Future Intersection		
8.	Fairfax Boulevard & McLean Avenue & Warwick Road[3]	Signal	EB Appr	F (115.4)	F (117.3)	F (128.0)	F (115.4)	F (117.3)	F (128.0)
			WB Appr	F (90.4)	F (103.7)	F (103.2)	F (90.4)	F (103.7)	F (103.2)
			NB Appr	F (88.2)	F (106.5)	F (115.4)	F (88.2)	F (106.5)	F (115.4)
			SB Appr	F (85.3)	F (104.4)	F (93.1)	F (85.3)	F (104.4)	F (93.1)
			NE Appr	C (21.9)	B (12.3)	B (11.5)	C (24.2)	B (13.2)	B (12.6)
			SW Appr	B (19.7)	C (23.3)	D (39.1)	C (20.1)	C (24.3)	D (43.7)
			Overall	**C (28.5)**	**C (26.6)**	**D (37.9)**	**C (29.7)**	**C (27.1)**	**D (40.4)**
9.	Walnut Street & Cedar Avenue[4]	Stop	WB Appr	B (10.1)	A (9.4)	A (9.5)	B (10.1)	A (9.4)	A (9.5)
10.	Oak Street & Cedar Avenue	Stop	EB Appr	B (13.9)	A (8.5)	A (7.8)	B (14.3)	A (8.7)	A (7.9)
			WB Appr	C (15.6)	B (10.9)	A (8.0)	C (16.2)	B (11.2)	A (8.1)
			NB Appr	B (12.6)	A (9.0)	A (8.0)	B (13.6)	A (9.3)	A (8.2)
			SB Appr	B (14.8)	A (9.4)	A (8.1)	C (15.3)	A (9.7)	A (8.4)
			Overall	**B (14.3)**	**B (10.0)**	**A (8.0)**	**B (14.9)**	**B (10.2)**	**A (8.2)**
11.	Cedar Avenue & McLean Avenue	Stop	EB Appr	A (7.7)	A (7.4)	A (7.7)	A (7.7)	A (7.4)	A (7.7)
			WB Appr	A (7.1)	A (6.9)	A (7.1)	A (7.1)	A (6.9)	A (7.1)
			SB Appr	A (7.0)	A (6.9)	A (7.0)	A (7.0)	A (6.9)	A (7.0)
			Overall	**A (7.4)**	**A (7.0)**	**A (7.4)**	**A (7.4)**	**A (7.0)**	**A (7.4)**
12.	Internal Road & Frontage Road	Stop	NB Appr	Future Intersection			Future Intersection		
13.	Internal Road & Frontage Road	Stop	NB Appr	Future Intersection			Future Intersection		

Notes:
1. Capacity analysis based on Highway Capacity Manual methodology, using Synchro 9.1.
2. Fairfax Boulevard/Main Street analyzed as east-west road; Lee Highway/Fairfax Boulevard analyzed as north-south roadway.
3. Warwick Road analyzed as east-west road; McLean Avenue analyzed as north-south roadway; Fairfax Boulevard analyzed as northeast-southwest roadway.
4. Analyzed with northbound and southbound as free movements along Walnut Street, and westbound movements along Cedar Avenue as stop-controlled.

SECTION 6
SITE ANALYSIS

Overview

Trips anticipated to be generated by the proposed development plan forecasted and assigned to the surrounding roadway network. The generation, distribution, and assignment of site trips were based on the proposed redevelopment plan and program, as well as the locations of future site entrances in relation to the surrounding roadway network.

Existing Site Trips

As stated previously, the site is currently developed with the Paul VI Catholic High School. The redevelopment plan calls for the elimination of the school use and the construction of a mix of residential, retail, and community uses. Trips currently generated by the school were tabulated through existing traffic counts. As shown in Table 6-1, the Paul VI Catholic High School currently generates 1,005 trips during the AM commuter peak hour, 563 trips during the PM school peak hour, and 132 trips during the PM commuter peak hour.

A portion of the existing school will remain and will be repurposed as local serving retail and/or community use. Existing traffic volumes generated by the high school were eliminated from the existing traffic streams based on the existing driveway counts conducted at existing school access drives. The existing traffic volumes less the existing school trips removed at each of the study intersections are shown on Figure 6-1.

Proposed Site Access

The site plan provided on Figure 1-2 shows that a slow lane (with on-street parking), separated from the main travel lanes by a landscaped median is proposed along a portion of the Fairfax Boulevard site frontage. Access between the site and Fairfax Boulevard is proposed via two (2) full access driveways; one (1) will be located directly across Fairfax Boulevard from the existing signalized driveway to/from the Shops at Fairfax, and the other will be located approximately 570’ east of the existing signalized driveway to/from the Shops at Fairfax and approximately 260’ west of the Fairfax Boulevard/Mclean Avenue/Warwick Avenue intersection. A right-in/right-out driveway will be provided from Fairfax Boulevard west of the existing signalized driveway to/from the Shops at Fairfax. An additional right-in/right-out driveway will be provided from the proposed slow lane and access to/from the southern portion of the property will be provided via Cedar Avenue to/from the west. Access between the site and Cedar Avenue to/from the east is not proposed by the Applicant, however access to a new 22-space parking lot for the existing ball fields located south of the Paul VI property is proposed.

Trip Generation

Overview. Trip generation estimates for the AM and PM peak hours, as well as the average daily traffic, were derived from the standard Institute of Transportation Engineers (ITE) trip generation rates, as published in the Trip Generation Manual, 9th edition. The "Residential Condominium/ Townhouse" (230) land use code was used for the proposed townhomes units. The "High-Rise Residential Condominium/Townhouse" (232) land use code was used for the single family attached units as this building will be three (3) or more floors in height. The "Shopping Center" (820) land use code was used for the retail uses, and the "Recreational Community Center" (495) land use code was used for the community center use to be operated by the City of Fairfax.

Existing trips generated by Paul VI were determined through traffic counts at the existing site driveways. The trip generation analysis for the existing uses and the proposed uses is presented in Table 6-1.

Net Site Trips. The net vehicle trips that would be generated by the proposed development plan were determined by subtracting the current trip generation of Paul VI from the trips anticipated to be generated by the site after redevelopment. This comparison is shown in Table 6-1 and illustrates that the proposed site will generate 789 ***fewer*** AM peak commuter hour trips, 148 ***fewer*** PM school peak hour trips, and 294 ***more*** PM peak commuter hour trips than are currently generated by the high school.

It should be noted that no reduction in site generated trips due to transit mode split was taken in this analysis. However, it is anticipated that the project would take advantage of public transit opportunities available in the proximity of the site.

Site Trip Distribution

As agreed upon in the scope with City staff, site trip distribution used in the analysis was based on existing travel patterns and engineering judgment. For purposes of this analysis, the following distribution was used in the forecasting of future site traffic:

- To/from the west on Lee Highway/Fairfax Boulevard: 35%
- To/from the northeast on Fairfax Boulevard: 50%
- To/from the southeast on Main Street: 15%

Site Trip Assignments

The assignments of the total vehicle trips generated upon the future build-out of the Paul VI redevelopment was based on the above distribution, and are depicted on Figure 6-2.

Table 6-1

Paul VI Redevelopment

Site Trip Generation Analysis

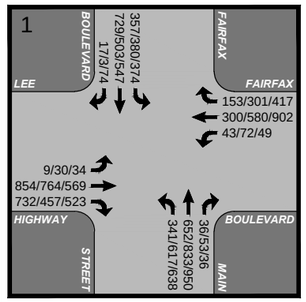
Development	ITE Land Use Code[1]	Amount	Units	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM School Peak (2:45-3:45) In	PM School Peak (2:45-3:45) Out	PM School Peak (2:45-3:45) Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Average Daily Trips
Existing													
Private High School[2,3]			Actual Trips	671	334	1,005	174	389	563	46	86	132	3,270
Proposed[4]													
Condominiums	232	184	DU	16	66	82	37	29	66	48	30	78	917
Townhomes	230	137	DU	11	55	66	44	38	82	52	26	78	846
Subtotal Residential		321	DU	27	121	148	81	67	148	100	56	156	1,763
Community Center	495	24,000	SF	32	17	49	28	41	69	32	34	66	812
Local Serving Retail	820	20,000	SF	12	7	19	93	105	198	98	106	204	2,386
Total Proposed Trips				**71**	**145**	**216**	**202**	**213**	**415**	**230**	**196**	**426**	**4,961**
Comparison													
Proposed vs. Existing				**-600**	**-189**	**-789**	**28**	**-176**	**-148**	**184**	**110**	**294**	**1,691**

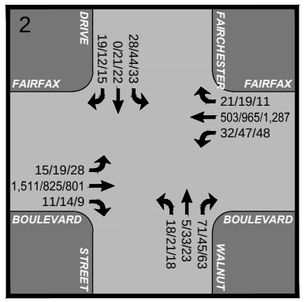
Notes: 1. Institute of Transportation Engineer's (ITE), Trip Generation Manual, 9th Edition

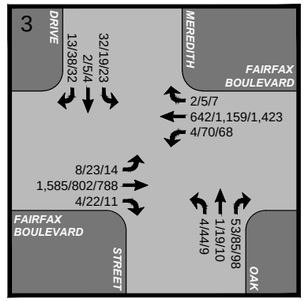
2. Based on traffic counts completed on February 3, 2016.

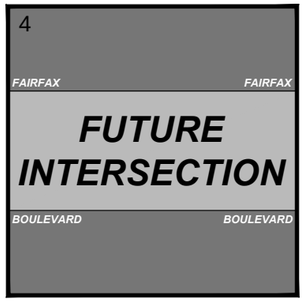
3. Actual ADT estimated based on ITE ADT and PM school peak ratio.

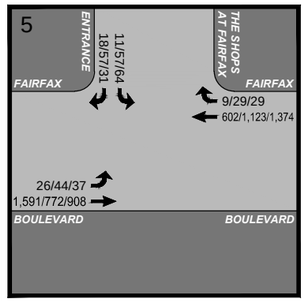
4. PM School Peak trips based on residential and retail diurnal rates compiled from ITE and Wells + Associates files.

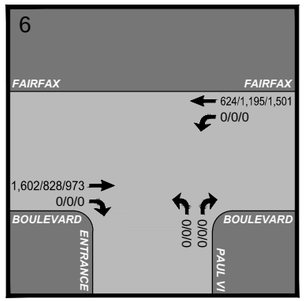


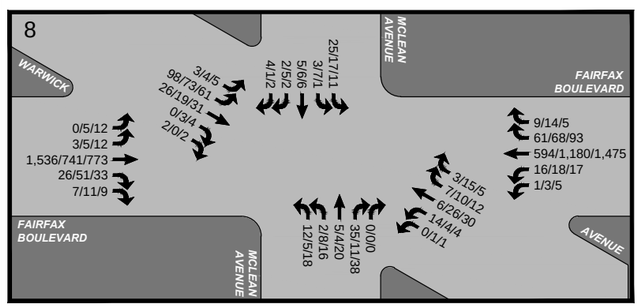


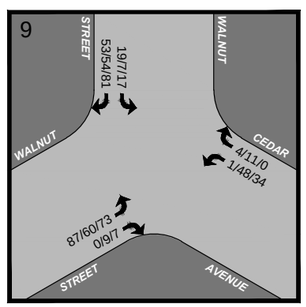


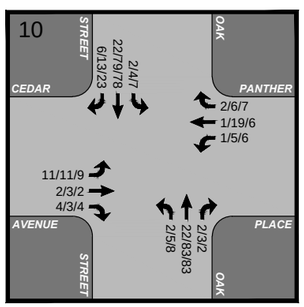


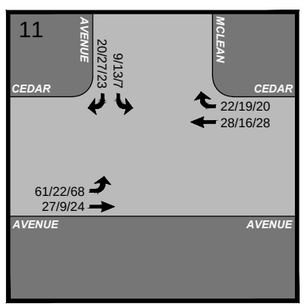


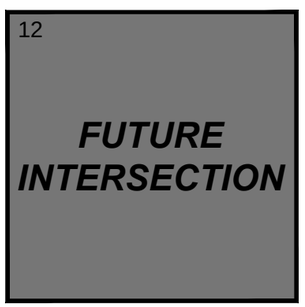


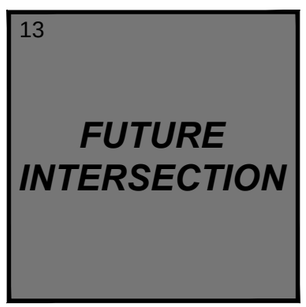












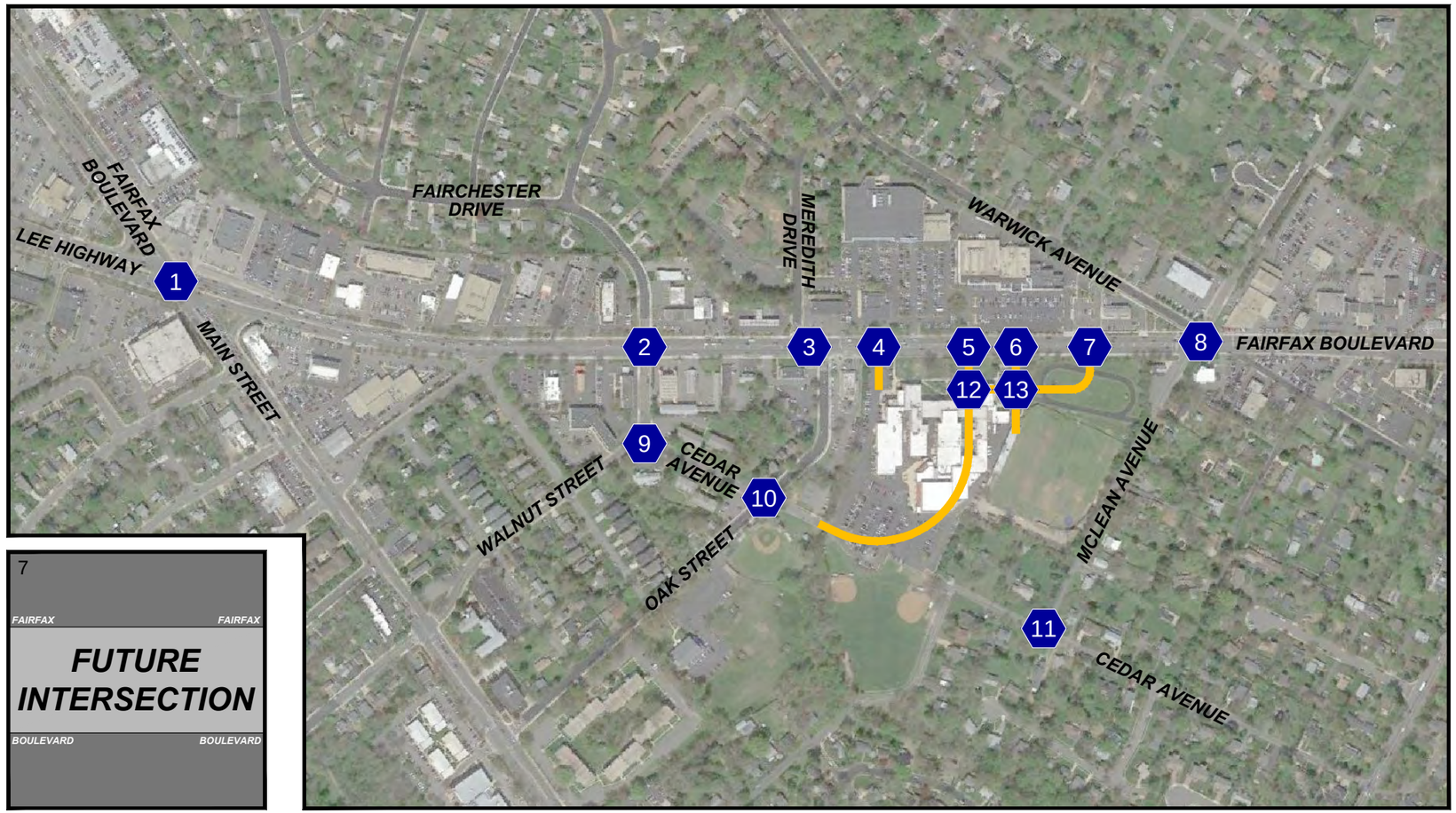


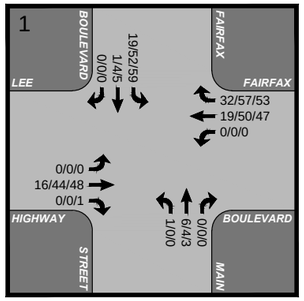
Figure 6-1
Existing Traffic Volumes Less Existing Site Trips

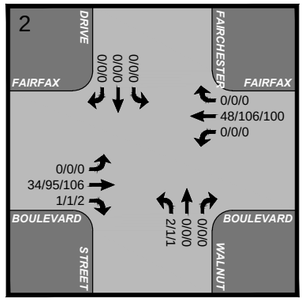
Paul VI Redevelopment

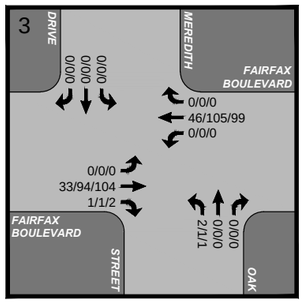
Fairfax County, Virginia

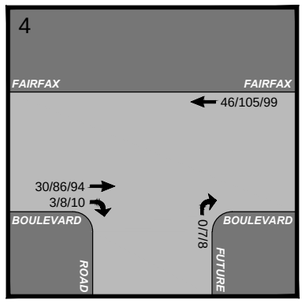
AM PEAK HOUR
SCHOOL PM PEAK HOUR
PM PEAK HOUR
000 / 000 / 000

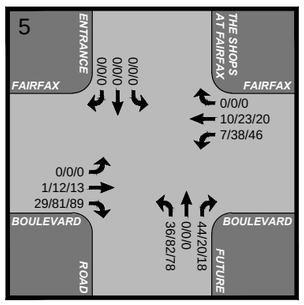
NORTH

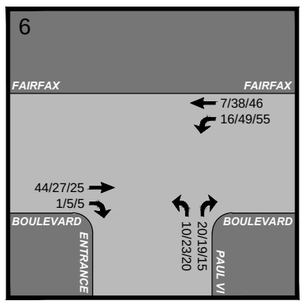


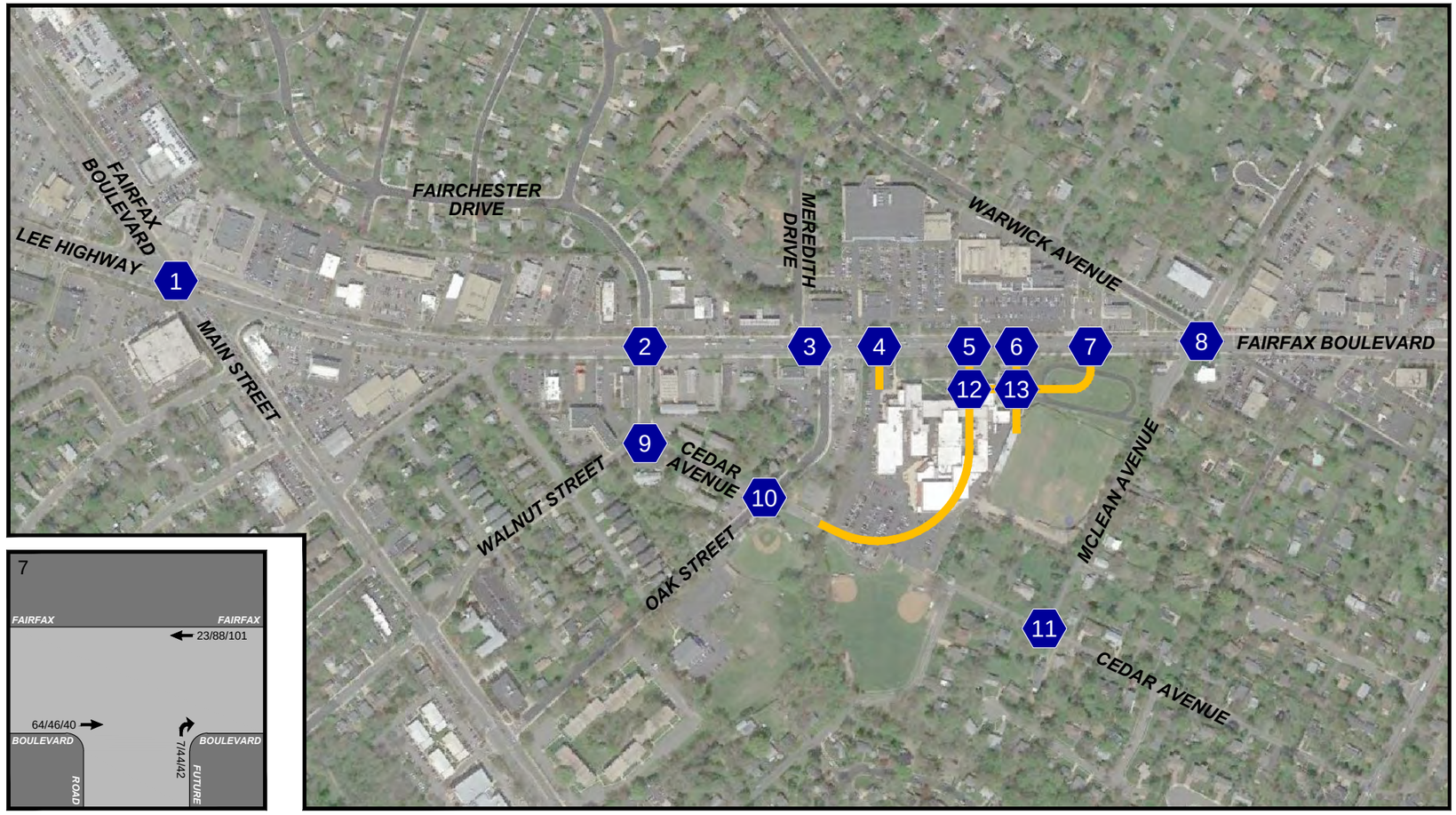


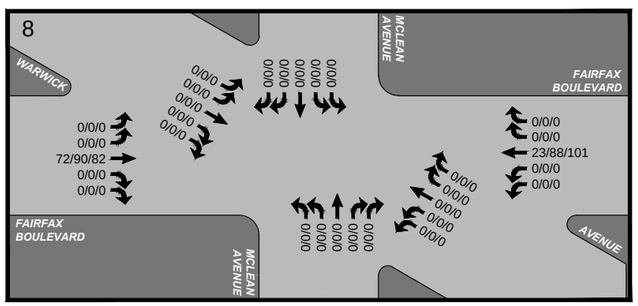


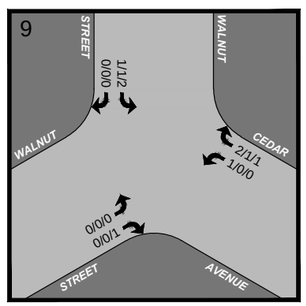


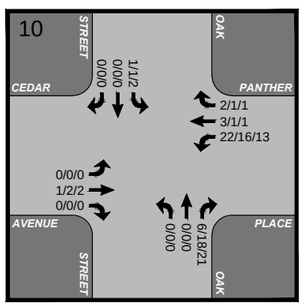


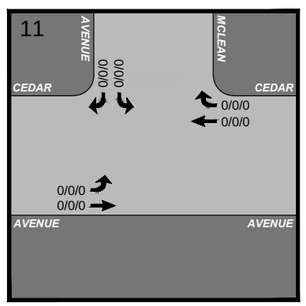


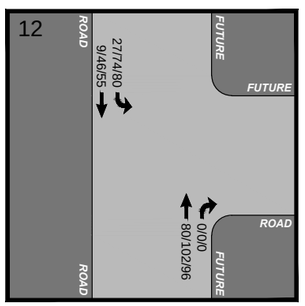












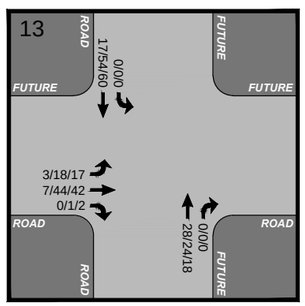


Figure 6-2
Site Trip Assignments

Paul VI Redevelopment

Fairfax County, Virginia

AM PEAK HOUR
SCHOOL PM PEAK HOUR
PM PEAK HOUR
000 / 000 / 000

NORTH

SECTION 7
ANALYSIS OF FUTURE CONDITIONS WITH SITE DEVELOPMENT

Total Future Traffic Forecasts

Site trip assignments shown on Figure 6-2 were added to the existing traffic volumes less the existing site trips at each of the study intersections, shown on Figure 6-1, and pipeline trip assignments shown on Figure 5-2 to yield 2027 total future traffic forecasts, shown on Figure 7-1.

Proposed Improvements

Provision of a slow lane (with on-street parking), separated from the main travel lanes by landscaped medians is proposed along the portion of the Fairfax Boulevard site frontage east of the Fairfax Boulevard/The Shops at Fairfax signalized intersection. Access between the site and Fairfax Boulevard is proposed via two (2) full access driveways and one (1) right-in/right-out driveway. One of the proposed full access site driveways will form the fourth (south) leg at the Fairfax Boulevard/The Shops at Fairfax signalized intersection and will provide two northbound and one southbound lanes. The other full access driveway will be located along Fairfax Boulevard approximately 570' east of the existing signalized driveway to/from the Shops at Fairfax and approximately 260' west of the Fairfax Boulevard/Mclean Avenue intersection. A right-in/right-out driveway from Fairfax Boulevard will be provided west of the Fairfax Boulevard/The Shops at Fairfax signalized intersection.

Lane use and traffic control at each of the study intersections for 2027 total future conditions is shown on Figure 7-2.

Total Future Levels of Service with Proposed Development Plan

Future levels of service with the proposed development plan were estimated at the study intersections based on the future traffic volumes shown on Figure 7-1, future lane use and traffic control shown on Figure 7-2, and the 2000 HCM methodologies for signalized and unsignalized intersections. The results of these analyses are provided in Appendix E and summarized in Table 7-1.

As shown in Table 7-1, levels of service under future site development conditions would remain generally consistent with future background conditions (i.e., without site development).

The Lee Highway/Fairfax Boulevard/Main Street intersection will continue to operate at an overall LOS E during all three studied peak periods under total future conditions. When compared to background future conditions, the intersection will experience minor ***reductions*** in delay (0.3 – 5.8 seconds) during the AM, PM school peak period, and PM peak commuter periods.

When compared to background future conditions, the Fairfax Boulevard/Fairchester Drive, Walnut Street intersection will experience minor ***reductions*** in overall delay during each of the three peak periods.

When compared to background future conditions, the Fairfax Boulevard/Meredith Drive/Oak Street will experience a significant ***reduction*** (18.8 seconds) in delay during the AM commuter peak period and minor ***increases*** in delay during the PM school and PM commuter peak periods.

When compared to background future conditions, the Fairfax Boulevard/Shops at Fairfax Driveway/Site Driveway intersection will experience a decline in LOS due to the addition of a fourth (northbound) leg at this intersection. However, this intersection will operate at an acceptable LOS "D" or better during all three (3) peak periods studied.

When compared to background future conditions, the Fairfax Boulevard/McLean Avenue/Warwick Road intersection will experience a minor ***reduction*** in delay during the AM commuter peak period and minor ***increases*** in delay during the PM school and PM commuter peak periods.

All studied unsignalized intersections will operate at LOS "C" or better during each of the peak periods.

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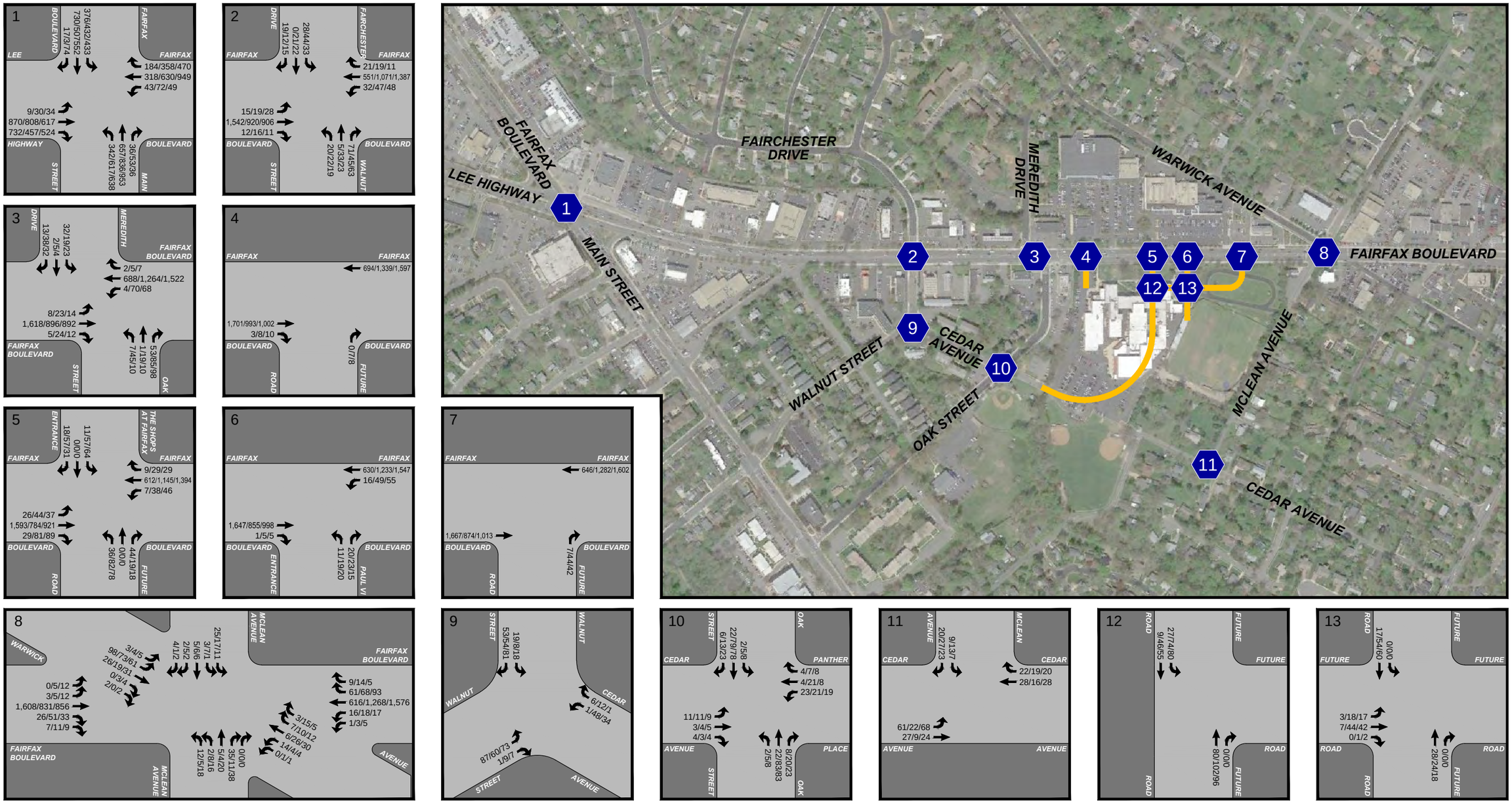

Figure 7-1
2027 Total Future Peak Hour Traffic Forecasts

Paul VI Redevelopment

Fairfax County, Virginia

AM PEAK HOUR
SCHOOL PM PEAK HOUR
PM PEAK HOUR
000 / 000 / 000

NORTH

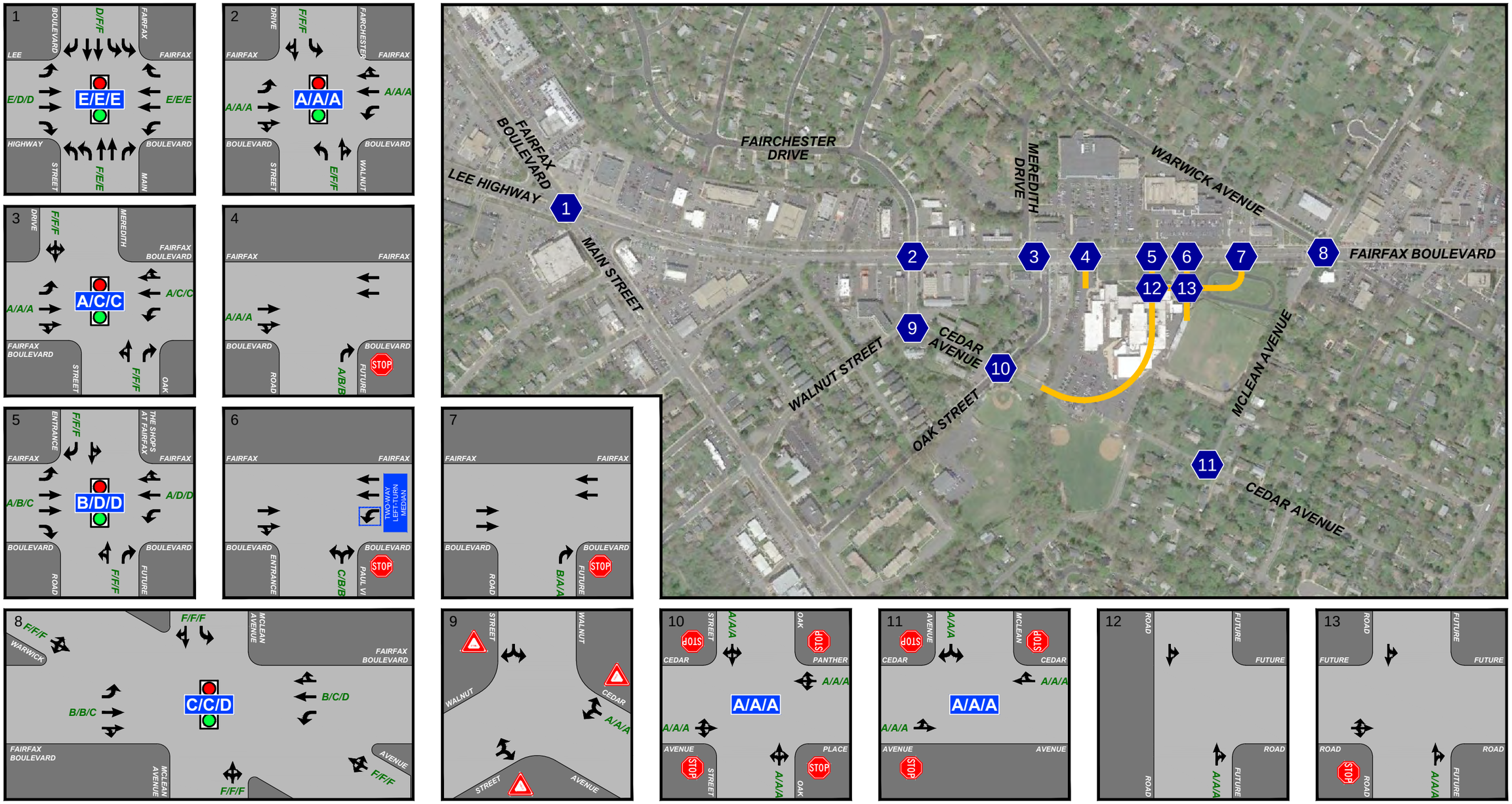

Figure 7-2
Total Future Lane Use, Traffic Controls, and Levels of Service

Paul VI Redevelopment

Fairfax County, Virginia

X/X/X Approach Levels of Service

X/X/X Overall Intersection Levels of Service

Represents One Travel Lane

Signalized Intersection

Stop Sign

Yield Sign

NORTH

Table 7-1

Paul VI Redevelopment

Total Future Intersection Capacity Analysis Summary[1]

	Intersection	Intersection Control	Approach	Existing			Background Future			Total Future		
				AM Peak	PM School Peak	PM Peak	AM Peak	PM School Peak	PM Peak	AM Peak	PM School Peak	PM Peak
1.	Lee Highway & Fairfax Boulevard & Main Street[2]	Signal	EB Appr	D (54.0)	F (87.3)	F (91.3)	D (54.8)	F (89.0)	F (95.6)	D (52.0)	F (87.0)	F (91.8)
			WB Appr	F (96.0)	E (70.1)	E (76.3)	F (106.3)	E (72.0)	F (82.9)	F (88.4)	E (69.9)	E (76.3)
			NB Appr	E (74.9)	D (45.1)	D (39.1)	E (78.4)	D (46.0)	D (40.0)	E (69.6)	D (46.0)	D (40.3)
			SB Appr	E (57.4)	D (49.5)	E (71.5)	E (56.5)	D (51.1)	E (72.4)	E (71.7)	E (55.8)	E (62.5)
			Overall	**E (71.5)**	**E (62.3)**	**E (69.8)**	**E (75.0)**	**E (64.0)**	**E (73.4)**	**E (69.8)**	**E (63.7)**	**E (67.6)**
2.	Fairfax Boulevard & Fairchester Drive/Walnut Street	Signal	EB Appr	A (8.2)	A (1.4)	A (1.4)	A (9.0)	A (1.4)	A (1.5)	A (6.7)	A (1.3)	A (1.5)
			WB Appr	A (5.3)	A (2.6)	A (1.7)	A (5.4)	A (2.6)	A (1.8)	A (0.9)	A (1.2)	A (2.8)
			NB Appr	E (76.1)	F (87.5)	F (90.9)	E (76.0)	F (87.6)	F (90.9)	E (75.1)	F (88.8)	F (89.8)
			SB Appr	F (88.8)	F (93.7)	F (118.8)	F (88.7)	F (93.6)	F (118.8)	F (94.5)	F (111.4)	F (114.7)
			Overall	**B (14.1)**	**B (13.0)**	**B (10.1)**	**B (14.4)**	**B (12.6)**	**A (9.6)**	**A (9.8)**	**A (8.8)**	**A (9.0)**
3.	Fairfax Boulevard & Meredith Drive/Oak Street	Signal	EB Appr	B (15.7)	A (4.3)	A (3.3)	B (19.2)	A (4.3)	A (3.4)	A (5.0)	A (3.9)	A (3.1)
			WB Appr	C (23.3)	A (7.4)	A (8.3)	C (23.3)	A (7.5)	A (9.5)	A (4.4)	C (20.3)	C (23.4)
			NB Appr	F (83.8)	F (100.1)	F (100.0)	F (83.7)	F (99.7)	F (99.8)	F (86.3)	F (98.6)	F (100.4)
			SB Appr	F (89.5)	F (102.4)	F (102.5)	F (89.5)	F (102.4)	F (102.5)	F (89.5)	F (102.4)	F (102.5)
			Overall	**C (25.1)**	**B (18.1)**	**B (14.1)**	**C (27.4)**	**B (18.1)**	**B (14.8)**	**A (8.6)**	**C (20.8)**	**C (21.6)**
4.	Fairfax Boulevard & Site Entrance	Stop[3]	EB Appr	Future Intersection			Future Intersection			A (0.0)	A (0.0)	A (0.0)
			NB Appr							A (0.0)	B (10.2)	B (10.5)
5.	Fairfax Boulevard & Shops at Fairfax Entrance/Site Entrance	Signal	EB Appr	A (2.0)	A (1.0)	A (1.4)	A (2.4)	A (1.0)	A (1.4)	A (7.9)	B (17.6)	C (26.5)
			WB Appr	A (0.6)	A (1.2)	A (0.5)	A (0.6)	A (1.3)	A (0.5)	A (5.4)	D (42.5)	D (40.6)
			NB Appr	Future Approach			Future Approach			F (105.2)	F (96.0)	F (95.5)
			SB Appr	F (84.1)	F (104.7)	F (103.9)	F (84.1)	F (104.7)	F (103.9)	F (88.2)	F (93.9)	F (96.2)
			Overall	**A (2.6)**	**A (6.4)**	**A (4.8)**	**A (2.8)**	**A (6.2)**	**A (4.5)**	**B (11.5)**	**D (37.7)**	**D (39.1)**
6.	Fairfax Boulevard & Site Entrance	Stop	NB Appr	C (21.1)	B (13.6)	B (12.6)	C (22.4)	B (14.2)	B (13.1)	C (20.0)	B (12.5)	B (13.3)
7.	Fairfax Boulevard & Site Exit	Stop	NB Appr	Future Intersection			Future Intersection			B (11.4)	A (9.8)	A (9.8)
8.	Fairfax Boulevard & McLean Avenue & Warwick Road[4]	Signal	EB Appr	F (115.4)	F (117.3)	F (128.0)	F (115.4)	F (117.3)	F (128.0)	F (115.4)	F (117.3)	F (128.0)
			WB Appr	F (90.4)	F (103.7)	F (103.2)	F (90.4)	F (103.7)	F (103.2)	F (90.4)	F (103.7)	F (103.2)
			NB Appr	F (88.2)	F (106.5)	F (115.4)	F (88.2)	F (106.5)	F (115.4)	F (88.2)	F (106.5)	F (115.4)
			SB Appr	F (85.3)	F (104.4)	F (93.1)	F (85.3)	F (104.4)	F (93.1)	F (85.3)	F (104.4)	F (93.1)
			NE Appr	C (21.9)	B (12.3)	B (11.5)	C (24.2)	B (13.2)	B (12.6)	B (16.3)	B (15.2)	C (27.7)
			SW Appr	B (19.7)	C (23.3)	D (39.1)	C (20.1)	C (24.3)	D (43.7)	B (18.6)	C (23.8)	D (42.5)
			Overall	**C (28.5)**	**C (26.6)**	**D (37.9)**	**C (29.7)**	**C (27.1)**	**D (40.4)**	**C (25.2)**	**C (28.2)**	**D (44.6)**
9.	Walnut Street & Cedar Avenue[5]	Stop	WB Appr	B (10.1)	A (9.4)	A (9.5)	B (10.1)	A (9.4)	A (9.5)	A (8.9)	A (9.4)	A (9.9)
10.	Oak Street & Cedar Avenue	Stop	EB Appr	B (13.9)	A (8.5)	A (7.8)	B (14.3)	A (8.7)	A (7.9)	A (7.2)	A (7.6)	A (7.6)
			WB Appr	C (15.6)	B (10.9)	A (8.0)	C (16.2)	B (11.2)	A (8.1)	A (7.3)	A (7.8)	A (7.7)
			NB Appr	B (12.6)	A (9.0)	A (8.0)	B (13.6)	A (9.3)	A (8.2)	A (7.1)	A (7.7)	A (7.7)
			SB Appr	B (14.8)	A (9.4)	A (8.1)	C (15.3)	A (9.7)	A (8.4)	A (7.1)	A (7.7)	A (7.7)
			Overall	**B (14.3)**	**B (10.0)**	**A (8.0)**	**B (14.9)**	**B (10.2)**	**A (8.2)**	**A (7.2)**	**A (7.7)**	**A (7.7)**
11.	Cedar Avenue & McLean Avenue	Stop	EB Appr	A (7.7)	A (7.4)	A (7.7)	A (7.7)	A (7.4)	A (7.7)	A (7.7)	A (7.4)	A (7.7)
			WB Appr	A (7.1)	A (6.9)	A (7.1)	A (7.1)	A (6.9)	A (7.1)	A (7.1)	A (6.9)	A (7.1)
			SB Appr	A (7.0)	A (6.9)	A (7.0)	A (7.0)	A (6.9)	A (7.0)	A (7.0)	A (6.9)	A (7.0)
			Overall	**A (7.4)**	**A (7.0)**	**A (7.4)**	**A (7.4)**	**A (7.0)**	**A (7.4)**	**A (7.4)**	**A (7.0)**	**A (7.4)**
12.	Internal Road & Frontage Road	Stop	NB Appr	Future Intersection			Future Intersection			A (5.6)	A (4.8)	A (4.7)
13.	Internal Road & Frontage Road	Stop	NB Appr	Future Intersection			Future Intersection			A (9.2)	A (9.7)	A (9.7)

Notes:
1. Capacity analysis based on Highway Capacity Manual methodology, using Synchro 9.1.
2. Fairfax Boulevard/Main Street analyzed as east-west road; Lee Highway/Fairfax Boulevard analyzed as north-south roadway.
3. The eastbound right movement is neither signal nor stop-controlled.
4. Warwick Road analyzed as east-west road; McLean Avenue analyzed as north-south roadway; Fairfax Boulevard analyzed as northeast-southwest roadway.
5. Analyzed with northbound and southbound as free movements along Walnut Street, and westbound movements along Cedar Avenue as stop-controlled.

SECTION 8
TRANSPORTATION DEMAND MANAGEMENT

To take full advantage of the site's proximity to various transit facilities and services, a project sponsored Transportation Demand Management (TDM) program would encourage the use of transit, ridesharing, bicycling, and walking which would serve to decrease reliance on the single occupancy vehicles (SOV).

TDM is a general term for strategies that result in more efficient use of transportation resources. There are many different TDM strategies with a variety of results. They can improve the transportation options available to consumers, provide an incentive to choose more efficient travel patterns, or reduce the need for physical travel through mobility substitutes or more efficient land use. TDM strategies can change travel timing, route, destination, or mode.

The following strategies should be considered:

A. Designate a Transportation Management Coordinator (TMC) to implement the TDM program and advise residents, tenants, and employees of the availability and location of the TDM coordinator and program. It is anticipated that after the for sell units are sold, the Home Owner's Association (HOA) would assume the TMC duties and would provide information regarding the TDM program at least once a year. The TMC functions may include the following:

   1. Assist residents and employees in making effective and efficient commuting choices.

   2. Disseminate Metrorail, Metrobus, ridesharing, and other relevant transit options to new residents and employees.

   3. Solicit support from the Metropolitan Washington Council of Governments Commuter Connections (MWCOGCC) program, the Washington Metropolitan Area Transit Authority, the City of Fairfax, etc.

   4. Provide on-site assistance to residents and employees in forming and maintaining carpools and vanpools.

   5. Disseminate park-and-ride lot information to prospective carpoolers and vanpoolers.

   6. Encourage carpool/vanpool participants, transit users, bicyclists, and walkers to register in MWCOGCC Guaranteed Ride Home (GRH) program.

   7. Encourage residents and employees to ride bikes or walk to work.

   8. Provide on-site facilities for bicycle parking and/or storage, including bike racks for visitors and bike storage lockers for residents.

9. Market and promote the TDM Program among residents and employees through printed materials obtained from the City, MWCOGCC, Metro and/or the projects' web site (if available).

B. Commuter Center.

1. Designate a centralized space on-site as a "Commuter Center".

2. Install display racks that would provide information on local transit options.

3. Promote transit and multi-modal options provided by the City.

C. Incentives to use transit, including:

1. Providing information on Metrorail, CUE Bus, Metrobus, and other public transportation facilities, services, routes, schedules, and fares.

2. Disseminating information to transit users regarding free guaranteed rides home in cases of emergency.

3. Providing safe, convenient, and attractive pedestrian connections on site that connect to off-site facilities.

D. Carpool programs, including:

1. Disseminating information to carpoolers regarding free guaranteed rides home in cases of emergency.

2. Reserve a number of conveniently-located, parking spaces for carpools only for commercial use with registration.

E. Parking management, including:

1. Reserving a number of conveniently-located, parking spaces for carpools, and/or hybrid vehicles.

2. Implementing a parking pass system in order to manage the number of vehicular parking spaces allotted per resident or dwelling unit.

3. Providing an on-street parking space for a car sharing service (i.e., Zip or Flex Car).

SECTION 9
CONCLUSIONS

Based on the results of this traffic impact study, the following may be concluded:

1. The Lee Highway/Fairfax Boulevard/Main Street intersection currently operates at or near capacity at level of service (LOS) "E" during each of the three (3) studied peak periods.

2. All other signalized intersections currently operate at an overall LOS D or better during each of the three (3) studied peak periods based on Highway Capacity Manual calculations, however, substantial queues were observed along Fairfax Boulevard during the peak periods. Specifically, substantial queues along eastbound Fairfax Boulevard were observed during the AM peak period and substantial westbound queues were observed during the PM peak period.

3. Historic VDOT traffic data indicates that average daily traffic counts along Fairfax Boulevard and Main Street have decreased by 0.7% to 1.7% per year between 2008 and 2016.

4. The Novus Fairfax Gateway and Mount Vineyard pipeline developments are anticipated to generate 395 AM commuter peak hour trips, 418 PM school peak hour trips, and 576 PM commuter peak hour trips at full buildout.

5. Under future 2027 traffic conditions, without redevelopment of the Paul VI site, minimal increases in delay at the study intersections are expected due to the trips generated by pipeline development in the vicinity of the site and overall levels of service would remain generally consistent with existing conditions.

6. The existing Paul VI Catholic High School currently generates 1,005 trips during the AM commuter peak hour, 563 trips during the PM school peak hour, and 132 trips during the PM commuter peak hour.

7. The Applicant proposes to redevelop the site with 184 residential condominium units, 137 town homes, 20,000 SF of local serving retail, and 24,000 SF of community center space.

8. The project is estimated to generate 789 ***fewer*** AM peak commuter hour trips, 148 ***fewer*** PM school peak hour trips, and 294 ***more*** PM peak commuter hour trips than are currently generated by the high school.

9. Under future 2027 traffic conditions, with the development of the subject site, intersection levels of service would remain generally consistent with existing and background conditions. The analyses show that the Lee Highway/Fairfax Boulevard/Main Street will continue to operate at LOS E during all three peak periods studied. All other intersections will operate at LOS D or better during each of the studied peak periods.

10. A full turning movement site driveway is proposed along Fairfax Boulevard to align with the existing Shops at Fairfax entrance. The full access signalized intersection would operate at an overall LOS "D" or better during each of the studied peak periods.

11. A full turning movement, side-street stop-controlled entrance is proposed along Fairfax Boulevard between the Shops at Fairfax intersection and McLean Avenue. This unsignalized intersection will operate at LOS "C" or better during each of the studied time periods.

APPENDIX A

City of Fairfax Scoping Agreement

SCOPE OF WORK MEETING FORM

Information on the Project
Traffic Impact Analysis Base Assumptions

PAUL VI REDEVELOPMENT
CITY OF FAIRFAX, VIRGINIA
December 29, 2016

Contact Information			
Consultant Name: Tele: E-mail:	Christopher Turnbull - Wells + Associates, Inc. 703-917-6620 cturnbull@wellsandassociates.com		
Developer/Owner Name: Tele: E-mail:	Enrico C. Cecchi – Patrick Rhodes IDI Group Companies 703-558-7348 ececchi@idigroup.com		
Project Information			
Project Name:	Paul VI Redevelopment	Locality/County:	City of Fairfax
Project Location: (Attach regional and site specific location map)	The project is generally located south of Fairfax Boulevard, between Main Street and Chain Bridge Road. See Attachment 1 for the site location.		
Submission Type	Comp Plan ☐	Rezoning ☒ (SUP)	Site Plan ☐	Subd Plat ☐
Project Description: (Including details on the land use, acreage, phasing, access location, etc. Attach additional sheet if necessary)	The Applicant is proposing to redevelop the property with 575 residential units to include active adult, condominiums, townhomes, and multifamily units. Twenty thousand (20,000) square feet of commercial and community space is also proposed. The conceptual development plan is provided as Attachment 2.		
Proposed Use(s): (Check all that apply; attach additional pages as necessary)	Residential ☐	Commercial ☐	Mixed Use ☒	Other ☐
(See Attachment – 3)	**Residential Uses(s)** Number of Units: 575 ITE LU Code(s): 220, 230, & 251 **Commercial Use(s)** ITE LU Code(s): 820 Square Ft or Other Variable: 10,000		**Other Use(s)** ITE LU Code(s): _____ _____ _____ Independent Variable(s): _____ _____ _____	

Total Peak Hour Trip Projection:	Less than 100 ☐	100 – 499 ☒	500 – 999 ☐	1,000 or more ☐

Traffic Impact Analysis Assumptions

Study Period	Existing Year: 2017	Build-out Year: 2027	Design Year: n/a
Study Area Boundaries	North: Fairfax Boulevard (US Route 50)	South: Cedar Avenue	
	East: McLean Avenue	West: Oak Street	
External Factors That Could Affect Project (Planned road improvements, other nearby developments)	• Novus Fairfax Gateway redevelopment • Mount Vineyard (Oak Knolls) • Kamp Washington intersection improvements • Fairfax Boulevard at Chain Bridge Road intersection improvements		
Consistency With Comprehensive Plan (Land use, transportation plan)	A change in land use from Institutional was not anticipated with the lastest Comp. Plan Update. The current C-2 Commercial/R-2 zoning would permit the proposed land use via a rezoning. The roadway network is consistent with the intent of the City Transportation Plan.		
Available Traffic Data (Historical, forecasts)	VDOT historical traffic count data indicates: 2015 VDOT Average Annual Daily Traffic (AADT): Fairfax Boulevard (US Route 50): 35,000 vpd (Main Street to Chain Bridge Road) 2014 VDOT Average Annual Daily Traffic (AADT): Fairfax Boulevard (US Route 50): 36,000 vpd (Main Street to Chain Bridge Road) 2013 VDOT Average Annual Daily Traffic (AADT): Fairfax Boulevard (US Route 50): 36,000 vpd (Main Street to Chain Bridge Road) Future Forecasts will be developed		
Trip Distribution (Pending data from existing traffic counts) (See Attachment 4)	From the West: 35%	From the Northeast: 50%	
	From the North: 0%	From the Southeast: 15%	
Annual Vehicle Trip Growth Rate:	1% or per VDOT AADT counts	Peak Period for Study (check all that apply)	☒ AM ☒ PM ☐ SAT
		Peak Hour of the Generator	N/A
Study Intersections and/or Road Segments (See Attachment 4)	1. Fairfax Boulevard/Main Street	6. Walnut Street/Cedar Avenue	
	2. Fairfax Boulevard/Fairchester Drive, Walnut Street	7. Oak Street/Cedar Avenue	
	3. Fairfax Boulevard/Meredith Drive, Oak Street	8. McLean Avenue/Cedar Avenue	
	4. Fairfax Boulevard/Shopping Center Entrance – Future Site Entrance	9. Chain Bridge Road/Cedar Avenue	
	5. Fairfax Boulevard /McLean Avenue/ Warwick Avenue		
Trip Adjustment Factors	Internal allowance: ☐ Yes ☒ No Reduction: _____% trips	Pass-by allowance: ☐ Yes ☒ No Reduction: _____ %trips	

Software Methodology	☒ Synchro ☐ HCS (v.2000/+) ☐ aaSIDRA ☐ CORSIM ☐ Other ____
Traffic Signal Proposed or Affected (Analysis software to be used, progression speed, cycle length)	Project anticipates adding 4th leg to Fairfax Drive/Shopping Center signal. Capacity analyses will be based on Synchro (version 9.1).
Improvement(s) Assumed or to be Considered	A full-access entrance is proposed as noted above along with a frontage road or slow lane as envisioned in the Master Plan for Fairfax Boulevard.
Background Traffic Studies Considered	• Novus Fairfax Gateway Traffic Impact Analysis • Mount Vineyard (Oak Knolls) Traffic Impact Study
Plan Submission	☐ Master Development Plan (MDP) ☒ Generalized Development Plan (GDP) ☐ Preliminary/Sketch Plan ☐ Other Plan type (Final Site, Subd. Plan)
Additional Issues to be Addressed	☐ Queuing analysis ☐ Actuation/Coordination ☐ Weaving analysis ☐ Merge analysis ☐ Bike/Ped Accommodations ☐ Intersection(s) ☐ TDM Measures ☐ Other ____

NOTES on ASSUMPTIONS:

1. Synchro 9.1 will be used to conduct capacity analysis with peak hour factors measured in the field for existing conditions (0.85<PHF<0.92). Under background and total future conditions a PHF of 0.92 will be used for all movements.
2. Existing Synchro (signal timing) files to be provided by the city.

SCOPE OF WORK MEETING

ADDITIONS TO THE REQUIRED ELEMENTS, CHANGES TO THE METHODOLOGY OR STANDARD ASSUMPTIONS, AND SIGNATURE PAGE

Any additions to the Required Elements or changes to the Methodology or Standard Assumptions due to special circumstances that are approved by the City of Fairfax:

_____

_____

_____

_____

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_____

AGREED: _____ DATE: 12/29/2016
Consultant

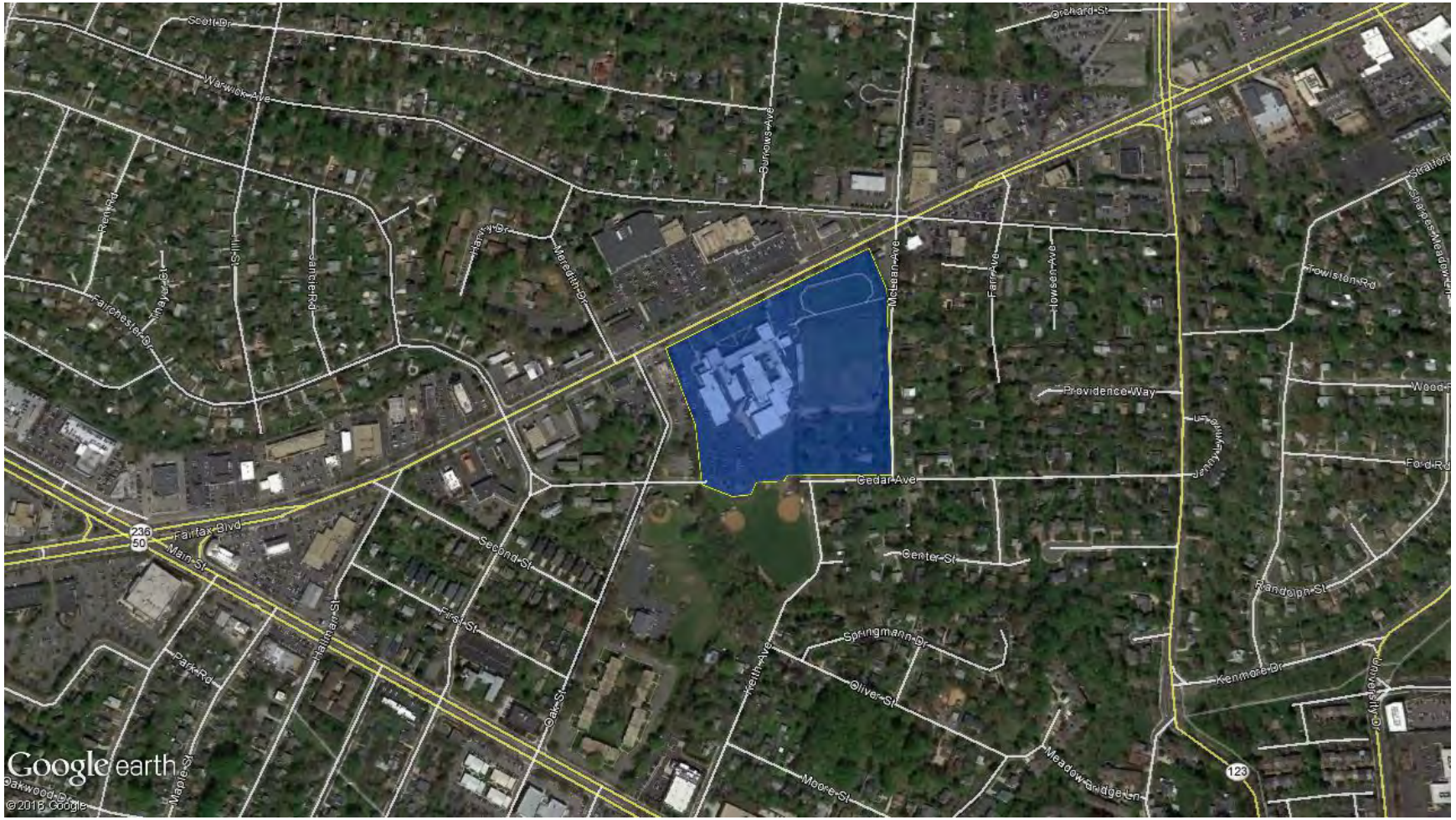
PRINT NAME: Christopher Turnbull
Consultant

SIGNED: Wendy Block Sanford DATE: January 12, 2017

PRINT NAME: Wendy Sanford

Attachments:
Attachment 1 - Site Location
Attachment 2 – Conceptual Development Plans – Paul VI Scheme B
Attachment 3 – Trip Generation
Attachment 4 – Study Intersections and Site Trip Distribution Percentages

Attachment 1 – Site Location



Attachment 2 - Conceptual Development Plan

THE IDI GROUP COMPANIES

SCHEME B

Paul VI Development | Fairfax, Virginia

BLANK ROME | WELLS ASSOCIATES | Thunderbird | christopher consultants | streetsense.

July 26, 2016

Attachment 3

Paul VI Redevelopment - Scheme B

Site Trip Generation Comparison

Development	ITE Land Use Code[1]	Amount	Units	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM School Peak (2:45-3:45) In	PM School Peak (2:45-3:45) Out	PM School Peak (2:45-3:45) Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Average Daily Trips
Existing													
Private High School[2,3]			Actual Trips	676	311	987	157	397	554	37	74	111	3,270
Current Zoning[4]													
Retail	**820**	**132,500**	**SF**	**79**	**48**	**127**	**318**	**359**	**677**	**347**	**376**	**723**	**8,154**
Proposed[4]													
Apartments	220	214	DU	22	87	109	58	45	102	88	47	135	1,420
Condominiums/Townhomes	230	327	DU	23	110	133	37	32	69	107	52	159	1,803
Senior Housing	251	34	DU	13	23	36	37	35	73	12	8	20	181
Subtotal Residential		575	DU	58	220	278	132	111	243	207	107	314	3,404
Local Serving Retail	820	10,000	SF	6	4	10	59	67	126	61	67	128	1,520
Total Proposed Trips				**64**	**224**	**288**	**191**	**178**	**369**	**268**	**174**	**442**	**4,924**
Comparison													
Actual vs. Current Zoning				**-597**	**-263**	**-860**	**161**	**-38**	**123**	**310**	**302**	**612**	**4,884**
Actual vs. Proposed				**-612**	**-87**	**-699**	**34**	**-219**	**-185**	**231**	**100**	**331**	**1,654**

Notes:

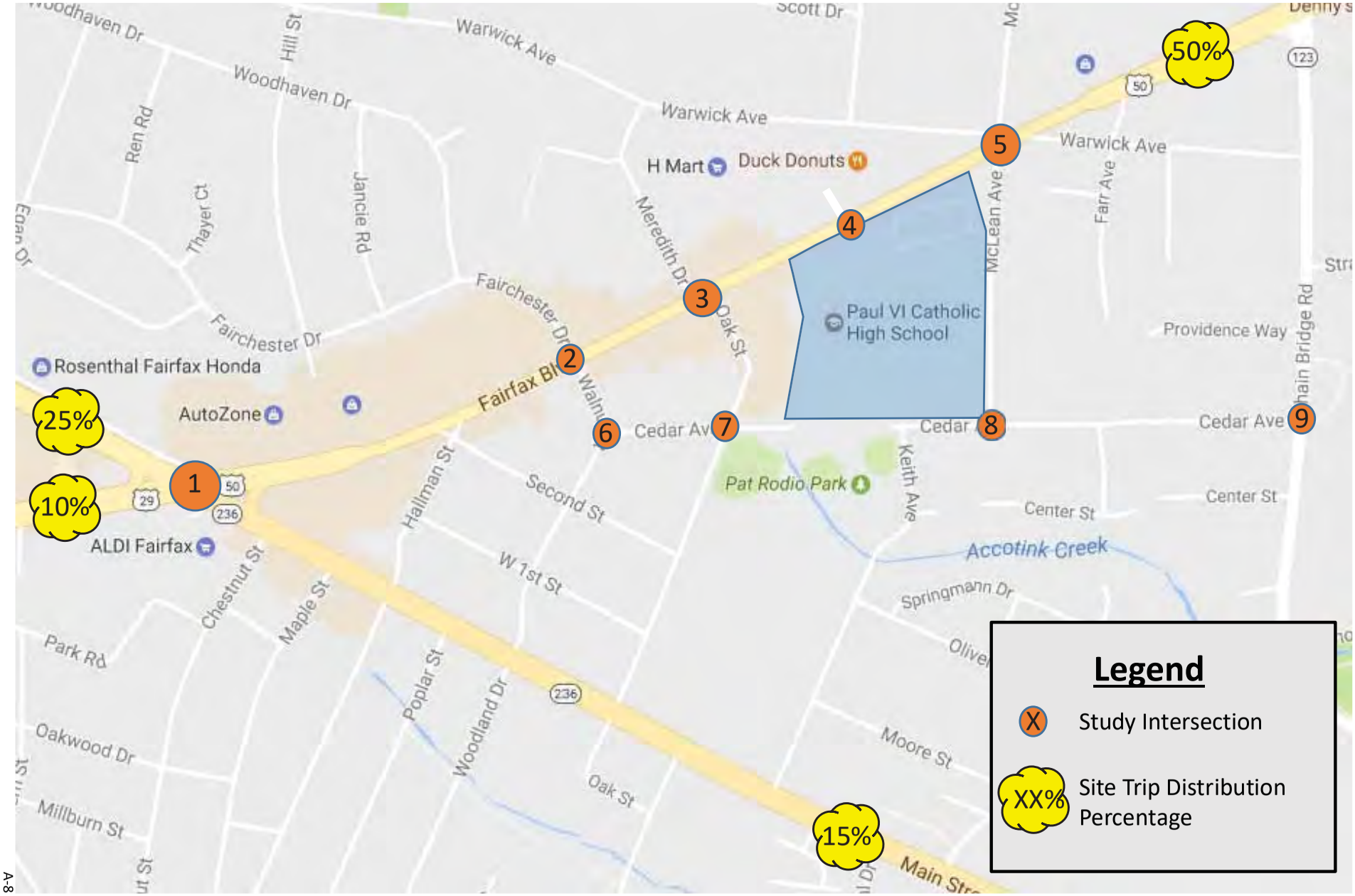
1 Institute of Transportation Engineer's (ITE), Trip Generation Manual, 9th Edition

2 Based on traffic counts completed on February 3, 2016.

3 Actual ADT estimated based on ITE ADT and PM school peak ratio.

4 PM School Peak trips based on residential and retail diurnal rates compiled from ITE and Wells + Associates files.

Attachment 4 - Study Intersections and Site Trip Distribution Percentages



APPENDIX B

Existing Traffic Volumes

Wells + Associates, Inc.

McLean, Virginia

Turning Movement Count - All Vehicles

PROJECT: Paul VI Development
W+A JOB NO: 6709
INTERSECTION: Fairfax Blvd. & Main St.
LOCATION: Fairfax County,VA

DATE: 1/5/2017
DAY: Thursday
WEATHER: clear
COUNTED BY: Matt,Chintia & Silvia
INPUTED BY: agan

SOUTHBOUND ROAD: Fairfax Boulevard - 50
NORTHBOUND ROAD: Main Street - 236
WESTBOUND ROAD: Fairfax Boulevard - 50
EASTBOUND ROAD: Lee Highway - 29

Time Period	Southbound Fairfax Boulevard - 50					Westbound Fairfax Boulevard - 50					Northbound Main Street - 236					Eastbound Lee Highway - 29					North & South	East & West	Total
	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF			
AM 15 Minute Volumes																							
6:00 AM - 6:15 AM	7	77	59	143		16	9	4	29		2	44	18	64		63	151	1	215		207	244	451
6:15 AM - 6:30 AM	1	116	127	244		20	11	2	33		1	66	21	88		72	251	0	323		332	356	688
6:30 AM - 6:45 AM	1	139	145	285		25	23	5	53		8	89	19	116		83	227	2	312		401	365	766
6:45 AM - 7:00 AM	3	139	154	296		23	47	6	76		7	114	46	167		148	259	1	408		463	484	947
7:00 AM - 7:15 AM	1	138	164	303		26	48	6	80		9	102	44	155		142	274	0	416		458	496	954
7:15 AM - 7:30 AM	5	196	214	415		58	52	9	119		11	131	39	181		157	324	1	482		596	601	1197
7:30 AM - 7:45 AM	3	220	158	381		66	55	17	138		11	169	56	236		201	244	0	445		617	583	1200
7:45 AM - 8:00 AM	3	198	122	323		54	105	19	178		4	163	87	254		182	223	2	407		577	585	1162
8:00 AM - 8:15 AM	4	219	128	351		51	75	12	138		8	171	77	256		129	209	1	339		607	477	1084
8:15 AM - 8:30 AM	3	207	131	341		67	109	13	189		15	168	87	270		184	239	2	425		611	614	1225
8:30 AM - 8:45 AM	4	227	117	348		49	70	9	128		5	169	86	260		188	239	4	431		608	559	1167
8:45 AM - 9:00 AM	6	192	98	296		60	96	9	165		8	181	91	280		231	267	2	500		576	665	1241
Total	41	2068	1617	3726		515	700	111	1326		89	1567	671	2327		1780	2907	16	4703		6053	6029	12082
AM One Hour Volumes																							
6:00 AM - 7:00 AM	12	471	485	968	0.82	84	90	17	191	0.63	18	313	104	435	0.65	366	888	4	1258	0.77	1403	1449	2852
6:15 AM - 7:15 AM	6	532	590	1128	0.93	94	129	19	242	0.76	25	371	130	526	0.79	445	1011	3	1459	0.88	1654	1701	3355
6:30 AM - 7:30 AM	10	612	677	1299	0.78	132	170	26	328	0.69	35	436	148	619	0.85	530	1084	4	1618	0.84	1918	1946	3864
6:45 AM - 7:45 AM	12	693	690	1395	0.84	173	202	38	413	0.75	38	516	185	739	0.78	648	1101	2	1751	0.91	2134	2164	4298
7:00 AM - 8:00 AM	12	752	658	1422	0.86	204	260	51	515	0.72	35	565	226	826	0.81	682	1065	3	1750	0.91	2248	2265	4513
7:15 AM - 8:15 AM	15	833	622	1470	0.89	229	287	57	573	0.80	34	634	259	927	0.91	669	1000	4	1673	0.87	2397	2246	4643
7:30 AM - 8:30 AM	13	844	539	1396	0.92	238	344	61	643	0.85	38	671	307	1016	0.94	696	915	5	1616	0.91	2412	2259	4671
7:45 AM - 8:45 AM	14	851	498	1363	0.97	221	359	53	633	0.84	32	671	337	1040	0.96	683	910	9	1602	0.93	2403	2235	4638
8:00 AM - 9:00 AM	**17**	**845**	**474**	**1336**	**0.95**	**227**	**350**	**43**	**620**	**0.82**	**36**	**689**	**341**	**1066**	**0.95**	**732**	**954**	**9**	**1695**	**0.85**	**2402**	**2315**	**4717**
PM 15 Minute Volumes																							
2:00 PM - 2:15 PM	2	132	78	212		51	153	21	225		23	179	114	316		101	156	0	257		528	482	1010
2:15 PM - 2:30 PM	61	143	57	261		56	151	21	228		20	177	138	335		120	145	5	270		596	498	1094
2:30 PM - 2:45 PM	28	149	87	264		67	149	27	243		11	182	147	340		122	147	0	269		604	512	1116
2:45 PM - 3:00 PM	0	144	133	277		86	149	18	253		23	208	126	357		88	188	6	282		634	535	1169
3:00 PM - 3:15 PM	0	127	126	253		103	148	24	275		12	202	159	373		125	194	8	327		626	602	1228
3:15 PM - 3:30 PM	3	122	88	213		107	158	14	279		10	210	180	400		114	210	7	331		613	610	1223
3:30 PM - 3:45 PM	0	121	91	212		92	173	16	281		8	223	152	383		130	189	9	328		595	609	1204
3:45 PM - 4:00 PM	3	122	102	227		76	200	11	287		11	231	170	412		156	217	13	386		639	673	1312
4:00 PM - 4:15 PM	1	131	104	236		70	143	10	223		10	246	159	415		123	136	1	260		651	483	1134
4:15 PM - 4:30 PM	3	133	87	223		88	191	13	292		8	241	157	406		121	133	13	267		629	559	1188
4:30 PM - **4:45 PM**	9	139	102	250		118	209	14	341		14	244	177	435		143	138	12	293		685	634	1319
4:45 PM - 5:00 PM	19	151	104	274		117	238	9	364		8	241	152	401		133	132	6	271		675	635	1310
5:00 PM - 5:15 PM	20	134	98	252		104	239	16	359		7	237	160	404		145	153	7	305		656	664	1320
5:15 PM - 5:30 PM	26	127	81	234		98	229	10	337		7	231	149	387		102	152	9	263		621	600	1221
5:30 PM - 5:45 PM	17	127	86	230		88	242	13	343		16	212	158	386		185	154	11	350		616	693	1309
5:45 PM - 6:00 PM	13	132	95	240		94	262	17	373		10	202	145	357		190	143	0	333		597	706	1303
6:00 PM - 6:15 PM	19	125	70	214		83	248	10	341		5	208	144	357		168	125	7	300		571	641	1212
6:15 PM - 6:30 PM	20	131	63	214		98	239	11	348		10	194	157	361		88	140	2	230		575	578	1153
6:30 PM - 6:45 PM	16	124	44	184		76	240	14	330		8	177	135	320		69	116	5	190		504	520	1024
6:45 PM - 7:00 PM	0	0	0	0		0	224	17	241		10	187	129	326		83	110	5	198		326	439	765
Total	163	1454	934	2551		1034	2704	154	3892		113	2620	1822	4555		1550	1632	78	3260		7106	7152	14258
PM One Hour Volumes																							
2:00 PM - 3:00 PM	91	568	355	1014	0.92	260	602	87	949	0.94	77	746	525	1348	0.94	431	636	11	1078	0.96	2362	2027	4389
2:15 PM - 3:15 PM	89	563	403	1055	0.95	312	597	90	999	0.91	66	769	570	1405	0.94	455	674	19	1148	0.88	2460	2147	4607
2:30 PM - 3:30 PM	31	542	434	1007	0.91	363	604	83	1050	0.94	56	802	612	1470	0.92	449	739	21	1209	0.91	2477	2259	4736
2:45 PM - 3:45 PM	**3**	**514**	**438**	**955**	**0.86**	**388**	**628**	**72**	**1088**	**0.97**	**53**	**843**	**617**	**1513**	**0.95**	**457**	**781**	**30**	**1268**	**0.96**	**2468**	**2356**	**4824**
3:00 PM - 4:00 PM	6	492	407	905	0.89	378	679	65	1122	0.98	41	866	661	1568	0.95	525	810	37	1372	0.89	2473	2494	4967
3:15 PM - 4:15 PM	7	496	385	888	0.94	345	674	51	1070	0.93	39	910	661	1610	0.97	523	752	30	1305	0.85	2498	2375	4873
3:30 PM - 4:30 PM	7	507	384	898	0.95	326	707	50	1083	0.93	37	941	638	1616	0.97	530	675	36	1241	0.80	2514	2324	4838
3:45 PM - 4:45 PM	16	525	395	936	0.94	352	743	48	1143	0.84	43	962	663	1668	0.96	543	624	39	1206	0.78	2604	2349	4953
4:00 PM - 5:00 PM	32	554	397	983	0.90	393	781	46	1220	0.84	40	972	645	1657	0.95	520	539	32	1091	0.93	2640	2311	4951
4:15 PM - 5:15 PM	51	557	391	999	0.91	427	877	52	1356	0.93	37	963	646	1646	0.95	542	556	38	1136	0.93	2645	2492	5137
4:30 PM - 5:30 PM	**74**	**551**	**385**	**1010**	**0.92**	**437**	**915**	**49**	**1401**	**0.96**	**36**	**953**	**638**	**1627**	**0.94**	**523**	**575**	**34**	**1132**	**0.93**	**2637**	**2533**	**5170**
4:45 PM - 5:45 PM	82	539	369	990	0.90	407	948	48	1403	0.96	38	921	619	1578	0.98	565	591	33	1189	0.85	2568	2592	5160
5:00 PM - 6:00 PM	76	520	360	956	0.95	384	972	56	1412	0.95	40	882	612	1534	0.95	622	602	27	1251	0.89	2490	2663	5153
5:15 PM - 6:15 PM	75	511	332	918	0.96	363	981	50	1394	0.93	38	853	596	1487	0.96	645	574	27	1246	0.89	2405	2640	5045
5:30 PM - 6:30 PM	69	515	314	898	0.94	363	991	51	1405	0.94	41	816	604	1461	0.95	631	562	20	1213	0.87	2359	2618	4977
5:45 PM - 6:45 PM	68	512	272	852	0.89	351	989	52	1392	0.93	33	781	581	1395	0.97	515	524	14	1053	0.79	2247	2445	4692
6:00 PM - 7:00 PM	55	380	177	612	0.71	257	951	52	1260	0.91	33	766	565	1364	0.94	408	491	19	918	0.77	1976	2178	4154

Wells + Associates, Inc.

McLean, Virginia

Turning Movement Count - All Vehicles

PROJECT: Paul VI Development
W+A JOB NO: 6709
INTERSECTION: Fairfax Blvd. & Fairchester Dr.
LOCATION: Fairfax County,VA

DATE: 2/3/2016
DAY: Wednesday
WEATHER: rain
COUNTED BY: Luz & Eduvina
INPUTED BY: agan

SOUTHBOUND ROAD: Fairchester Drive
NORTHBOUND ROAD: Walnut Street
WESTBOUND ROAD: Fairfax Boulevard - 50
EASTBOUND ROAD: Fairfax Boulevard - 50

Time Period	Southbound Fairchester Drive					Westbound Fairfax Boulevard - 50					Northbound Walnut Street					Eastbound Fairfax Boulevard - 50					North & South	East & West	Total
	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF			
AM 15 Minute Volumes																							
6:00 AM - 6:15 AM	0	2	1	3		0	33	1	34		7	0	1	8		0	246	1	247		11	281	292
6:15 AM - 6:30 AM	3	0	5	8		3	41	3	47		8	0	2	10		1	356	3	360		18	407	425
6:30 AM - 6:45 AM	5	2	1	8		4	47	2	53		8	1	0	9		4	384	7	395		17	448	465
6:45 AM - 7:00 AM	4	6	7	17		8	76	2	86		16	2	2	20		1	390	2	393		37	479	516
7:00 AM - 7:15 AM	5	14	3	22		5	66	10	81		9	11	7	27		11	416	1	428		49	509	558
7:15 AM - 7:30 AM	3	11	10	24		8	94	11	113		18	4	9	31		18	439	10	467		55	580	635
7:30 AM - 7:45 AM	4	12	9	25		5	125	9	139		28	10	27	65		4	436	3	443		90	582	672
7:45 AM - 8:00 AM	6	6	10	22		9	158	5	172		15	3	13	31		1	401	3	405		53	577	630
8:00 AM - 8:15 AM	6	7	7	20		4	137	7	148		26	11	7	44		1	370	8	379		64	527	591
8:15 AM - 8:30 AM	3	8	2	13		3	180	11	194		13	10	3	26		1	409	1	411		39	605	644
8:30 AM - 8:45 AM	3	10	7	20		3	148	15	166		19	6	2	27		3	364	6	373		47	539	586
8:45 AM - 9:00 AM	3	4	9	16		1	156	7	164		18	4	5	27		5	382	10	397		43	561	604
Total	45	82	71	198		53	1261	83	1397		185	62	78	325		50	4593	55	4698		523	6095	6618
AM One Hour Volumes																							
6:00 AM - 7:00 AM	12	10	14	36	0.53	15	197	8	220	0.64	39	3	5	47	0.59	6	1376	13	1395	0.88	83	1615	1698
6:15 AM - 7:15 AM	17	22	16	55	0.63	20	230	17	267	0.78	41	14	11	66	0.61	17	1546	13	1576	0.92	121	1843	1964
6:30 AM - 7:30 AM	17	33	21	71	0.74	25	283	25	333	0.74	51	18	18	87	0.70	34	1629	20	1683	0.90	158	2016	2174
6:45 AM - 7:45 AM	16	43	29	88	0.88	26	361	32	419	0.75	71	27	45	143	0.55	34	1681	16	1731	0.93	231	2150	2381
7:00 AM - 8:00 AM	18	43	32	93	0.93	27	443	35	505	0.73	70	28	56	154	0.59	34	1692	17	1743	0.93	247	2248	2495
7:15 AM - 8:15 AM	19	36	36	91	0.91	26	514	32	572	0.83	87	28	56	171	0.66	24	1646	24	1694	0.91	262	2266	2528
7:30 AM - 8:30 AM	**19**	**33**	**28**	**80**	**0.80**	**21**	**600**	**32**	**653**	**0.84**	**82**	**34**	**50**	**166**	**0.64**	**7**	**1616**	**15**	**1638**	**0.92**	**246**	**2291**	**2537**
7:45 AM - 8:45 AM	18	31	26	75	0.85	19	623	38	680	0.88	73	30	25	128	0.73	6	1544	18	1568	0.95	203	2248	2451
8:00 AM - 9:00 AM	15	29	25	69	0.86	11	621	40	672	0.87	76	31	17	124	0.70	10	1525	25	1560	0.95	193	2232	2425
PM 15 Minute Volumes																							
2:00 PM - 2:15 PM	3	1	5	9		3	224	14	241		12	3	10	25		6	187	4	197		34	438	472
2:15 PM - 2:30 PM	5	6	6	17		5	173	9	187		8	3	4	15		5	182	3	190		32	377	409
2:30 PM - 2:45 PM	1	1	5	7		1	164	12	177		17	10	4	31		8	209	4	221		38	398	436
2:45 PM - 3:00 PM	1	2	8	11		3	198	17	218		11	2	13	26		7	223	4	234		37	452	489
3:00 PM - 3:15 PM	6	3	8	17		6	247	11	264		7	32	45	84		4	242	5	251		101	515	616
3:15 PM - 3:30 PM	2	11	11	24		6	305	8	319		17	14	29	60		7	192	3	202		84	521	605
3:30 PM - 3:45 PM	3	12	17	32		4	265	11	280		10	6	19	35		3	220	7	230		67	510	577
3:45 PM - 4:00 PM	3	1	2	6		3	289	22	314		12	4	14	30		7	215	8	230		36	544	580
4:00 PM - **4:15 PM**	1	5	7	13		2	354	20	376		12	6	13	31		6	206	6	218		44	594	638
4:15 PM - 4:30 PM	8	6	15	29		6	297	5	308		13	7	10	30		1	201	8	210		59	518	577
4:30 PM - 4:45 PM	3	11	5	19		2	329	5	336		19	7	10	36		3	190	4	197		55	533	588
4:45 PM - 5:00 PM	3	3	6	12		1	317	18	336		19	9	8	36		2	214	10	226		48	562	610
5:00 PM - 5:15 PM	3	10	6	19		3	318	12	333		9	9	4	22		2	173	4	179		41	512	553
5:15 PM - 5:30 PM	1	4	8	13		2	306	4	312		12	3	1	16		3	172	5	180		29	492	521
5:30 PM - 5:45 PM	4	8	8	20		1	330	11	342		8	9	3	20		1	206	9	216		40	558	598
5:45 PM - 6:00 PM	5	12	2	19		3	321	9	333		8	11	4	23		5	201	9	215		42	548	590
6:00 PM - 6:15 PM	6	15	1	22		19	277	4	300		10	8	7	25		5	183	6	194		47	494	541
6:15 PM - 6:30 PM	2	10	4	16		1	325	7	333		21	6	9	36		6	176	10	192		52	525	577
6:30 PM - 6:45 PM	4	2	8	14		2	254	9	265		11	8	4	23		5	171	13	189		37	454	491
6:45 PM - 7:00 PM	1	2	8	11		4	266	5	275		12	6	2	20		7	169	15	191		31	466	497
Total	41	88	78	207		46	3694	109	3849		154	89	75	318		46	2262	99	2407		525	6256	6781
PM One Hour Volumes																							
2:00 PM - 3:00 PM	10	10	24	44	0.65	12	759	52	823	0.85	48	18	31	97	0.78	26	801	15	842	0.90	141	1665	1806
2:15 PM - 3:15 PM	13	12	27	52	0.76	15	782	49	846	0.80	43	47	66	156	0.46	24	856	16	896	0.89	208	1742	1950
2:30 PM - 3:30 PM	10	17	32	59	0.61	16	914	48	978	0.77	52	58	91	201	0.60	26	866	16	908	0.90	260	1886	2146
2:45 PM - 3:45 PM	**12**	**28**	**44**	**84**	**0.66**	**19**	**1015**	**47**	**1081**	**0.85**	**45**	**54**	**106**	**205**	**0.61**	**21**	**877**	**19**	**917**	**0.91**	**289**	**1998**	**2287**
3:00 PM - 4:00 PM	14	27	38	79	0.62	19	1106	52	1177	0.92	46	56	107	209	0.62	21	869	23	913	0.91	288	2090	2378
3:15 PM - 4:15 PM	9	29	37	75	0.59	15	1213	61	1289	0.86	51	30	75	156	0.65	23	833	24	880	0.96	231	2169	2400
3:30 PM - 4:30 PM	15	24	41	80	0.63	15	1205	58	1278	0.85	47	23	56	126	0.90	17	842	29	888	0.97	206	2166	2372
3:45 PM - 4:45 PM	15	23	29	67	0.58	13	1269	52	1334	0.89	56	24	47	127	0.88	17	812	26	855	0.93	194	2189	2383
4:00 PM - 5:00 PM	**15**	**25**	**33**	**73**	**0.63**	**11**	**1297**	**48**	**1356**	**0.90**	**63**	**29**	**41**	**133**	**0.92**	**12**	**811**	**28**	**851**	**0.94**	**206**	**2207**	**2413**
4:15 PM - 5:15 PM	17	30	32	79	0.68	12	1261	40	1313	0.98	60	32	32	124	0.86	8	778	26	812	0.90	203	2125	2328
4:30 PM - 5:30 PM	10	28	25	63	0.83	8	1270	39	1317	0.98	59	28	23	110	0.76	10	749	23	782	0.87	173	2099	2272
4:45 PM - 5:45 PM	11	25	28	64	0.80	7	1271	45	1323	0.97	48	30	16	94	0.65	8	765	28	801	0.89	158	2124	2282
5:00 PM - 6:00 PM	13	34	24	71	0.89	9	1275	36	1320	0.96	37	32	12	81	0.88	11	752	27	790	0.91	152	2110	2262
5:15 PM - 6:15 PM	16	39	19	74	0.84	25	1234	28	1287	0.94	38	31	15	84	0.84	14	762	29	805	0.93	158	2092	2250
5:30 PM - 6:30 PM	17	45	15	77	0.88	24	1253	31	1308	0.96	47	34	23	104	0.72	17	766	34	817	0.95	181	2125	2306
5:45 PM - 6:45 PM	17	39	15	71	0.81	25	1177	29	1231	0.92	50	33	24	107	0.74	21	731	38	790	0.92	178	2021	2199
6:00 PM - 7:00 PM	13	29	21	63	0.72	26	1122	25	1173	0.88	54	28	22	104	0.72	23	699	44	766	0.99	167	1939	2106

Wells + Associates, Inc.

McLean, Virginia

Turning Movement Count - All Vehicles

PROJECT: Paul VI Development
W+A JOB NO: 6709
INTERSECTION: Fairfax Blvd. & Meredith Dr.
LOCATION: Fairfax County,VA

DATE: 2/3/2016
DAY: Wednesday
WEATHER: rain
COUNTED BY: Dzemo & Whitney
INPUTED BY: agan

SOUTHBOUND ROAD: Meredith Drive
NORTHBOUND ROAD: Oak Street
WESTBOUND ROAD: Fairfax Boulevard - 50
EASTBOUND ROAD: Fairfax Boulevard - 50

Time Period	Southbound Meredith Drive					Westbound Fairfax Boulevard - 50					Northbound Oak Street					Eastbound Fairfax Boulevard - 50					North & South	East & West	Total
	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF			
AM 15 Minute Volumes																							
6:00 AM - 6:15 AM	2	0	2	4		0	35	1	36		5	0	2	7		0	269	1	270		11	306	317
6:15 AM - 6:30 AM	1	0	1	2		0	50	3	53		6	0	1	7		2	365	0	367		9	420	429
6:30 AM - 6:45 AM	2	0	1	3		0	53	10	63		10	0	0	10		2	361	2	365		13	428	441
6:45 AM - 7:00 AM	1	0	4	5		0	90	15	105		18	0	2	20		6	398	1	405		25	510	535
7:00 AM - 7:15 AM	3	0	12	15		1	70	26	97		31	0	11	42		12	396	1	409		57	506	563
7:15 AM - 7:30 AM	3	0	20	23		1	112	34	147		40	1	25	66		32	385	0	417		89	564	653
7:30 AM - 7:45 AM	4	0	17	21		0	131	23	154		35	0	22	57		7	434	2	443		78	597	675
7:45 AM - 8:00 AM	7	0	6	13		1	145	24	170		28	1	12	41		1	377	0	378		54	548	602
8:00 AM - 8:15 AM	1	0	5	6		1	163	20	184		12	2	5	19		0	377	4	381		25	565	590
8:15 AM - 8:30 AM	1	0	6	7		0	208	16	224		16	4	4	24		2	419	2	423		31	647	678
8:30 AM - 8:45 AM	2	0	2	4		0	172	15	187		21	3	2	26		5	363	5	373		30	560	590
8:45 AM - 9:00 AM	4	1	2	7		0	161	16	177		22	1	3	26		4	389	3	396		33	573	606
Total	31	1	78	110		4	1390	203	1597		244	12	89	345		73	4533	21	4627		455	6224	6679
AM One Hour Volumes																							
6:00 AM - 7:00 AM	6	0	8	14	0.70	0	228	29	257	0.61	39	0	5	44	0.55	10	1393	4	1407	0.87	58	1664	1722
6:15 AM - 7:15 AM	7	0	18	25	0.42	1	263	54	318	0.76	65	0	14	79	0.47	22	1520	4	1546	0.94	104	1864	1968
6:30 AM - 7:30 AM	9	0	37	46	0.50	2	325	85	412	0.70	99	1	38	138	0.52	52	1540	4	1596	0.96	184	2008	2192
6:45 AM - 7:45 AM	11	0	53	64	0.70	2	403	98	503	0.82	124	1	60	185	0.70	57	1613	4	1674	0.94	249	2177	2426
7:00 AM - 8:00 AM	17	0	55	72	0.78	3	458	107	568	0.84	134	2	70	206	0.78	52	1592	3	1647	0.93	278	2215	2493
7:15 AM - 8:15 AM	15	0	48	63	0.68	3	551	101	655	0.89	115	4	64	183	0.69	40	1573	6	1619	0.91	246	2274	2520
7:30 AM - 8:30 AM	**13**	**0**	**34**	**47**	**0.56**	**2**	**647**	**83**	**732**	**0.82**	**91**	**7**	**43**	**141**	**0.62**	**10**	**1607**	**8**	**1625**	**0.92**	**188**	**2357**	**2545**
7:45 AM - 8:45 AM	11	0	19	30	0.58	2	688	75	765	0.85	77	10	23	110	0.67	8	1536	11	1555	0.92	140	2320	2460
8:00 AM - 9:00 AM	8	1	15	24	0.86	1	704	67	772	0.86	71	10	14	95	0.91	11	1548	14	1573	0.93	119	2345	2464
PM 15 Minute Volumes																							
2:00 PM - 2:15 PM	13	0	8	21		2	232	25	259		21	0	3	24		2	187	6	195		45	454	499
2:15 PM - 2:30 PM	11	0	4	15		1	208	25	234		22	2	5	29		5	164	7	176		44	410	454
2:30 PM - 2:45 PM	9	0	6	15		2	195	16	213		16	0	3	19		11	209	7	227		34	440	474
2:45 PM - 3:00 PM	5	0	4	9		2	224	33	259		24	3	2	29		17	211	6	234		38	493	531
3:00 PM - 3:15 PM	13	0	7	20		0	305	27	332		49	6	29	84		10	211	9	230		104	562	666
3:15 PM - 3:30 PM	12	0	6	18		0	327	14	341		43	7	25	75		7	198	8	213		93	554	647
3:30 PM - 3:45 PM	8	0	7	15		3	319	17	339		27	2	15	44		8	215	5	228		59	567	626
3:45 PM - 4:00 PM	14	0	9	23		2	367	14	383		22	4	9	35		8	211	1	220		58	603	661
4:00 PM - **4:15 PM**	8	0	5	13		4	362	20	386		21	2	5	28		5	191	1	197		41	583	624
4:15 PM - 4:30 PM	14	0	6	20		1	345	23	369		25	2	2	29		4	193	3	200		49	569	618
4:30 PM - 4:45 PM	3	0	8	11		1	353	13	367		23	1	3	27		5	200	6	211		38	578	616
4:45 PM - 5:00 PM	7	0	8	15		1	364	20	385		20	2	4	26		4	205	4	213		41	598	639
5:00 PM - 5:15 PM	11	0	3	14		6	351	17	374		25	3	6	34		0	178	5	183		48	557	605
5:15 PM - 5:30 PM	7	0	8	15		2	360	15	377		20	4	4	28		4	169	8	181		43	558	601
5:30 PM - 5:45 PM	6	0	7	13		4	348	16	368		22	3	4	29		3	191	10	204		42	572	614
5:45 PM - 6:00 PM	11	0	4	15		3	365	12	380		15	2	5	22		5	197	8	210		37	590	627
6:00 PM - 6:15 PM	10	0	3	13		5	325	19	349		16	0	4	20		6	188	3	197		33	546	579
6:15 PM - 6:30 PM	5	0	5	10		4	360	13	377		14	2	9	25		2	179	8	189		35	566	601
6:30 PM - 6:45 PM	13	0	6	19		1	334	14	349		17	3	10	30		7	156	19	182		49	531	580
6:45 PM - 7:00 PM	10	0	5	15		2	371	27	400		8	1	6	15		4	172	4	180		30	580	610
Total	105	0	68	173		34	4238	209	4481		226	25	62	313		49	2219	79	2347		486	6828	7314
PM One Hour Volumes																							
2:00 PM - 3:00 PM	38	0	22	60	0.71	7	859	99	965	0.93	83	5	13	101	0.87	35	771	26	832	0.89	161	1797	1958
2:15 PM - 3:15 PM	38	0	21	59	0.74	5	932	101	1038	0.78	111	11	39	161	0.48	43	795	29	867	0.93	220	1905	2125
2:30 PM - 3:30 PM	39	0	23	62	0.78	4	1051	90	1145	0.84	132	16	59	207	0.62	45	829	30	904	0.97	269	2049	2318
2:45 PM - 3:45 PM	**38**	**0**	**24**	**62**	**0.78**	**5**	**1175**	**91**	**1271**	**0.93**	**143**	**18**	**71**	**232**	**0.69**	**42**	**835**	**28**	**905**	**0.97**	**294**	**2176**	**2470**
3:00 PM - 4:00 PM	47	0	29	76	0.83	5	1318	72	1395	0.91	141	19	78	238	0.71	33	835	23	891	0.97	314	2286	2600
3:15 PM - 4:15 PM	42	0	27	69	0.75	9	1375	65	1449	0.94	113	15	54	182	0.61	28	815	15	858	0.94	251	2307	2558
3:30 PM - 4:30 PM	44	0	27	71	0.77	10	1393	74	1477	0.96	95	10	31	136	0.77	25	810	10	845	0.93	207	2322	2529
3:45 PM - 4:45 PM	39	0	28	67	0.73	8	1427	70	1505	0.97	91	9	19	119	0.85	22	795	11	828	0.94	186	2333	2519
4:00 PM - 5:00 PM	**32**	**0**	**27**	**59**	**0.74**	**7**	**1424**	**76**	**1507**	**0.98**	**89**	**7**	**14**	**110**	**0.95**	**18**	**789**	**14**	**821**	**0.96**	**169**	**2328**	**2497**
4:15 PM - 5:15 PM	35	0	25	60	0.75	9	1413	73	1495	0.97	93	8	15	116	0.85	13	776	18	807	0.95	176	2302	2478
4:30 PM - 5:30 PM	28	0	27	55	0.92	10	1428	65	1503	0.98	88	10	17	115	0.85	13	752	23	788	0.92	170	2291	2461
4:45 PM - 5:45 PM	31	0	26	57	0.95	13	1423	68	1504	0.98	87	12	18	117	0.86	11	743	27	781	0.92	174	2285	2459
5:00 PM - 6:00 PM	35	0	22	57	0.95	15	1424	60	1499	0.99	82	12	19	113	0.83	12	735	31	778	0.93	170	2277	2447
5:15 PM - 6:15 PM	34	0	22	56	0.93	14	1398	62	1474	0.97	73	9	17	99	0.85	18	745	29	792	0.94	155	2266	2421
5:30 PM - 6:30 PM	32	0	19	51	0.85	16	1398	60	1474	0.97	67	7	22	96	0.83	16	755	29	800	0.95	147	2274	2421
5:45 PM - 6:45 PM	39	0	18	57	0.75	13	1384	58	1455	0.96	62	7	28	97	0.81	20	720	38	778	0.93	154	2233	2387
6:00 PM - 7:00 PM	38	0	19	57	0.75	12	1390	73	1475	0.92	55	6	29	90	0.75	19	695	34	748	0.95	147	2223	2370

Wells + Associates, Inc.

McLean, Virginia

Turning Movement Count - All Vehicles

PROJECT: Paul VI Development
W+A JOB NO: 6709
INTERSECTION: Fairfax Blvd. & Shopping Center Entr.
LOCATION: Fairfax County,VA

DATE: 2/3/2016
DAY: Wednesday
WEATHER: rain
COUNTED BY: Zilko & Jose
INPUTED BY: agan

SOUTHBOUND ROAD: Shopping Center Entrance
NORTHBOUND ROAD: 0
WESTBOUND ROAD: Fairfax Boulevard - 50
EASTBOUND ROAD: Fairfax Boulevard - 50

Time Period	Southbound Shopping Center Entrance					Westbound Fairfax Boulevard - 50					Northbound 0					Eastbound Fairfax Boulevard - 50					North & South	East & West	Total
	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF			
AM 15 Minute Volumes																							
6:00 AM - 6:15 AM	2	0	0	2		0	36	0	36		0	0	0	0		0	267	3	270		2	306	308
6:15 AM - 6:30 AM	2	0	2	4		0	58	0	58		0	0	0	0		0	321	5	326		4	384	388
6:30 AM - 6:45 AM	2	0	0	2		0	68	0	68		0	0	0	0		0	380	5	385		2	453	455
6:45 AM - 7:00 AM	5	0	2	7		4	108	0	112		0	0	0	0		0	398	6	404		7	516	523
7:00 AM - 7:15 AM	5	0	4	9		2	124	0	126		0	0	0	0		0	401	8	409		9	535	544
7:15 AM - 7:30 AM	14	0	6	20		2	142	0	144		0	0	0	0		0	366	10	376		20	520	540
7:30 AM - 7:45 AM	6	0	7	13		1	121	0	122		0	0	0	0		0	481	7	488		13	610	623
7:45 AM - 8:00 AM	4	0	0	4		4	192	0	196		0	0	0	0		0	346	2	348		4	544	548
8:00 AM - 8:15 AM	4	0	0	4		2	183	0	185		0	0	0	0		0	415	5	420		4	605	609
8:15 AM - 8:30 AM	4	0	4	8		2	235	0	237		0	0	0	0		0	466	12	478		8	715	723
8:30 AM - 8:45 AM	7	0	8	15		3	176	0	179		0	0	0	0		0	372	5	377		15	556	571
8:45 AM - 9:00 AM	3	0	4	7		2	217	0	219		0	0	0	0		0	427	6	433		7	652	659
Total	58	0	37	95		22	1660	0	1682		0	0	0	0		0	4640	74	4714		95	6396	6491
AM One Hour Volumes																							
6:00 AM - 7:00 AM	11	0	4	15	0.54	4	270	0	274	0.61	0	0	0	0	0.00	0	1366	19	1385	0.86	15	1659	1674
6:15 AM - 7:15 AM	14	0	8	22	0.61	6	358	0	364	0.72	0	0	0	0	0.00	0	1500	24	1524	0.93	22	1888	1910
6:30 AM - 7:30 AM	26	0	12	38	0.48	8	442	0	450	0.78	0	0	0	0	0.00	0	1545	29	1574	0.96	38	2024	2062
6:45 AM - 7:45 AM	30	0	19	49	0.61	9	495	0	504	0.88	0	0	0	0	0.00	0	1646	31	1677	0.86	49	2181	2230
7:00 AM - 8:00 AM	29	0	17	46	0.58	9	579	0	588	0.75	0	0	0	0	0.00	0	1594	27	1621	0.83	46	2209	2255
7:15 AM - 8:15 AM	28	0	13	41	0.51	9	638	0	647	0.83	0	0	0	0	0.00	0	1608	24	1632	0.84	41	2279	2320
7:30 AM - 8:30 AM	**18**	**0**	**11**	**29**	**0.56**	**9**	**731**	**0**	**740**	**0.78**	**0**	**0**	**0**	**0**	**0.00**	**0**	**1708**	**26**	**1734**	**0.89**	**29**	**2474**	**2503**
7:45 AM - 8:45 AM	19	0	12	31	0.52	11	786	0	797	0.84	0	0	0	0	0.00	0	1599	24	1623	0.85	31	2420	2451
8:00 AM - 9:00 AM	18	0	16	34	0.57	9	811	0	820	0.86	0	0	0	0	0.00	0	1680	28	1708	0.89	34	2528	2562
PM 15 Minute Volumes																							
2:00 PM - 2:15 PM	18	0	11	29		9	235	0	244		0	0	0	0		0	194	5	199		29	443	472
2:15 PM - 2:30 PM	11	0	25	36		8	216	0	224		0	0	0	0		0	199	11	210		36	434	470
2:30 PM - 2:45 PM	6	0	22	28		5	180	0	185		0	0	0	0		0	201	11	212		28	397	425
2:45 PM - 3:00 PM	9	0	11	20		8	210	0	218		0	0	0	0		0	196	7	203		20	421	441
3:00 PM - 3:15 PM	12	0	22	34		7	324	0	331		0	0	0	0		0	215	9	224		34	555	589
3:15 PM - 3:30 PM	17	0	12	29		5	319	0	324		0	0	0	0		0	236	16	252		29	576	605
3:30 PM - 3:45 PM	19	0	12	31		9	307	0	316		0	0	0	0		0	229	12	241		31	557	588
3:45 PM - 4:00 PM	15	0	19	34		9	375	0	384		0	0	0	0		0	239	13	252		34	636	670
4:00 PM - **4:15 PM**	11	0	19	30		5	380	0	385		0	0	0	0		0	243	10	253		30	638	668
4:15 PM - 4:30 PM	7	0	25	32		9	373	0	382		0	0	0	0		0	227	9	236		32	618	650
4:30 PM - 4:45 PM	9	0	13	22		10	299	0	309		0	0	0	0		0	222	8	230		22	539	561
4:45 PM - 5:00 PM	4	0	7	11		5	331	0	336		0	0	0	0		0	237	10	247		11	583	594
5:00 PM - 5:15 PM	3	0	12	15		5	351	0	356		0	0	0	0		0	205	13	218		15	574	589
5:15 PM - 5:30 PM	17	0	11	28		4	350	0	354		0	0	0	0		0	181	7	188		28	542	570
5:30 PM - 5:45 PM	10	0	10	20		8	344	0	352		0	0	0	0		0	199	4	203		20	555	575
5:45 PM - 6:00 PM	8	0	16	24		6	357	0	363		0	0	0	0		0	205	8	213		24	576	600
6:00 PM - 6:15 PM	8	0	16	24		6	357	0	363		0	0	0	0		0	206	10	216		24	579	603
6:15 PM - 6:30 PM	20	0	10	30		10	408	0	418		0	0	0	0		0	200	5	205		30	623	653
6:30 PM - 6:45 PM	8	0	12	20		8	322	0	330		0	0	0	0		0	176	6	182		20	512	532
6:45 PM - 7:00 PM	11	0	19	30		7	329	0	336		0	0	0	0		0	184	9	193		30	529	559
Total	116	0	170	286		83	4201	0	4284		0	0	0	0		0	2485	99	2584		286	6868	7154
PM One Hour Volumes																							
2:00 PM - 3:00 PM	44	0	69	113	0.78	30	841	0	871	0.89	0	0	0	0	0.00	0	790	34	824	0.97	113	1695	1808
2:15 PM - 3:15 PM	38	0	80	118	0.82	28	930	0	958	0.72	0	0	0	0	0.00	0	811	38	849	0.95	118	1807	1925
2:30 PM - 3:30 PM	44	0	67	111	0.82	25	1033	0	1058	0.80	0	0	0	0	0.00	0	848	43	891	0.88	111	1949	2060
2:45 PM - 3:45 PM	**57**	**0**	**57**	**114**	**0.84**	**29**	**1160**	**0**	**1189**	**0.90**	**0**	**0**	**0**	**0**	**0.00**	**0**	**876**	**44**	**920**	**0.91**	**114**	**2109**	**2223**
3:00 PM - 4:00 PM	63	0	65	128	0.94	30	1325	0	1355	0.88	0	0	0	0	0.00	0	919	50	969	0.96	128	2324	2452
3:15 PM - 4:15 PM	62	0	62	124	0.91	28	1381	0	1409	0.91	0	0	0	0	0.00	0	947	51	998	0.99	124	2407	2531
3:30 PM - 4:30 PM	52	0	75	127	0.93	32	1435	0	1467	0.95	0	0	0	0	0.00	0	938	44	982	0.97	127	2449	2576
3:45 PM - 4:45 PM	42	0	76	118	0.87	33	1427	0	1460	0.95	0	0	0	0	0.00	0	931	40	971	0.96	118	2431	2549
4:00 PM - 5:00 PM	**31**	**0**	**64**	**95**	**0.74**	**29**	**1383**	**0**	**1412**	**0.92**	**0**	**0**	**0**	**0**	**0.00**	**0**	**929**	**37**	**966**	**0.95**	**95**	**2378**	**2473**
4:15 PM - 5:15 PM	23	0	57	80	0.63	29	1354	0	1383	0.91	0	0	0	0	0.00	0	891	40	931	0.94	80	2314	2394
4:30 PM - 5:30 PM	33	0	43	76	0.68	24	1331	0	1355	0.95	0	0	0	0	0.00	0	845	38	883	0.89	76	2238	2314
4:45 PM - 5:45 PM	34	0	40	74	0.66	22	1376	0	1398	0.98	0	0	0	0	0.00	0	822	34	856	0.87	74	2254	2328
5:00 PM - 6:00 PM	38	0	49	87	0.78	23	1402	0	1425	0.98	0	0	0	0	0.00	0	790	32	822	0.94	87	2247	2334
5:15 PM - 6:15 PM	43	0	53	96	0.86	24	1408	0	1432	0.99	0	0	0	0	0.00	0	791	29	820	0.95	96	2252	2348
5:30 PM - 6:30 PM	46	0	52	98	0.82	30	1466	0	1496	0.89	0	0	0	0	0.00	0	810	27	837	0.97	98	2333	2431
5:45 PM - 6:45 PM	44	0	54	98	0.82	30	1444	0	1474	0.88	0	0	0	0	0.00	0	787	29	816	0.94	98	2290	2388
6:00 PM - 7:00 PM	47	0	57	104	0.87	31	1416	0	1447	0.87	0	0	0	0	0.00	0	766	30	796	0.92	104	2243	2347

Wells + Associates, Inc.

McLean, Virginia

Turning Movement Count - All Vehicles

PROJECT: Paul VI Development
W+A JOB NO: 6709
INTERSECTION: Fairfax Blvd. & Sshool Entr.
LOCATION: Fairfax County,VA

DATE: 2/3/2016
DAY: Wednesday
WEATHER: rain
COUNTED BY: Majda
INPUTED BY: agan

SOUTHBOUND ROAD: 0
NORTHBOUND ROAD: School Entrance
WESTBOUND ROAD: Fairfax Boulevard - 50
EASTBOUND ROAD: Fairfax Boulevard - 50

Time	Southbound 0					Westbound Fairfax Boulevard - 50					Northbound School Entrance					Eastbound Fairfax Boulevard - 50					North & South	East & West	Total
Period	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF			
AM 15 Minute Volumes																							
6:00 AM - 6:15 AM	0	0	0	0		0	0	0	0		0	0	0	0		1	0	0	1		0	1	1
6:15 AM - 6:30 AM	0	0	0	0		0	0	0	0		0	0	0	0		3	0	0	3		0	3	3
6:30 AM - 6:45 AM	0	0	0	0		0	0	2	2		0	0	0	0		3	0	0	3		0	5	5
6:45 AM - 7:00 AM	0	0	0	0		0	0	5	5		0	0	0	0		2	0	0	2		0	7	7
7:00 AM - 7:15 AM	0	0	0	0		0	0	7	7		1	0	2	3		2	0	0	2		3	9	12
7:15 AM - 7:30 AM	0	0	0	0		0	0	6	6		3	0	1	4		15	0	0	15		4	21	25
7:30 AM - 7:45 AM	0	0	0	0		0	0	9	9		10	0	2	12		3	0	0	3		12	12	24
7:45 AM - 8:00 AM	0	0	0	0		0	0	0	0		2	0	1	3		9	0	0	9		3	9	12
8:00 AM - 8:15 AM	0	0	0	0		0	0	0	0		1	0	1	2		1	0	0	1		2	1	3
8:15 AM - 8:30 AM	0	0	0	0		0	0	2	2		0	0	0	0		1	0	0	1		0	3	3
8:30 AM - 8:45 AM	0	0	0	0		0	0	1	1		2	0	0	2		3	0	0	3		2	4	6
8:45 AM - 9:00 AM	0	0	0	0		0	0	0	0		3	0	1	4		1	0	0	1		4	1	5
Total	0	0	0	0		0	0	32	32		22	0	8	30		44	0	0	44		30	76	106
AM One Hour Volumes																							
6:00 AM - 7:00 AM	0	0	0	0	0.00	0	0	7	7	0.35	0	0	0	0	0.00	9	0	0	9	0.75	0	16	16
6:15 AM - 7:15 AM	0	0	0	0	0.00	0	0	14	14	0.50	1	0	2	3	0.25	10	0	0	10	0.83	3	24	27
6:30 AM - 7:30 AM	0	0	0	0	0.00	0	0	20	20	0.71	4	0	3	7	0.44	22	0	0	22	0.37	7	42	49
6:45 AM - 7:45 AM	**0**	**0**	**0**	**0**	**0.00**	**0**	**0**	**27**	**27**	**0.75**	**14**	**0**	**5**	**19**	**0.40**	**22**	**0**	**0**	**22**	**0.37**	**19**	**49**	**68**
7:00 AM - 8:00 AM	0	0	0	0	0.00	0	0	22	22	0.61	16	0	6	22	0.46	29	0	0	29	0.48	22	51	73
7:15 AM - 8:15 AM	0	0	0	0	0.00	0	0	15	15	0.42	16	0	5	21	0.44	28	0	0	28	0.47	21	43	64
7:30 AM - 8:30 AM	0	0	0	0	0.00	0	0	11	11	0.31	13	0	4	17	0.35	14	0	0	14	0.39	17	25	42
7:45 AM - 8:45 AM	0	0	0	0	0.00	0	0	3	3	0.38	5	0	2	7	0.58	14	0	0	14	0.39	7	17	24
8:00 AM - 9:00 AM	0	0	0	0	0.00	0	0	3	3	0.38	6	0	2	8	0.50	6	0	0	6	0.50	8	9	17
PM 15 Minute Volumes																							
2:00 PM - 2:15 PM	0	0	0	0		0	0	3	3		5	0	4	9		5	0	0	5		9	8	17
2:15 PM - 2:30 PM	0	0	0	0		0	0	0	0		3	0	0	3		2	0	0	2		3	2	5
2:30 PM - 2:45 PM	0	0	0	0		0	0	2	2		4	0	3	7		3	0	0	3		7	5	12
2:45 PM - 3:00 PM	0	0	0	0		0	0	17	17		12	0	3	15		5	0	0	5		15	22	37
3:00 PM - 3:15 PM	0	0	0	0		0	0	6	6		38	0	7	45		22	0	0	22		45	28	73
3:15 PM - 3:30 PM	0	0	0	0		0	0	6	6		14	0	2	16		1	0	0	1		16	7	23
3:30 PM - 3:45 PM	0	0	0	0		0	0	5	5		11	0	4	15		5	0	0	5		15	10	25
3:45 PM - 4:00 PM	0	0	0	0		0	0	6	6		9	0	1	10		2	0	0	2		10	8	18
4:00 PM - **4:15 PM**	0	0	0	0		0	0	3	3		0	0	0	0		1	0	0	1		0	4	4
4:15 PM - 4:30 PM	0	0	0	0		0	0	1	1		2	0	1	3		0	0	0	0		3	1	4
4:30 PM - 4:45 PM	0	0	0	0		0	0	1	1		2	0	0	2		0	0	0	0		2	1	3
4:45 PM - 5:00 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0	0
5:00 PM - 5:15 PM	0	0	0	0		0	0	2	2		2	0	1	3		1	0	0	1		3	3	6
5:15 PM - 5:30 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0	0
5:30 PM - 5:45 PM	0	0	0	0		0	0	1	1		5	0	2	7		1	0	0	1		7	2	9
5:45 PM - 6:00 PM	0	0	0	0		0	0	1	1		1	0	0	1		0	0	0	0		1	1	2
6:00 PM - 6:15 PM	0	0	0	0		0	0	1	1		2	0	0	2		1	0	0	1		2	2	4
6:15 PM - 6:30 PM	0	0	0	0		0	0	2	2		0	0	0	0		1	0	0	1		0	3	3
6:30 PM - 6:45 PM	0	0	0	0		0	0	3	3		1	0	0	1		1	0	0	1		1	4	5
6:45 PM - 7:00 PM	0	0	0	0		0	0	2	2		2	0	1	3		2	0	0	2		3	4	7
Total	0	0	0	0		0	0	17	17		17	0	5	22		8	0	0	8		22	25	47
PM One Hour Volumes																							
2:00 PM - 3:00 PM	0	0	0	0	0.00	0	0	22	22	0.32	24	0	10	34	0.57	15	0	0	15	0.75	34	37	71
2:15 PM - 3:15 PM	0	0	0	0	0.00	0	0	25	25	0.37	57	0	13	70	0.39	32	0	0	32	0.36	70	57	127
2:30 PM - 3:30 PM	0	0	0	0	0.00	0	0	31	31	0.46	68	0	15	83	0.46	31	0	0	31	0.35	83	62	145
2:45 PM - 3:45 PM	**0**	**0**	**0**	**0**	**0.00**	**0**	**0**	**34**	**34**	**0.50**	**75**	**0**	**16**	**91**	**0.51**	**33**	**0**	**0**	**33**	**0.38**	**91**	**67**	**158**
3:00 PM - 4:00 PM	0	0	0	0	0.00	0	0	23	23	0.96	72	0	14	86	0.48	30	0	0	30	0.34	86	53	139
3:15 PM - 4:15 PM	0	0	0	0	0.00	0	0	20	20	0.83	34	0	7	41	0.64	9	0	0	9	0.45	41	29	70
3:30 PM - 4:30 PM	0	0	0	0	0.00	0	0	15	15	0.63	22	0	6	28	0.47	8	0	0	8	0.40	28	23	51
3:45 PM - 4:45 PM	0	0	0	0	0.00	0	0	11	11	0.46	13	0	2	15	0.38	3	0	0	3	0.38	15	14	29
4:00 PM - 5:00 PM	**0**	**0**	**0**	**0**	**0.00**	**0**	**0**	**5**	**5**	**0.42**	**4**	**0**	**1**	**5**	**0.42**	**1**	**0**	**0**	**1**	**0.25**	**5**	**6**	**11**
4:15 PM - 5:15 PM	0	0	0	0	0.00	0	0	4	4	0.50	6	0	2	8	0.67	1	0	0	1	0.25	8	5	13
4:30 PM - 5:30 PM	0	0	0	0	0.00	0	0	3	3	0.38	4	0	1	5	0.42	1	0	0	1	0.25	5	4	9
4:45 PM - 5:45 PM	0	0	0	0	0.00	0	0	3	3	0.38	7	0	3	10	0.36	2	0	0	2	0.50	10	5	15
5:00 PM - 6:00 PM	0	0	0	0	0.00	0	0	4	4	0.50	8	0	3	11	0.39	2	0	0	2	0.50	11	6	17
5:15 PM - 6:15 PM	0	0	0	0	0.00	0	0	3	3	0.75	8	0	2	10	0.36	2	0	0	2	0.50	10	5	15
5:30 PM - 6:30 PM	0	0	0	0	0.00	0	0	5	5	0.63	8	0	2	10	0.36	3	0	0	3	0.75	10	8	18
5:45 PM - 6:45 PM	0	0	0	0	0.00	0	0	7	7	0.58	4	0	0	4	0.50	3	0	0	3	0.75	4	10	14
6:00 PM - 7:00 PM	0	0	0	0	0.00	0	0	8	8	0.67	5	0	1	6	0.50	5	0	0	5	0.63	6	13	19

Wells + Associates, Inc.

McLean, Virginia

Turning Movement Count - All Vehicles

PROJECT: Paul VI Development
W+A JOB NO: 6709
INTERSECTION: Fairfax Blvd. & McLean Ave.
LOCATION: Fairfax County,VA

DATE: 2/3/2016
DAY: Wednesday
WEATHER: rain
COUNTED BY: Tyler,Austin & Salih
INPUTED BY: agan

SOUTHBOUND ROAD: McLean Avenue
NORTHBOUND ROAD: McLean Avenue
WESTBOUND ROAD: Fairfax Boulevard - 50
EASTBOUND ROAD: Fairfax Boulevard - 50

Time Period	Southbound McLean Avenue					Westbound Fairfax Boulevard - 50					Northbound McLean Avenue					Eastbound Fairfax Boulevard - 50					North & South	East & West	Total
	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF			
AM 15 Minute Volumes																							
6:00 AM - 6:15 AM	0	1	0	1		0	38	3	41		1	1	0	2		0	265	1	266		3	307	310
6:15 AM - 6:30 AM	0	0	0	0		0	58	3	61		1	0	1	2		0	351	1	352		2	413	415
6:30 AM - 6:45 AM	0	0	4	4		0	66	0	66		0	0	0	0		0	369	0	369		4	435	439
6:45 AM - 7:00 AM	0	0	1	1		0	110	5	115		7	0	2	9		0	394	0	394		10	509	519
7:00 AM - 7:15 AM	0	1	1	2		4	134	1	139		7	3	4	14		0	439	0	439		16	578	594
7:15 AM - 7:30 AM	0	1	2	3		2	163	6	171		10	1	8	19		1	410	2	413		22	584	606
7:30 AM - 7:45 AM	1	4	8	13		2	140	3	145		9	0	4	13		1	433	0	434		26	579	605
7:45 AM - 8:00 AM	0	1	9	10		2	170	2	174		12	1	3	16		0	380	1	381		26	555	581
8:00 AM - 8:15 AM	1	0	4	5		4	200	6	210		9	3	1	13		4	393	1	398		18	608	626
8:15 AM - 8:30 AM	0	0	4	4		1	235	5	241		5	1	4	10		2	439	1	442		14	683	697
8:30 AM - 8:45 AM	0	2	3	5		2	192	4	198		0	1	3	4		2	363	0	365		9	563	572
8:45 AM - 9:00 AM	2	4	2	8		0	176	5	181		4	2	0	6		4	442	1	447		14	628	642
Total	4	14	38	56		17	1682	43	1742		65	13	30	108		14	4678	8	4700		164	6442	6606
AM One Hour Volumes																							
6:00 AM - 7:00 AM	0	1	5	6	0.38	0	272	11	283	0.62	9	1	3	13	0.36	0	1379	2	1381	0.88	19	1664	1683
6:15 AM - 7:15 AM	0	1	6	7	0.44	4	368	9	381	0.69	15	3	7	25	0.45	0	1553	1	1554	0.88	32	1935	1967
6:30 AM - 7:30 AM	0	2	8	10	0.63	6	473	12	491	0.72	24	4	14	42	0.55	1	1612	2	1615	0.92	52	2106	2158
6:45 AM - 7:45 AM	1	6	12	19	0.37	8	547	15	570	0.83	33	4	18	55	0.72	2	1676	2	1680	0.96	74	2250	2324
7:00 AM - 8:00 AM	1	7	20	28	0.54	10	607	12	629	0.90	38	5	19	62	0.82	2	1662	3	1667	0.95	90	2296	2386
7:15 AM - 8:15 AM	2	6	23	31	0.60	10	673	17	700	0.83	40	5	16	61	0.80	6	1616	4	1626	0.94	92	2326	2418
7:30 AM - 8:30 AM	**2**	**5**	**25**	**32**	**0.62**	**9**	**745**	**16**	**770**	**0.80**	**35**	**5**	**12**	**52**	**0.81**	**7**	**1645**	**3**	**1655**	**0.94**	**84**	**2425**	**2509**
7:45 AM - 8:45 AM	1	3	20	24	0.60	9	797	17	823	0.85	26	6	11	43	0.67	8	1575	3	1586	0.90	67	2409	2476
8:00 AM - 9:00 AM	3	6	13	22	0.69	7	803	20	830	0.86	18	7	8	33	0.63	12	1637	3	1652	0.92	55	2482	2537
PM 15 Minute Volumes																							
2:00 PM - 2:15 PM	1	0	1	2		2	242	3	247		2	1	2	5		2	196	1	199		7	446	453
2:15 PM - 2:30 PM	0	1	3	4		2	180	18	200		8	1	0	9		0	178	3	181		13	381	394
2:30 PM - 2:45 PM	6	2	4	12		3	217	3	223		10	1	4	15		2	204	2	208		27	431	458
2:45 PM - 3:00 PM	1	3	5	9		4	248	2	254		5	3	1	9		3	208	0	211		18	465	483
3:00 PM - 3:15 PM	0	0	3	3		1	346	2	349		1	0	2	3		3	260	3	266		6	615	621
3:15 PM - 3:30 PM	0	1	5	6		5	321	7	333		3	0	2	5		3	226	1	230		11	563	574
3:30 PM - 3:45 PM	4	2	4	10		4	321	7	332		2	1	0	3		2	194	1	197		13	529	542
3:45 PM - 4:00 PM	1	0	1	2		3	376	5	384		6	0	2	8		6	239	0	245		10	629	639
4:00 PM - 4:15 PM	1	0	1	2		3	365	6	374		9	0	2	11		2	175	0	177		13	551	564
4:15 PM - **4:30 PM**	0	0	2	2		2	358	5	365		12	4	4	20		3	203	0	206		22	571	593
4:30 PM - 4:45 PM	1	2	3	6		0	369	4	373		9	4	3	16		2	187	11	200		22	573	595
4:45 PM - 5:00 PM	0	4	3	7		0	387	3	390		7	11	6	24		1	211	1	213		31	603	634
5:00 PM - 5:15 PM	1	0	3	4		3	374	5	382		10	1	5	16		3	196	0	199		20	581	601
5:15 PM - 5:30 PM	0	0	3	3		3	351	5	359		7	6	6	19		1	177	1	179		22	538	560
5:30 PM - 5:45 PM	0	2	3	5		2	363	5	370		4	2	7	13		4	188	0	192		18	562	580
5:45 PM - 6:00 PM	0	3	0	3		1	380	4	385		2	1	4	7		1	187	2	190		10	575	585
6:00 PM - 6:15 PM	0	1	3	4		1	374	6	381		4	1	3	8		3	180	1	184		12	565	577
6:15 PM - 6:30 PM	1	0	2	3		3	373	7	383		2	0	2	4		2	172	2	176		7	559	566
6:30 PM - 6:45 PM	0	3	1	4		4	329	5	338		0	1	1	2		3	170	6	179		6	517	523
6:45 PM - 7:00 PM	1	0	2	3		2	395	3	400		0	0	3	3		2	164	0	166		6	566	572
Total	5	15	26	46		24	4418	58	4500		66	31	46	143		27	2210	24	2261		189	6761	6950
PM One Hour Volumes																							
2:00 PM - 3:00 PM	8	6	13	27	0.56	11	887	26	924	0.91	25	6	7	38	0.63	7	786	6	799	0.95	65	1723	1788
2:15 PM - 3:15 PM	7	6	15	28	0.58	10	991	25	1026	0.73	24	5	7	36	0.60	8	850	8	866	0.81	64	1892	1956
2:30 PM - 3:30 PM	7	6	17	30	0.63	13	1132	14	1159	0.83	19	4	9	32	0.53	11	898	6	915	0.86	62	2074	2136
2:45 PM - 3:45 PM	**5**	**6**	**17**	**28**	**0.70**	**14**	**1236**	**18**	**1268**	**0.91**	**11**	**4**	**5**	**20**	**0.56**	**11**	**888**	**5**	**904**	**0.85**	**48**	**2172**	**2220**
3:00 PM - 4:00 PM	5	3	13	21	0.53	13	1364	21	1398	0.91	12	1	6	19	0.59	14	919	5	938	0.88	40	2336	2376
3:15 PM - 4:15 PM	6	3	11	20	0.50	15	1383	25	1423	0.93	20	1	6	27	0.61	13	834	2	849	0.87	47	2272	2319
3:30 PM - 4:30 PM	6	2	8	16	0.40	12	1420	23	1455	0.95	29	5	8	42	0.53	13	811	1	825	0.84	58	2280	2338
3:45 PM - 4:45 PM	3	2	7	12	0.50	8	1468	20	1496	0.97	36	8	11	55	0.69	13	804	11	828	0.84	67	2324	2391
4:00 PM - 5:00 PM	2	6	9	17	0.61	5	1479	18	1502	0.96	37	19	15	71	0.74	8	776	12	796	0.93	88	2298	2386
4:15 PM - 5:15 PM	**2**	**6**	**11**	**19**	**0.68**	**5**	**1488**	**17**	**1510**	**0.97**	**38**	**20**	**18**	**76**	**0.79**	**9**	**797**	**12**	**818**	**0.96**	**95**	**2328**	**2423**
4:30 PM - 5:30 PM	2	6	12	20	0.71	6	1481	17	1504	0.96	33	22	20	75	0.78	7	771	13	791	0.93	95	2295	2390
4:45 PM - 5:45 PM	1	6	12	19	0.68	8	1475	18	1501	0.96	28	20	24	72	0.75	9	772	2	783	0.92	91	2284	2375
5:00 PM - 6:00 PM	1	5	9	15	0.75	9	1468	19	1496	0.97	23	10	22	55	0.72	9	748	3	760	0.95	70	2256	2326
5:15 PM - 6:15 PM	0	6	9	15	0.75	7	1468	20	1495	0.97	17	10	20	47	0.62	9	732	4	745	0.97	62	2240	2302
5:30 PM - 6:30 PM	1	6	8	15	0.75	7	1490	22	1519	0.99	12	4	16	32	0.62	10	727	5	742	0.97	47	2261	2308
5:45 PM - 6:45 PM	1	7	6	14	0.88	9	1456	22	1487	0.97	8	3	10	21	0.66	9	709	11	729	0.96	35	2216	2251
6:00 PM - 7:00 PM	2	4	8	14	0.88	10	1471	21	1502	0.94	6	2	9	17	0.53	10	686	9	705	0.96	31	2207	2238

Wells + Associates, Inc.

McLean, Virginia

Turning Movement Count - All Vehicles

PROJECT: Paul VI Development
W+A JOB NO: 6709
INTERSECTION: McLean Ave. & Warwick Ave.
LOCATION: Fairfax County,VA

DATE: 2/3/2016
DAY: Wednesday
WEATHER: rain
COUNTED BY: Salih & Laura
INPUTED BY: agan

SOUTHBOUND ROAD: McLean Avenue
NORTHBOUND ROAD: McLean Avenue
WESTBOUND ROAD: Warwick Avenue
EASTBOUND ROAD: Warwick Avenue

Time Period	Southbound McLean Avenue					Westbound Warwick Avenue					Northbound McLean Avenue					Eastbound Warwick Avenue					North & South	East & West	Total
	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF			
AM 15 Minute Volumes																							
6:00 AM - 6:15 AM	1	0	0	1		0	0	0	0		0	0	0	0		0	0	0	0		1	0	1
6:15 AM - 6:30 AM	0	0	0	0		1	0	0	1		0	0	0	0		0	0	0	0		0	1	1
6:30 AM - 6:45 AM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0	0
6:45 AM - 7:00 AM	0	0	0	0		0	0	1	1		0	0	0	0		0	0	0	0		0	1	1
7:00 AM - 7:15 AM	0	0	1	1		1	0	0	1		0	0	0	0		0	0	1	1		1	2	3
7:15 AM - 7:30 AM	1	0	1	2		0	0	0	0		1	0	0	1		0	0	2	2		3	2	5
7:30 AM - 7:45 AM	0	0	1	1		2	0	0	2		0	0	0	0		0	0	1	1		1	3	4
7:45 AM - 8:00 AM	1	0	0	1		1	0	0	1		0	0	0	0		0	0	0	0		1	1	2
8:00 AM - 8:15 AM	2	0	2	4		2	0	0	2		0	0	2	2		0	0	1	1		6	3	9
8:15 AM - 8:30 AM	1	0	0	1		2	0	0	2		0	0	0	0		0	0	1	1		1	3	4
8:30 AM - 8:45 AM	0	0	0	0		4	0	1	5		0	0	1	1		0	0	0	0		1	5	6
8:45 AM - 9:00 AM	0	0	1	1		2	0	2	4		0	0	0	0		1	0	0	1		1	5	6
Total	6	0	6	12		15	0	4	19		1	0	3	4		1	0	6	7		16	26	42
AM One Hour Volumes																							
6:00 AM - 7:00 AM	1	0	0	1	0.25	1	0	1	2	0.50	0	0	0	0	0.00	0	0	0	0	0.00	1	2	3
6:15 AM - 7:15 AM	0	0	1	1	0.25	2	0	1	3	0.75	0	0	0	0	0.00	0	0	1	1	0.25	1	4	5
6:30 AM - 7:30 AM	1	0	2	3	0.38	1	0	1	2	0.50	1	0	0	1	0.25	0	0	3	3	0.38	4	5	9
6:45 AM - 7:45 AM	1	0	3	4	0.50	3	0	1	4	0.50	1	0	0	1	0.25	0	0	4	4	0.50	5	8	13
7:00 AM - 8:00 AM	2	0	3	5	0.63	4	0	0	4	0.50	1	0	0	1	0.25	0	0	4	4	0.50	6	8	14
7:15 AM - 8:15 AM	4	0	4	8	0.50	5	0	0	5	0.63	1	0	2	3	0.38	0	0	4	4	0.50	11	9	20
7:30 AM - 8:30 AM	**4**	**0**	**3**	**7**	**0.44**	**7**	**0**	**0**	**7**	**0.88**	**0**	**0**	**2**	**2**	**0.25**	**0**	**0**	**3**	**3**	**0.75**	**9**	**10**	**19**
7:45 AM - 8:45 AM	4	0	2	6	0.38	9	0	1	10	0.50	0	0	3	3	0.38	0	0	2	2	0.50	9	12	21
8:00 AM - 9:00 AM	3	0	3	6	0.38	10	0	3	13	0.65	0	0	3	3	0.38	1	0	2	3	0.75	9	16	25
PM 15 Minute Volumes																							
2:00 PM - 2:15 PM	1	0	1	2		2	0	0	2		0	0	0	0		1	0	0	1		2	3	5
2:15 PM - 2:30 PM	0	0	0	0		1	0	0	1		0	0	0	0		0	0	2	2		0	3	3
2:30 PM - 2:45 PM	0	0	1	1		1	0	0	1		0	0	1	1		0	0	0	0		2	1	3
2:45 PM - 3:00 PM	0	0	0	0		2	0	1	3		0	0	2	2		0	0	1	1		2	4	6
3:00 PM - 3:15 PM	0	0	0	0		3	0	0	3		0	0	0	0		3	0	0	3		0	6	6
3:15 PM - 3:30 PM	1	0	3	4		3	0	0	3		0	0	3	3		0	0	2	2		7	5	12
3:30 PM - 3:45 PM	0	0	4	4		2	0	0	2		0	0	3	3		0	0	1	1		7	3	10
3:45 PM - 4:00 PM	1	0	0	1		1	0	0	1		0	0	0	0		0	0	0	0		1	1	2
4:00 PM - 4:15 PM	0	0	0	0		2	0	0	2		2	0	3	5		1	0	0	1		5	3	8
4:15 PM - **4:30 PM**	0	0	0	0		3	0	0	3		0	0	5	5		1	0	0	1		5	4	9
4:30 PM - 4:45 PM	0	0	0	0		3	0	0	3		0	0	2	2		1	0	4	5		2	8	10
4:45 PM - 5:00 PM	1	0	0	1		3	0	0	3		0	0	6	6		0	0	0	0		7	3	10
5:00 PM - 5:15 PM	1	0	1	2		3	0	1	4		0	0	3	3		2	0	1	3		5	7	12
5:15 PM - 5:30 PM	0	0	1	1		5	0	0	5		0	0	4	4		0	0	1	1		5	6	11
5:30 PM - 5:45 PM	0	0	1	1		4	0	0	4		0	0	1	1		1	0	2	3		2	7	9
5:45 PM - 6:00 PM	0	0	0	0		2	0	0	2		0	0	5	5		0	0	2	2		5	4	9
6:00 PM - 6:15 PM	0	0	0	0		4	0	0	4		0	0	0	0		0	0	1	1		0	5	5
6:15 PM - 6:30 PM	0	0	1	1		1	0	0	1		0	0	1	1		0	0	1	1		2	2	4
6:30 PM - 6:45 PM	0	0	1	1		4	0	0	4		0	0	3	3		0	0	1	1		4	5	9
6:45 PM - 7:00 PM	0	0	0	0		3	0	0	3		0	0	1	1		0	0	0	0		1	3	4
Total	2	0	5	7		37	0	1	38		2	0	34	36		6	0	13	19		43	57	100
PM One Hour Volumes																							
2:00 PM - 3:00 PM	1	0	2	3	0.38	6	0	1	7	0.58	0	0	3	3	0.38	1	0	3	4	0.50	6	11	17
2:15 PM - 3:15 PM	0	0	1	1	0.25	7	0	1	8	0.67	0	0	3	3	0.38	3	0	3	6	0.50	4	14	18
2:30 PM - 3:30 PM	1	0	4	5	0.31	9	0	1	10	0.83	0	0	6	6	0.50	3	0	3	6	0.50	11	16	27
2:45 PM - 3:45 PM	**1**	**0**	**7**	**8**	**0.50**	**10**	**0**	**1**	**11**	**0.92**	**0**	**0**	**8**	**8**	**0.67**	**3**	**0**	**4**	**7**	**0.58**	**16**	**18**	**34**
3:00 PM - 4:00 PM	2	0	7	9	0.56	9	0	0	9	0.75	0	0	6	6	0.50	3	0	3	6	0.50	15	15	30
3:15 PM - 4:15 PM	2	0	7	9	0.56	8	0	0	8	0.67	2	0	9	11	0.55	1	0	3	4	0.50	20	12	32
3:30 PM - 4:30 PM	1	0	4	5	0.31	8	0	0	8	0.67	2	0	11	13	0.65	2	0	1	3	0.75	18	11	29
3:45 PM - 4:45 PM	1	0	0	1	0.25	9	0	0	9	0.75	2	0	10	12	0.60	3	0	4	7	0.35	13	16	29
4:00 PM - 5:00 PM	1	0	0	1	0.25	11	0	0	11	0.92	2	0	16	18	0.75	3	0	4	7	0.35	19	18	37
4:15 PM - 5:15 PM	**2**	**0**	**1**	**3**	**0.38**	**12**	**0**	**1**	**13**	**0.81**	**0**	**0**	**16**	**16**	**0.67**	**4**	**0**	**5**	**9**	**0.45**	**19**	**22**	**41**
4:30 PM - 5:30 PM	2	0	2	4	0.50	14	0	1	15	0.75	0	0	15	15	0.63	3	0	6	9	0.45	19	24	43
4:45 PM - 5:45 PM	2	0	3	5	0.63	15	0	1	16	0.80	0	0	14	14	0.58	3	0	4	7	0.58	19	23	42
5:00 PM - 6:00 PM	1	0	3	4	0.50	14	0	1	15	0.75	0	0	13	13	0.65	3	0	6	9	0.75	17	24	41
5:15 PM - 6:15 PM	0	0	2	2	0.50	15	0	0	15	0.75	0	0	10	10	0.50	1	0	6	7	0.58	12	22	34
5:30 PM - 6:30 PM	0	0	2	2	0.50	11	0	0	11	0.69	0	0	7	7	0.35	1	0	6	7	0.58	9	18	27
5:45 PM - 6:45 PM	0	0	2	2	0.50	11	0	0	11	0.69	0	0	9	9	0.45	0	0	5	5	0.63	11	16	27
6:00 PM - 7:00 PM	0	0	2	2	0.50	12	0	0	12	0.75	0	0	5	5	0.42	0	0	3	3	0.75	7	15	22

Wells + Associates, Inc.

McLean, Virginia

Turning Movement Count - All Vehicles

PROJECT: Paul VI Development
W+A JOB NO: 6709
INTERSECTION: Fairfax Blvd. & Warwick Ave.
LOCATION: Fairfax County,VA

DATE: 2/3/2016
DAY: Wednesday
WEATHER: rain
COUNTED BY: Tyler,Sali,Austin & Laura
INPUTED BY: agan

SOUTHBOUND ROAD: Warwick Avenue
NORTHBOUND ROAD: Warwick Avenue
WESTBOUND ROAD: Fairfax Boulevard - 50
EASTBOUND ROAD: Fairfax Boulevard - 50

Time Period	Southbound Warwick Avenue					Westbound Fairfax Boulevard - 50					Northbound Warwick Avenue					Eastbound Fairfax Boulevard - 50					North & South	East & West	Total
	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF			
AM 15 Minute Volumes																							
6:00 AM - 6:15 AM	0	3	2	5		3	0	0	3		0	1	1	2		2	0	1	3		7	6	13
6:15 AM - 6:30 AM	0	3	3	6		1	0	0	1		0	0	2	2		2	0	0	2		8	3	11
6:30 AM - 6:45 AM	0	0	11	11		5	0	0	5		1	1	1	3		2	0	0	2		14	7	21
6:45 AM - 7:00 AM	0	2	15	17		4	0	0	4		0	0	2	2		0	0	0	0		19	4	23
7:00 AM - 7:15 AM	0	6	13	19		19	0	0	19		3	0	2	5		7	0	0	7		24	26	50
7:15 AM - 7:30 AM	0	5	16	21		18	0	1	19		2	0	1	3		10	0	0	10		24	29	53
7:30 AM - 7:45 AM	1	8	30	39		11	0	1	12		1	1	2	4		12	0	0	12		43	24	67
7:45 AM - 8:00 AM	0	7	36	43		19	0	0	19		1	2	4	7		4	0	0	4		50	23	73
8:00 AM - 8:15 AM	1	8	16	25		17	0	0	17		1	2	5	8		4	0	0	4		33	21	54
8:15 AM - 8:30 AM	0	3	16	19		14	0	0	14		0	1	3	4		6	0	0	6		23	20	43
8:30 AM - 8:45 AM	0	2	15	17		6	0	1	7		1	2	2	5		2	0	0	2		22	9	31
8:45 AM - 9:00 AM	0	5	14	19		26	0	2	28		0	1	2	3		10	0	0	10		22	38	60
Total	2	52	187	241		143	0	5	148		10	11	27	48		61	0	1	62		289	210	499
AM One Hour Volumes																							
6:00 AM - 7:00 AM	0	8	31	39	0.57	13	0	0	13	0.65	1	2	6	9	0.75	6	0	1	7	0.58	48	20	68
6:15 AM - 7:15 AM	0	11	42	53	0.70	29	0	0	29	0.38	4	1	7	12	0.60	11	0	0	11	0.39	65	40	105
6:30 AM - 7:30 AM	0	13	55	68	0.81	46	0	1	47	0.62	6	1	6	13	0.65	19	0	0	19	0.48	81	66	147
6:45 AM - 7:45 AM	1	21	74	96	0.62	52	0	2	54	0.71	6	1	7	14	0.70	29	0	0	29	0.60	110	83	193
7:00 AM - 8:00 AM	1	26	95	122	0.71	67	0	2	69	0.91	7	3	9	19	0.68	33	0	0	33	0.69	141	102	243
7:15 AM - 8:15 AM	2	28	98	128	0.74	65	0	2	67	0.88	5	5	12	22	0.69	30	0	0	30	0.63	150	97	247
7:30 AM - 8:30 AM	**2**	**26**	**98**	**126**	**0.73**	**61**	**0**	**1**	**62**	**0.82**	**3**	**6**	**14**	**23**	**0.72**	**26**	**0**	**0**	**26**	**0.54**	**149**	**88**	**237**
7:45 AM - 8:45 AM	1	20	83	104	0.60	56	0	1	57	0.75	3	7	14	24	0.75	16	0	0	16	0.67	128	73	201
8:00 AM - 9:00 AM	1	18	61	80	0.80	63	0	3	66	0.59	2	6	12	20	0.63	22	0	0	22	0.55	100	88	188
PM 15 Minute Volumes																							
2:00 PM - 2:15 PM	0	7	12	19		15	0	1	16		0	2	1	3		7	0	1	8		22	24	46
2:15 PM - 2:30 PM	0	3	16	19		33	0	2	35		1	4	0	5		14	0	3	17		24	52	76
2:30 PM - 2:45 PM	0	2	19	21		7	0	1	8		3	5	2	10		13	0	2	15		31	23	54
2:45 PM - 3:00 PM	0	5	16	21		10	0	1	11		7	7	1	15		12	0	0	12		36	23	59
3:00 PM - 3:15 PM	0	3	23	26		20	0	1	21		1	9	0	10		16	0	3	19		36	40	76
3:15 PM - 3:30 PM	0	6	17	23		18	0	0	18		4	4	2	10		11	0	1	12		33	30	63
3:30 PM - 3:45 PM	0	5	17	22		20	0	1	21		3	6	1	10		12	0	1	13		32	34	66
3:45 PM - 4:00 PM	0	6	14	20		18	0	2	20		3	9	0	12		16	0	0	16		32	36	68
4:00 PM - 4:15 PM	0	4	10	14		20	0	1	21		1	8	1	10		10	0	0	10		24	31	55
4:15 PM - **4:30 PM**	0	10	15	25		23	0	0	23		1	10	0	11		11	0	0	11		36	34	70
4:30 PM - 4:45 PM	2	7	14	23		22	0	3	25		2	7	2	11		13	0	11	24		34	49	83
4:45 PM - 5:00 PM	0	8	15	23		29	0	2	31		0	7	2	9		5	0	1	6		32	37	69
5:00 PM - 5:15 PM	0	6	17	23		19	0	0	19		2	6	0	8		4	0	0	4		31	23	54
5:15 PM - 5:30 PM	0	5	11	16		30	0	0	30		0	7	2	9		5	0	1	6		25	36	61
5:30 PM - 5:45 PM	0	6	21	27		24	0	0	24		1	9	0	10		13	0	0	13		37	37	74
5:45 PM - 6:00 PM	0	16	18	34		26	0	0	26		0	6	0	6		12	0	2	14		40	40	80
6:00 PM - 6:15 PM	0	6	12	18		27	0	0	27		0	9	1	10		8	0	1	9		28	36	64
6:15 PM - 6:30 PM	0	3	12	15		29	0	0	29		0	3	1	4		10	0	2	12		19	41	60
6:30 PM - 6:45 PM	0	10	13	23		22	0	2	24		1	5	0	6		6	0	6	12		29	36	65
6:45 PM - 7:00 PM	0	5	9	14		13	0	0	13		0	9	1	10		5	0	0	5		24	18	42
Total	2	86	167	255		284	0	8	292		8	86	10	104		102	0	24	126		359	418	777
PM One Hour Volumes																							
2:00 PM - 3:00 PM	0	17	63	80	0.95	65	0	5	70	0.50	11	18	4	33	0.55	46	0	6	52	0.76	113	122	235
2:15 PM - 3:15 PM	0	13	74	87	0.84	70	0	5	75	0.54	12	25	3	40	0.67	55	0	8	63	0.83	127	138	265
2:30 PM - 3:30 PM	0	16	75	91	0.88	55	0	3	58	0.69	15	25	5	45	0.75	52	0	6	58	0.76	136	116	252
2:45 PM - 3:45 PM	**0**	**19**	**73**	**92**	**0.88**	**68**	**0**	**3**	**71**	**0.85**	**15**	**26**	**4**	**45**	**0.75**	**51**	**0**	**5**	**56**	**0.74**	**137**	**127**	**264**
3:00 PM - 4:00 PM	0	20	71	91	0.88	76	0	4	80	0.95	11	28	3	42	0.88	55	0	5	60	0.79	133	140	273
3:15 PM - 4:15 PM	0	21	58	79	0.86	76	0	4	80	0.95	11	27	4	42	0.88	49	0	2	51	0.80	121	131	252
3:30 PM - 4:30 PM	0	25	56	81	0.81	81	0	4	85	0.92	8	33	2	43	0.90	49	0	1	50	0.78	124	135	259
3:45 PM - 4:45 PM	2	27	53	82	0.82	83	0	6	89	0.89	7	34	3	44	0.92	50	0	11	61	0.64	126	150	276
4:00 PM - 5:00 PM	2	29	54	85	0.85	94	0	6	100	0.81	4	32	5	41	0.93	39	0	12	51	0.53	126	151	277
4:15 PM - 5:15 PM	**2**	**31**	**61**	**94**	**0.94**	**93**	**0**	**5**	**98**	**0.79**	**5**	**30**	**4**	**39**	**0.89**	**33**	**0**	**12**	**45**	**0.47**	**133**	**143**	**276**
4:30 PM - 5:30 PM	2	26	57	85	0.92	100	0	5	105	0.85	4	27	6	37	0.84	27	0	13	40	0.42	122	145	267
4:45 PM - 5:45 PM	0	25	64	89	0.82	102	0	2	104	0.84	3	29	4	36	0.90	27	0	2	29	0.56	125	133	258
5:00 PM - 6:00 PM	0	33	67	100	0.74	99	0	0	99	0.83	3	28	2	33	0.83	34	0	3	37	0.66	133	136	269
5:15 PM - 6:15 PM	0	33	62	95	0.70	107	0	0	107	0.89	1	31	3	35	0.88	38	0	4	42	0.75	130	149	279
5:30 PM - 6:30 PM	0	31	63	94	0.69	106	0	0	106	0.91	1	27	2	30	0.75	43	0	5	48	0.86	124	154	278
5:45 PM - 6:45 PM	0	35	55	90	0.66	104	0	2	106	0.91	1	23	2	26	0.65	36	0	11	47	0.84	116	153	269
6:00 PM - 7:00 PM	0	24	46	70	0.76	91	0	2	93	0.80	1	26	3	30	0.75	29	0	9	38	0.79	100	131	231

Wells + Associates, Inc.

McLean, Virginia

Turning Movement Count - All Vehicles

PROJECT: Paul VI Development
W+A JOB NO: 6709
INTERSECTION: Cedar Ave. & Walnut St.
LOCATION: Fairfax County,VA

DATE: 2/3/2016
DAY: Wednesday
WEATHER: rain
COUNTED BY: Vanessa
INPUTED BY: agan

SOUTHBOUND ROAD: Walnut Street
NORTHBOUND ROAD: Walnut Street
WESTBOUND ROAD: Cedar Avenue
EASTBOUND ROAD: Driveway

Time Period	Southbound Walnut Street					Westbound Cedar Avenue					Northbound Walnut Street					Eastbound Driveway					North & South	East & West	Total
	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF			
AM 15 Minute Volumes																							
6:00 AM - 6:15 AM	0	1	2	3		0	0	0	0		0	5	0	5		0	0	1	1		8	1	9
6:15 AM - 6:30 AM	0	3	1	4		0	0	0	0		0	9	0	9		0	0	0	0		13	0	13
6:30 AM - 6:45 AM	0	5	3	8		0	0	2	2		8	10	0	18		0	0	0	0		26	2	28
6:45 AM - 7:00 AM	0	4	7	11		1	0	3	4		22	16	0	38		0	0	0	0		49	4	53
7:00 AM - 7:15 AM	0	12	26	38		7	0	2	9		62	18	0	80		0	0	0	0		118	9	127
7:15 AM - 7:30 AM	0	16	34	50		12	0	5	17		51	31	0	82		0	0	0	0		132	17	149
7:30 AM - 7:45 AM	2	13	12	27		23	0	7	30		26	29	0	55		0	0	0	0		82	30	112
7:45 AM - 8:00 AM	2	12	3	17		6	0	2	8		6	15	0	21		1	0	0	1		38	9	47
8:00 AM - 8:15 AM	0	11	6	17		3	0	1	4		8	34	0	42		0	0	0	0		59	4	63
8:15 AM - 8:30 AM	0	16	5	21		0	0	0	0		15	31	4	50		0	0	0	0		71	0	71
8:30 AM - 8:45 AM	0	22	4	26		3	0	1	4		14	20	1	35		0	0	0	0		61	4	65
8:45 AM - 9:00 AM	0	13	0	13		5	0	3	8		8	20	0	28		0	0	0	0		41	8	49
Total	4	128	103	235		60	0	26	86		220	238	5	463		1	0	1	2		698	88	786
AM One Hour Volumes																							
6:00 AM - 7:00 AM	0	13	13	26	0.59	1	0	5	6	0.38	30	40	0	70	0.46	0	0	1	1	0.25	96	7	103
6:15 AM - 7:15 AM	0	24	37	61	0.40	8	0	7	15	0.42	92	53	0	145	0.45	0	0	0	0	0.00	206	15	221
6:30 AM - 7:30 AM	0	37	70	107	0.54	20	0	12	32	0.47	143	75	0	218	0.66	0	0	0	0	0.00	325	32	357
6:45 AM - 7:45 AM	2	45	79	126	0.63	43	0	17	60	0.50	161	94	0	255	0.78	0	0	0	0	0.00	381	60	441
7:00 AM - 8:00 AM	**4**	**53**	**75**	**132**	**0.66**	**48**	**0**	**16**	**64**	**0.53**	**145**	**93**	**0**	**238**	**0.73**	**1**	**0**	**0**	**1**	**0.25**	**370**	**65**	**435**
7:15 AM - 8:15 AM	4	52	55	111	0.56	44	0	15	59	0.49	91	109	0	200	0.61	1	0	0	1	0.25	311	60	371
7:30 AM - 8:30 AM	4	52	26	82	0.76	32	0	10	42	0.35	55	109	4	168	0.76	1	0	0	1	0.25	250	43	293
7:45 AM - 8:45 AM	2	61	18	81	0.78	12	0	4	16	0.50	43	100	5	148	0.74	1	0	0	1	0.25	229	17	246
8:00 AM - 9:00 AM	0	62	15	77	0.74	11	0	5	16	0.50	45	105	5	155	0.78	0	0	0	0	0.00	232	16	248
PM 15 Minute Volumes																							
2:00 PM - 2:15 PM	0	18	1	19		6	0	4	10		5	13	0	18		1	1	0	2		37	12	49
2:15 PM - 2:30 PM	0	11	3	14		6	1	2	9		2	10	0	12		0	0	0	0		26	9	35
2:30 PM - 2:45 PM	2	17	5	24		7	0	1	8		7	23	0	30		1	0	0	1		54	9	63
2:45 PM - 3:00 PM	2	14	6	22		18	0	2	20		8	25	1	34		0	0	1	1		56	21	77
3:00 PM - 3:15 PM	0	18	5	23		60	0	20	80		5	18	0	23		1	0	1	2		46	82	128
3:15 PM - 3:30 PM	0	17	6	23		24	0	9	33		3	19	2	24		1	0	1	2		47	35	82
3:30 PM - 3:45 PM	2	17	5	24		14	0	6	20		1	13	2	16		0	0	0	0		40	20	60
3:45 PM - 4:00 PM	1	28	6	35		11	0	6	17		5	16	1	22		0	0	1	1		57	18	75
4:00 PM - 4:15 PM	1	26	2	29		10	0	3	13		0	15	0	15		2	0	0	2		44	15	59
4:15 PM - 4:30 PM	0	12	3	15		8	0	5	13		4	23	0	27		1	0	0	1		42	14	56
4:30 PM - **4:45 PM**	0	18	1	19		4	0	2	6		4	24	0	28		1	0	2	3		47	9	56
4:45 PM - 5:00 PM	0	15	3	18		7	0	6	13		4	26	0	30		0	0	0	0		48	13	61
5:00 PM - 5:15 PM	0	17	6	23		8	0	4	12		1	16	1	18		0	0	1	1		41	13	54
5:15 PM - 5:30 PM	0	17	4	21		2	0	3	5		5	10	0	15		0	0	0	0		36	5	41
5:30 PM - 5:45 PM	0	20	3	23		4	0	6	10		0	15	0	15		0	0	0	0		38	10	48
5:45 PM - 6:00 PM	0	21	2	23		3	0	6	9		4	17	0	21		0	0	0	0		44	9	53
6:00 PM - 6:15 PM	1	14	4	19		5	0	8	13		3	17	0	20		1	0	1	2		39	15	54
6:15 PM - 6:30 PM	0	19	3	22		6	0	6	12		2	22	0	24		1	0	1	2		46	14	60
6:30 PM - 6:45 PM	0	19	4	23		1	0	6	7		6	17	0	23		0	0	0	0		46	7	53
6:45 PM - 7:00 PM	1	17	3	21		5	0	1	6		3	11	0	14		0	0	0	0		35	6	41
Total	3	215	38	256		63	0	56	119		36	213	1	250		6	0	5	11		506	130	636
PM One Hour Volumes																							
2:00 PM - 3:00 PM	4	60	15	79	0.82	37	1	9	47	0.59	22	71	1	94	0.69	2	1	1	4	0.50	173	51	224
2:15 PM - 3:15 PM	4	60	19	83	0.86	91	1	25	117	0.37	22	76	1	99	0.73	2	0	2	4	0.50	182	121	303
2:30 PM - 3:30 PM	4	66	22	92	0.96	109	0	32	141	0.44	23	85	3	111	0.82	3	0	3	6	0.75	203	147	350
2:45 PM - 3:45 PM	**4**	**66**	**22**	**92**	**0.96**	**116**	**0**	**37**	**153**	**0.48**	**17**	**75**	**5**	**97**	**0.71**	**2**	**0**	**3**	**5**	**0.63**	**189**	**158**	**347**
3:00 PM - 4:00 PM	3	80	22	105	0.75	109	0	41	150	0.47	14	66	5	85	0.89	2	0	3	5	0.63	190	155	345
3:15 PM - 4:15 PM	4	88	19	111	0.79	59	0	24	83	0.63	9	63	5	77	0.80	3	0	2	5	0.63	188	88	276
3:30 PM - 4:30 PM	4	83	16	103	0.74	43	0	20	63	0.79	10	67	3	80	0.74	3	0	1	4	0.50	183	67	250
3:45 PM - 4:45 PM	2	84	12	98	0.70	33	0	16	49	0.72	13	78	1	92	0.82	4	0	3	7	0.58	190	56	246
4:00 PM - 5:00 PM	1	71	9	81	0.70	29	0	16	45	0.87	12	88	0	100	0.83	4	0	2	6	0.50	181	51	232
4:15 PM - 5:15 PM	0	62	13	75	0.82	27	0	17	44	0.85	13	89	1	103	0.86	2	0	3	5	0.42	178	49	227
4:30 PM - 5:30 PM	**0**	**67**	**14**	**81**	**0.88**	**21**	**0**	**15**	**36**	**0.69**	**14**	**76**	**1**	**91**	**0.76**	**1**	**0**	**3**	**4**	**0.33**	**172**	**40**	**212**
4:45 PM - 5:45 PM	0	69	16	85	0.92	21	0	19	40	0.77	10	67	1	78	0.65	0	0	1	1	0.25	163	41	204
5:00 PM - 6:00 PM	0	75	15	90	0.98	17	0	19	36	0.75	10	58	1	69	0.82	0	0	1	1	0.25	159	37	196
5:15 PM - 6:15 PM	1	72	13	86	0.93	14	0	23	37	0.71	12	59	0	71	0.85	1	0	1	2	0.25	157	39	196
5:30 PM - 6:30 PM	1	74	12	87	0.95	18	0	26	44	0.85	9	71	0	80	0.83	2	0	2	4	0.50	167	48	215
5:45 PM - 6:45 PM	1	73	13	87	0.95	15	0	26	41	0.79	15	73	0	88	0.92	2	0	2	4	0.50	175	45	220
6:00 PM - 7:00 PM	2	69	14	85	0.92	17	0	21	38	0.73	14	67	0	81	0.84	2	0	2	4	0.50	166	42	208

Wells + Associates, Inc.

McLean, Virginia

Turning Movement Count - All Vehicles

PROJECT: Paul VI Development
W+A JOB NO: 6709
INTERSECTION: Cedar Ave. & Oak St.
LOCATION: Fairfax County,VA

DATE: 2/3/2016
DAY: Wednesday
WEATHER: rain
COUNTED BY: Geraldin
INPUTED BY: agan

SOUTHBOUND ROAD: Oak Street
NORTHBOUND ROAD: Oak Street
WESTBOUND ROAD: Cedar Avenue
EASTBOUND ROAD: Cedar Avenue

Time Period	Southbound Oak Street					Westbound Cedar Avenue					Northbound Oak Street					Eastbound Cedar Avenue					North & South	East & West	Total
	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF			
AM 15 Minute Volumes																							
6:00 AM - 6:15 AM	0	3	0	3		0	1	0	1		2	3	0	5		0	2	1	3		8	4	12
6:15 AM - 6:30 AM	0	2	3	5		1	0	1	2		1	6	0	7		0	0	0	0		12	2	14
6:30 AM - 6:45 AM	2	9	4	15		1	0	0	1		8	8	0	16		2	5	2	9		31	10	41
6:45 AM - 7:00 AM	3	7	17	27		8	3	4	15		22	13	0	35		2	21	2	25		62	40	102
7:00 AM - 7:15 AM	2	3	31	36		25	9	11	45		48	11	0	59		0	50	1	51		95	96	191
7:15 AM - 7:30 AM	1	4	71	76		62	17	17	96		66	1	3	70		2	68	1	71		146	167	313
7:30 AM - 7:45 AM	2	10	54	66		70	29	30	129		63	7	1	71		0	38	2	40		137	169	306
7:45 AM - 8:00 AM	0	21	2	23		10	8	7	25		1	7	1	9		1	5	6	12		32	37	69
8:00 AM - 8:15 AM	1	18	3	22		1	1	0	2		1	12	1	14		1	5	7	13		36	15	51
8:15 AM - 8:30 AM	0	13	10	23		2	0	0	2		4	15	0	19		2	10	7	19		42	21	63
8:30 AM - 8:45 AM	1	21	8	30		5	4	4	13		6	17	0	23		3	7	7	17		53	30	83
8:45 AM - 9:00 AM	3	21	3	27		4	2	5	11		7	18	1	26		1	4	6	11		53	22	75
Total	15	132	206	353		189	74	79	342		229	118	7	354		14	215	42	271		707	613	1320
AM One Hour Volumes																							
6:00 AM - 7:00 AM	5	21	24	50	0.46	10	4	5	19	0.32	33	30	0	63	0.45	4	28	5	37	0.37	113	56	169
6:15 AM - 7:15 AM	7	21	55	83	0.58	35	12	16	63	0.35	79	38	0	117	0.50	4	76	5	85	0.42	200	148	348
6:30 AM - 7:30 AM	8	23	123	154	0.51	96	29	32	157	0.41	144	33	3	180	0.64	6	144	6	156	0.55	334	313	647
6:45 AM - 7:45 AM	**8**	**24**	**173**	**205**	**0.67**	**165**	**58**	**62**	**285**	**0.55**	**199**	**32**	**4**	**235**	**0.83**	**4**	**177**	**6**	**187**	**0.66**	**440**	**472**	**912**
7:00 AM - 8:00 AM	5	38	158	201	0.66	167	63	65	295	0.57	178	26	5	209	0.74	3	161	10	174	0.61	410	469	879
7:15 AM - 8:15 AM	4	53	130	187	0.62	143	55	54	252	0.49	131	27	6	164	0.58	4	116	16	136	0.48	351	388	739
7:30 AM - 8:30 AM	3	62	69	134	0.51	83	38	37	158	0.31	69	41	3	113	0.40	4	58	22	84	0.53	247	242	489
7:45 AM - 8:45 AM	2	73	23	98	0.82	18	13	11	42	0.42	12	51	2	65	0.71	7	27	27	61	0.80	163	103	266
8:00 AM - 9:00 AM	5	73	24	102	0.85	12	7	9	28	0.54	18	62	2	82	0.79	7	26	27	60	0.79	184	88	272
PM 15 Minute Volumes																							
2:00 PM - 2:15 PM	3	29	3	35		8	6	2	16		2	14	0	16		1	1	4	6		51	22	73
2:15 PM - 2:30 PM	2	26	4	32		2	4	0	6		2	25	1	28		1	5	0	6		60	12	72
2:30 PM - 2:45 PM	3	16	11	30		2	3	3	8		3	17	2	22		0	7	3	10		52	18	70
2:45 PM - 3:00 PM	2	29	18	49		11	15	8	34		7	18	4	29		4	7	4	15		78	49	127
3:00 PM - 3:15 PM	3	32	13	48		46	63	33	142		7	20	1	28		3	5	1	9		76	151	227
3:15 PM - 3:30 PM	5	17	6	28		31	27	15	73		8	35	2	45		3	3	4	10		73	83	156
3:30 PM - 3:45 PM	3	16	9	28		23	16	16	55		7	11	1	19		2	2	1	5		47	60	107
3:45 PM - 4:00 PM	2	15	7	24		9	14	10	33		11	19	1	31		1	10	4	15		55	48	103
4:00 PM - **4:15 PM**	0	18	9	27		10	12	13	35		5	21	2	28		1	0	0	1		55	36	91
4:15 PM - 4:30 PM	6	17	6	29		7	8	7	22		5	19	1	25		1	1	6	8		54	30	84
4:30 PM - 4:45 PM	1	17	3	21		11	3	2	16		3	18	1	22		1	2	2	5		43	21	64
4:45 PM - 5:00 PM	6	18	5	29		3	4	4	11		0	20	1	21		0	3	4	7		50	18	68
5:00 PM - 5:15 PM	4	12	5	21		5	3	2	10		2	22	5	29		3	1	2	6		50	16	66
5:15 PM - 5:30 PM	2	16	4	22		5	4	4	13		2	17	0	19		3	4	1	8		41	21	62
5:30 PM - 5:45 PM	5	15	7	27		7	3	1	11		1	18	4	23		2	2	0	4		50	15	65
5:45 PM - 6:00 PM	4	12	7	23		6	3	8	17		5	16	1	22		2	1	0	3		45	20	65
6:00 PM - 6:15 PM	8	19	5	32		5	3	4	12		3	15	3	21		3	5	1	9		53	21	74
6:15 PM - 6:30 PM	0	16	4	20		10	13	8	31		0	12	1	13		0	5	0	5		33	36	69
6:30 PM - 6:45 PM	2	15	7	24		8	6	7	21		3	14	0	17		2	1	3	6		41	27	68
6:45 PM - 7:00 PM	1	26	8	35		3	2	2	7		3	7	4	14		0	7	2	9		49	16	65
Total	39	201	70	310		80	64	62	206		32	199	23	254		18	32	21	71		564	277	841
PM One Hour Volumes																							
2:00 PM - 3:00 PM	10	100	36	146	0.74	23	28	13	64	0.47	14	74	7	95	0.82	6	20	11	37	0.62	241	101	342
2:15 PM - 3:15 PM	10	103	46	159	0.81	61	85	44	190	0.33	19	80	8	107	0.92	8	24	8	40	0.67	266	230	496
2:30 PM - 3:30 PM	13	94	48	155	0.79	90	108	59	257	0.45	25	90	9	124	0.69	10	22	12	44	0.73	279	301	580
2:45 PM - 3:45 PM	**13**	**94**	**46**	**153**	**0.78**	**111**	**121**	**72**	**304**	**0.54**	**29**	**84**	**8**	**121**	**0.67**	**12**	**17**	**10**	**39**	**0.65**	**274**	**343**	**617**
3:00 PM - 4:00 PM	13	80	35	128	0.67	109	120	74	303	0.53	33	85	5	123	0.68	9	20	10	39	0.65	251	342	593
3:15 PM - 4:15 PM	10	66	31	107	0.96	73	69	54	196	0.67	31	86	6	123	0.68	7	15	9	31	0.52	230	227	457
3:30 PM - 4:30 PM	11	66	31	108	0.93	49	50	46	145	0.66	28	70	5	103	0.83	5	13	11	29	0.48	211	174	385
3:45 PM - 4:45 PM	9	67	25	101	0.87	37	37	32	106	0.76	24	77	5	106	0.85	4	13	12	29	0.48	207	135	342
4:00 PM - 5:00 PM	**13**	**70**	**23**	**106**	**0.91**	**31**	**27**	**26**	**84**	**0.60**	**13**	**78**	**5**	**96**	**0.86**	**3**	**6**	**12**	**21**	**0.66**	**202**	**105**	**307**
4:15 PM - 5:15 PM	17	64	19	100	0.86	26	18	15	59	0.67	10	79	8	97	0.84	5	7	14	26	0.81	197	85	282
4:30 PM - 5:30 PM	13	63	17	93	0.80	24	14	12	50	0.78	7	77	7	91	0.78	7	10	9	26	0.81	184	76	260
4:45 PM - 5:45 PM	17	61	21	99	0.85	20	14	11	45	0.87	5	77	10	92	0.79	8	10	7	25	0.78	191	70	261
5:00 PM - 6:00 PM	15	55	23	93	0.86	23	13	15	51	0.75	10	73	10	93	0.80	10	8	3	21	0.66	186	72	258
5:15 PM - 6:15 PM	19	62	23	104	0.81	23	13	17	53	0.78	11	66	8	85	0.92	10	12	2	24	0.67	189	77	266
5:30 PM - 6:30 PM	17	62	23	102	0.80	28	22	21	71	0.57	9	61	9	79	0.86	7	13	1	21	0.58	181	92	273
5:45 PM - 6:45 PM	14	62	23	99	0.77	29	25	27	81	0.65	11	57	5	73	0.83	7	12	4	23	0.64	172	104	276
6:00 PM - 7:00 PM	11	76	24	111	0.79	26	24	21	71	0.57	9	48	8	65	0.77	5	18	6	29	0.81	176	100	276

Wells + Associates, Inc.

McLean, Virginia

Turning Movement Count - All Vehicles

PROJECT: Paul VI Development
W+A JOB NO: 6709
INTERSECTION: Cedar Ave. & McLean Ave.
LOCATION: Fairfax County,VA

DATE: 2/3/2016
DAY: Wednesday
WEATHER: rain
COUNTED BY: Matt
INPUTED BY: agan

SOUTHBOUND ROAD: McLean Avenue
NORTHBOUND ROAD: 0
WESTBOUND ROAD: Cedar Avenue
EASTBOUND ROAD: Cedar Avenue

Time Period	Southbound McLean Avenue					Westbound Cedar Avenue					Northbound 0					Eastbound Cedar Avenue					North & South	East & West	Total
	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF			
AM 15 Minute Volumes																							
6:00 AM - 6:15 AM	3	0	1	4		0	0	0	0		0	0	0	0		0	1	1	2		4	2	6
6:15 AM - 6:30 AM	4	0	0	4		1	0	0	1		0	0	0	0		0	1	1	2		4	3	7
6:30 AM - 6:45 AM	0	0	1	1		1	3	0	4		0	0	0	0		0	3	3	6		1	10	11
6:45 AM - 7:00 AM	2	0	0	2		2	5	0	7		0	0	0	0		0	0	2	2		2	9	11
7:00 AM - 7:15 AM	2	0	1	3		3	0	0	3		0	0	0	0		0	1	1	2		3	5	8
7:15 AM - 7:30 AM	5	0	1	6		7	9	0	16		0	0	0	0		0	3	15	18		6	34	40
7:30 AM - 7:45 AM	6	0	6	12		3	7	0	10		0	0	0	0		0	11	15	26		12	36	48
7:45 AM - 8:00 AM	3	0	0	3		12	5	0	17		0	0	0	0		0	11	19	30		3	47	50
8:00 AM - 8:15 AM	6	0	2	8		0	7	0	7		0	0	0	0		0	2	12	14		8	21	29
8:15 AM - 8:30 AM	7	0	1	8		7	3	0	10		0	0	0	0		0	2	6	8		8	18	26
8:30 AM - 8:45 AM	2	0	1	3		2	6	0	8		0	0	0	0		0	0	3	3		3	11	14
8:45 AM - 9:00 AM	7	0	1	8		2	8	0	10		0	0	0	0		0	4	7	11		8	21	29
Total	47	0	15	62		40	53	0	93		0	0	0	0		0	39	85	124		62	217	279
AM One Hour Volumes																							
6:00 AM - 7:00 AM	9	0	2	11	0.69	4	8	0	12	0.43	0	0	0	0	0.00	0	5	7	12	0.50	11	24	35
6:15 AM - 7:15 AM	8	0	2	10	0.63	7	8	0	15	0.54	0	0	0	0	0.00	0	5	7	12	0.50	10	27	37
6:30 AM - 7:30 AM	9	0	3	12	0.50	13	17	0	30	0.47	0	0	0	0	0.00	0	7	21	28	0.39	12	58	70
6:45 AM - 7:45 AM	15	0	8	23	0.48	15	21	0	36	0.56	0	0	0	0	0.00	0	15	33	48	0.46	23	84	107
7:00 AM - 8:00 AM	16	0	8	24	0.50	25	21	0	46	0.68	0	0	0	0	0.00	0	26	50	76	0.63	24	122	146
7:15 AM - 8:15 AM	**20**	**0**	**9**	**29**	**0.60**	**22**	**28**	**0**	**50**	**0.74**	**0**	**0**	**0**	**0**	**0.00**	**0**	**27**	**61**	**88**	**0.73**	**29**	**138**	**167**
7:30 AM - 8:30 AM	22	0	9	31	0.65	22	22	0	44	0.65	0	0	0	0	0.00	0	26	52	78	0.65	31	122	153
7:45 AM - 8:45 AM	18	0	4	22	0.69	21	21	0	42	0.62	0	0	0	0	0.00	0	15	40	55	0.46	22	97	119
8:00 AM - 9:00 AM	22	0	5	27	0.84	11	24	0	35	0.88	0	0	0	0	0.00	0	8	28	36	0.64	27	71	98
PM 15 Minute Volumes																							
2:00 PM - 2:15 PM	4	0	1	5		2	2	0	4		0	0	0	0		0	3	6	9		5	13	18
2:15 PM - 2:30 PM	2	0	0	2		1	2	0	3		0	0	0	0		0	4	2	6		2	9	11
2:30 PM - 2:45 PM	3	0	2	5		1	4	0	5		0	0	0	0		0	4	8	12		5	17	22
2:45 PM - 3:00 PM	6	0	7	13		4	2	0	6		0	0	0	0		0	2	11	13		13	19	32
3:00 PM - 3:15 PM	3	0	0	3		4	5	0	9		0	0	0	0		0	1	5	6		3	15	18
3:15 PM - 3:30 PM	8	0	2	10		8	5	0	13		0	0	0	0		0	1	5	6		10	19	29
3:30 PM - 3:45 PM	10	0	4	14		3	4	0	7		0	0	0	0		0	5	1	6		14	13	27
3:45 PM - 4:00 PM	4	0	1	5		5	7	0	12		0	0	0	0		0	4	9	13		5	25	30
4:00 PM - 4:15 PM	10	0	1	11		1	7	0	8		0	0	0	0		0	4	13	17		11	25	36
4:15 PM - **4:30 PM**	4	0	1	5		6	6	0	12		0	0	0	0		0	7	19	26		5	38	43
4:30 PM - 4:45 PM	8	0	2	10		4	9	0	13		0	0	0	0		0	3	15	18		10	31	41
4:45 PM - 5:00 PM	5	0	3	8		4	6	0	10		0	0	0	0		0	5	18	23		8	33	41
5:00 PM - 5:15 PM	6	0	1	7		6	7	0	13		0	0	0	0		0	9	16	25		7	38	45
5:15 PM - 5:30 PM	6	0	2	8		9	1	0	10		0	0	0	0		0	3	13	16		8	26	34
5:30 PM - 5:45 PM	6	0	6	12		7	4	0	11		0	0	0	0		0	3	9	12		12	23	35
5:45 PM - 6:00 PM	7	0	5	12		8	8	0	16		0	0	0	0		0	0	8	8		12	24	36
6:00 PM - 6:15 PM	5	0	2	7		5	4	0	9		0	0	0	0		0	1	5	6		7	15	22
6:15 PM - 6:30 PM	4	0	2	6		4	6	0	10		0	0	0	0		0	3	1	4		6	14	20
6:30 PM - 6:45 PM	9	0	2	11		5	5	0	10		0	0	0	0		0	2	4	6		11	16	27
6:45 PM - 7:00 PM	5	0	1	6		5	1	0	6		0	0	0	0		0	5	4	9		6	15	21
Total	75	0	28	103		64	64	0	128		0	0	0	0		0	45	125	170		103	298	401
PM One Hour Volumes																							
2:00 PM - 3:00 PM	15	0	10	25	0.48	8	10	0	18	0.75	0	0	0	0	0.00	0	13	27	40	0.77	25	58	83
2:15 PM - 3:15 PM	14	0	9	23	0.44	10	13	0	23	0.64	0	0	0	0	0.00	0	11	26	37	0.71	23	60	83
2:30 PM - 3:30 PM	20	0	11	31	0.60	17	16	0	33	0.63	0	0	0	0	0.00	0	8	29	37	0.71	31	70	101
2:45 PM - 3:45 PM	**27**	**0**	**13**	**40**	**0.71**	**19**	**16**	**0**	**35**	**0.67**	**0**	**0**	**0**	**0**	**0.00**	**0**	**9**	**22**	**31**	**0.60**	**40**	**66**	**106**
3:00 PM - 4:00 PM	25	0	7	32	0.57	20	21	0	41	0.79	0	0	0	0	0.00	0	11	20	31	0.60	32	72	104
3:15 PM - 4:15 PM	32	0	8	40	0.71	17	23	0	40	0.77	0	0	0	0	0.00	0	14	28	42	0.62	40	82	122
3:30 PM - 4:30 PM	28	0	7	35	0.63	15	24	0	39	0.81	0	0	0	0	0.00	0	20	42	62	0.60	35	101	136
3:45 PM - 4:45 PM	26	0	5	31	0.70	16	29	0	45	0.87	0	0	0	0	0.00	0	18	56	74	0.71	31	119	150
4:00 PM - 5:00 PM	27	0	7	34	0.77	15	28	0	43	0.83	0	0	0	0	0.00	0	19	65	84	0.81	34	127	161
4:15 PM - 5:15 PM	**23**	**0**	**7**	**30**	**0.75**	**20**	**28**	**0**	**48**	**0.92**	**0**	**0**	**0**	**0**	**0.00**	**0**	**24**	**68**	**92**	**0.88**	**30**	**140**	**170**
4:30 PM - 5:30 PM	25	0	8	33	0.83	23	23	0	46	0.88	0	0	0	0	0.00	0	20	62	82	0.82	33	128	161
4:45 PM - 5:45 PM	23	0	12	35	0.73	26	18	0	44	0.85	0	0	0	0	0.00	0	20	56	76	0.76	35	120	155
5:00 PM - 6:00 PM	25	0	14	39	0.81	30	20	0	50	0.78	0	0	0	0	0.00	0	15	46	61	0.61	39	111	150
5:15 PM - 6:15 PM	24	0	15	39	0.81	29	17	0	46	0.72	0	0	0	0	0.00	0	7	35	42	0.66	39	88	127
5:30 PM - 6:30 PM	22	0	15	37	0.77	24	22	0	46	0.72	0	0	0	0	0.00	0	7	23	30	0.63	37	76	113
5:45 PM - 6:45 PM	25	0	11	36	0.75	22	23	0	45	0.70	0	0	0	0	0.00	0	6	18	24	0.75	36	69	105
6:00 PM - 7:00 PM	23	0	7	30	0.68	19	16	0	35	0.88	0	0	0	0	0.00	0	11	14	25	0.69	30	60	90

Wells + Associates, Inc.

McLean, Virginia

Turning Movement Count - All Vehicles

PROJECT: Paul VI Development
W+A JOB NO: 6709
INTERSECTION: Chain Bridge Rd. & Cedar Ave.
LOCATION: Fairfax County,VA

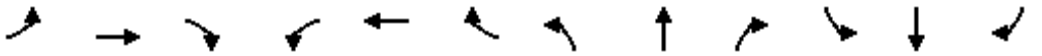
DATE: 1/5/2017
DAY: Thursday
WEATHER: clear
COUNTED BY: Maria & Anita
INPUTED BY: agan

SOUTHBOUND ROAD: Chain Bridge Road - 123
NORTHBOUND ROAD: Chain Bridge Road - 123
WESTBOUND ROAD: Driveway
EASTBOUND ROAD: Cedar Avenue

Time Period	Southbound Chain Bridge Road - 123					Westbound Driveway					Northbound Chain Bridge Road - 123					Eastbound Cedar Avenue					North & South	East & West	Total
	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF			
AM 15 Minute Volumes																							
6:00 AM - 6:15 AM	2	30	0	32		0	0	0	0		0	89	0	89		2	0	0	2		121	2	123
6:15 AM - 6:30 AM	0	39	0	39		0	0	0	0		0	137	1	138		1	0	3	4		177	4	181
6:30 AM - 6:45 AM	1	40	0	41		0	0	0	0		0	142	1	143		1	0	4	5		184	5	189
6:45 AM - 7:00 AM	2	56	0	58		0	0	0	0		0	191	4	195		3	0	6	9		253	9	262
7:00 AM - 7:15 AM	3	86	0	89		0	0	0	0		0	196	9	205		0	0	3	3		294	3	297
7:15 AM - 7:30 AM	6	121	0	127		0	0	0	0		0	223	5	228		7	0	0	7		355	7	362
7:30 AM - 7:45 AM	2	130	0	132		0	0	0	0		0	253	3	256		4	0	4	8		388	8	396
7:45 AM - 8:00 AM	4	141	0	145		0	0	0	0		0	194	7	201		5	0	3	8		346	8	354
8:00 AM - 8:15 AM	2	129	0	131		0	0	0	0		0	213	7	220		2	0	5	7		351	7	358
8:15 AM - 8:30 AM	4	156	0	160		0	0	0	0		0	178	6	184		4	0	1	5		344	5	349
8:30 AM - 8:45 AM	4	164	0	168		0	0	0	0		0	170	2	172		1	0	1	2		340	2	342
8:45 AM - 9:00 AM	2	170	0	172		0	0	0	0		1	182	2	185		5	0	2	7		357	7	364
Total	32	1262	0	1294		0	0	0	0		1	2168	47	2216		35	0	32	67		3510	67	3577
AM One Hour Volumes																							
6:00 AM - 7:00 AM	5	165	0	170	0.73	0	0	0	0	0.00	0	559	6	565	0.72	7	0	13	20	0.56	735	20	755
6:15 AM - 7:15 AM	6	221	0	227	0.64	0	0	0	0	0.00	0	666	15	681	0.83	5	0	16	21	0.58	908	21	929
6:30 AM - 7:30 AM	12	303	0	315	0.62	0	0	0	0	0.00	0	752	19	771	0.85	11	0	13	24	0.67	1086	24	1110
6:45 AM - 7:45 AM	13	393	0	406	0.77	0	0	0	0	0.00	0	863	21	884	0.86	14	0	13	27	0.75	1290	27	1317
7:00 AM - 8:00 AM	15	478	0	493	0.85	0	0	0	0	0.00	0	866	24	890	0.87	16	0	10	26	0.81	1383	26	1409
7:15 AM - 8:15 AM	**14**	**521**	**0**	**535**	**0.92**	**0**	**0**	**0**	**0**	**0.00**	**0**	**883**	**22**	**905**	**0.88**	**18**	**0**	**12**	**30**	**0.94**	**1440**	**30**	**1470**
7:30 AM - 8:30 AM	12	556	0	568	0.89	0	0	0	0	0.00	0	838	23	861	0.84	15	0	13	28	0.88	1429	28	1457
7:45 AM - 8:45 AM	14	590	0	604	0.90	0	0	0	0	0.00	0	755	22	777	0.88	12	0	10	22	0.69	1381	22	1403
8:00 AM - 9:00 AM	12	619	0	631	0.92	0	0	0	0	0.00	1	743	17	761	0.86	12	0	9	21	0.75	1392	21	1413
PM 15 Minute Volumes																							
2:00 PM - 2:15 PM	2	168	0	170		0	0	0	0		0	178	7	185		3	0	3	6		355	6	361
2:15 PM - 2:30 PM	3	185	0	188		0	0	0	0		0	179	1	180		8	0	3	11		368	11	379
2:30 PM - 2:45 PM	3	151	0	154		0	0	0	0		0	191	7	198		3	0	4	7		352	7	359
2:45 PM - 3:00 PM	2	172	0	174		0	0	0	0		0	160	7	167		2	0	0	2		341	2	343
3:00 PM - 3:15 PM	6	160	0	166		0	0	1	1		0	165	12	177		5	0	2	7		343	8	351
3:15 PM - 3:30 PM	0	137	0	137		1	0	0	1		1	177	4	182		4	0	3	7		319	8	327
3:30 PM - 3:45 PM	4	194	0	198		0	0	0	0		0	187	9	196		5	0	2	7		394	7	401
3:45 PM - 4:00 PM	2	160	0	162		0	0	0	0		0	171	11	182		1	0	1	2		344	2	346
4:00 PM - 4:15 PM	2	146	0	148		0	0	0	0		0	160	9	169		0	0	1	1		317	1	318
4:15 PM - 4:30 PM	1	154	0	155		0	0	0	0		0	164	11	175		6	0	4	10		330	10	340
4:30 PM - **4:45 PM**	2	157	0	159		0	0	0	0		0	195	5	200		4	0	4	8		359	8	367
4:45 PM - 5:00 PM	4	156	0	160		0	0	0	0		0	172	12	184		4	0	2	6		344	6	350
5:00 PM - 5:15 PM	1	162	1	164		0	0	0	0		0	182	30	212		1	0	1	2		376	2	378
5:15 PM - 5:30 PM	1	210	1	212		0	0	0	0		2	201	15	218		5	0	2	7		430	7	437
5:30 PM - 5:45 PM	6	177	0	183		0	0	0	0		0	141	13	154		3	1	3	7		337	7	344
5:45 PM - 6:00 PM	2	197	1	200		0	0	0	0		2	144	5	151		5	0	0	5		351	5	356
6:00 PM - 6:15 PM	5	219	0	224		0	0	0	0		0	135	9	144		3	0	1	4		368	4	372
6:15 PM - 6:30 PM	3	224	0	227		0	0	0	0		0	103	5	108		5	0	0	5		335	5	340
6:30 PM - 6:45 PM	4	168	0	172		0	0	0	0		0	96	1	97		4	0	1	5		269	5	274
6:45 PM - 7:00 PM	1	182	0	183		0	0	0	0		0	99	3	102		4	0	3	7		285	7	292
Total	32	2152	3	2187		0	0	0	0		4	1792	118	1914		44	1	22	67		4101	67	4168
PM One Hour Volumes																							
2:00 PM - 3:00 PM	10	676	0	686	0.91	0	0	0	0	0.00	0	708	22	730	0.92	16	0	10	26	0.59	1416	26	1442
2:15 PM - 3:15 PM	14	668	0	682	0.91	0	0	1	1	0.25	0	695	27	722	0.91	18	0	9	27	0.61	1404	28	1432
2:30 PM - 3:30 PM	11	620	0	631	0.91	1	0	1	2	0.50	1	693	30	724	0.91	14	0	9	23	0.82	1355	25	1380
2:45 PM - 3:45 PM	12	663	0	675	0.85	1	0	1	2	0.50	1	689	32	722	0.92	16	0	7	23	0.82	1397	25	1422
3:00 PM - 4:00 PM	12	651	0	663	0.84	1	0	1	2	0.50	1	700	36	737	0.94	15	0	8	23	0.82	1400	25	1425
3:15 PM - 4:15 PM	8	637	0	645	0.81	1	0	0	1	0.25	1	695	33	729	0.93	10	0	7	17	0.61	1374	18	1392
3:30 PM - 4:30 PM	9	654	0	663	0.84	0	0	0	0	0.00	0	682	40	722	0.92	12	0	8	20	0.50	1385	20	1405
3:45 PM - 4:45 PM	7	617	0	624	0.96	0	0	0	0	0.00	0	690	36	726	0.91	11	0	10	21	0.53	1350	21	1371
4:00 PM - 5:00 PM	9	613	0	622	0.97	0	0	0	0	0.00	0	691	37	728	0.91	14	0	11	25	0.63	1350	25	1375
4:15 PM - 5:15 PM	8	629	1	638	0.97	0	0	0	0	0.00	0	713	58	771	0.91	15	0	11	26	0.65	1409	26	1435
4:30 PM - 5:30 PM	**8**	**685**	**2**	**695**	**0.82**	**0**	**0**	**0**	**0**	**0.00**	**2**	**750**	**62**	**814**	**0.93**	**14**	**0**	**9**	**23**	**0.72**	**1509**	**23**	**1532**
4:45 PM - 5:45 PM	12	705	2	719	0.85	0	0	0	0	0.00	2	696	70	768	0.88	13	1	8	22	0.79	1487	22	1509
5:00 PM - 6:00 PM	10	746	3	759	0.90	0	0	0	0	0.00	4	668	63	735	0.84	14	1	6	21	0.75	1494	21	1515
5:15 PM - 6:15 PM	14	803	2	819	0.91	0	0	0	0	0.00	4	621	42	667	0.76	16	1	6	23	0.82	1486	23	1509
5:30 PM - 6:30 PM	16	817	1	834	0.92	0	0	0	0	0.00	2	523	32	557	0.90	16	1	4	21	0.75	1391	21	1412
5:45 PM - 6:45 PM	14	808	1	823	0.91	0	0	0	0	0.00	2	478	20	500	0.83	17	0	2	19	0.95	1323	19	1342
6:00 PM - 7:00 PM	13	793	0	806	0.89	0	0	0	0	0.00	0	433	18	451	0.78	16	0	5	21	0.75	1257	21	1278

APPENDIX C

Existing Capacity Analysis Worksheets



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	474	845	17	341	689	36	9	954	732	43	350	227
Future Volume (vph)	474	845	17	341	689	36	9	954	732	43	350	227
Ideal Flow (vphpl)	2500	2500	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1		4.3	4.3	6.3	4.8	5.6	5.6	4.8	5.6	5.6
Lane Util. Factor	0.97	0.95		0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	4430	4558		3335	3539	1509	1805	3539	1568	1703	3343	1524
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.43	1.00	1.00	0.07	1.00	1.00
Satd. Flow (perm)	4430	4558		3335	3539	1509	820	3539	1568	121	3343	1524
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	515	918	18	371	749	39	10	1037	796	47	380	247
RTOR Reduction (vph)	0	1	0	0	0	31	0	0	0	0	0	61
Lane Group Flow (vph)	515	935	0	371	749	8	10	1037	796	47	380	186
Heavy Vehicles (%)	4%	4%	0%	5%	2%	7%	0%	2%	3%	6%	8%	6%
Turn Type	Prot	NA		Prot	NA	Perm	pm+pt	NA	pt+ov	pm+pt	NA	pt+ov
Protected Phases	5	2		1	6		3	8	8 1	7	4	4 5
Permitted Phases						6	8			4		
Actuated Green, G (s)	59.9	59.9		37.8	37.8	37.8	64.5	57.4	95.2	64.5	57.4	124.4
Effective Green, g (s)	61.9	61.9		39.8	39.8	37.8	68.5	59.4	99.2	68.5	59.4	121.3
Actuated g/C Ratio	0.33	0.33		0.21	0.21	0.20	0.36	0.31	0.52	0.36	0.31	0.64
Clearance Time (s)	7.1	7.1		6.3	6.3	6.3	6.8	7.6		6.8	7.6	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	1443	1484		698	741	300	342	1106	818	119	1045	972
v/s Ratio Prot	0.12	c0.21		0.11	c0.21		0.00	0.29	c0.51	c0.02	0.11	0.12
v/s Ratio Perm						0.01	0.01			0.12		
v/c Ratio	0.36	0.63		0.53	1.01	0.03	0.03	0.94	0.97	0.39	0.36	0.19
Uniform Delay, d1	48.9	54.3		66.8	75.1	61.3	46.5	63.5	44.1	82.3	50.6	14.1
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.14	1.21	2.98
Incremental Delay, d2	0.7	2.0		2.9	35.8	0.2	0.0	15.7	25.6	2.1	1.0	0.4
Delay (s)	49.6	56.4		69.7	110.9	61.4	46.5	79.2	69.7	95.6	62.4	42.6
Level of Service	D	E		E	F	E	D	E	E	F	E	D
Approach Delay (s)		54.0			96.0			74.9			57.4	
Approach LOS		D			F			E			E	

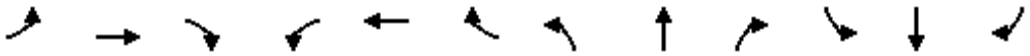
Intersection Summary			
HCM 2000 Control Delay	71.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	190.0	Sum of lost time (s)	19.8
Intersection Capacity Utilization	82.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	438	514	3	617	843	53	30	781	457	72	628	388
Future Volume (vph)	438	514	3	617	843	53	30	781	457	72	628	388
Ideal Flow (vphpl)	2500	2500	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1		4.3	4.3	6.3	4.8	5.6	5.6	4.8	5.6	5.6
Lane Util. Factor	0.97	0.95		0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	4430	4565		3335	3539	1509	1805	3539	1568	1703	3343	1524
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.25	1.00	1.00	0.17	1.00	1.00
Satd. Flow (perm)	4430	4565		3335	3539	1509	474	3539	1568	296	3343	1524
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	476	559	3	671	916	58	33	849	497	78	683	422
RTOR Reduction (vph)	0	0	0	0	0	40	0	0	0	0	0	44
Lane Group Flow (vph)	476	562	0	671	916	18	33	849	497	78	683	378
Heavy Vehicles (%)	4%	4%	0%	5%	2%	7%	0%	2%	3%	6%	8%	6%
Turn Type	Prot	NA		Prot	NA	Perm	pm+pt	NA	pt+ov	pm+pt	NA	pt+ov
Protected Phases	5	2		1	6		3	8	8 1	7	4	4 5
Permitted Phases						6	8			4		
Actuated Green, G (s)	37.9	37.9		68.9	68.9	68.9	85.4	78.4	147.3	85.4	78.4	123.4
Effective Green, g (s)	39.9	39.9		70.9	70.9	68.9	89.4	80.4	151.3	89.4	80.4	120.3
Actuated g/C Ratio	0.18	0.18		0.32	0.32	0.31	0.41	0.37	0.69	0.41	0.37	0.55
Clearance Time (s)	7.1	7.1		6.3	6.3	6.3	6.8	7.6		6.8	7.6	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	803	827		1074	1140	472	247	1293	1078	177	1221	833
v/s Ratio Prot	0.11	c0.12		0.20	c0.26		0.01	c0.24	0.32	c0.02	0.20	0.25
v/s Ratio Perm						0.01	0.05			0.16		
v/c Ratio	0.59	0.68		0.62	0.80	0.04	0.13	0.66	0.46	0.44	0.56	0.45
Uniform Delay, d1	82.6	84.1		63.3	68.2	52.5	60.8	58.3	15.7	76.5	55.7	30.0
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.97	1.13
Incremental Delay, d2	3.2	4.5		2.7	6.0	0.2	0.2	2.6	1.4	1.6	1.7	1.7
Delay (s)	85.8	88.6		66.0	74.2	52.7	61.0	60.9	17.1	71.4	55.6	35.6
Level of Service	F	F		E	E	D	E	E	B	E	E	D
Approach Delay (s)		87.3			70.1			45.1			49.5	
Approach LOS		F			E			D			D	

Intersection Summary			
HCM 2000 Control Delay	62.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	220.0	Sum of lost time (s)	19.8
Intersection Capacity Utilization	76.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

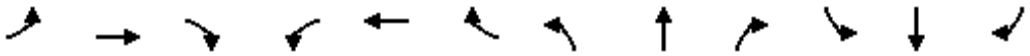
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	385	551	74	638	953	36	34	575	523	49	915	437
Future Volume (vph)	385	551	74	638	953	36	34	575	523	49	915	437
Ideal Flow (vphpl)	2500	2500	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1		4.3	4.3	6.3	4.8	5.6	5.6	4.8	5.6	5.6
Lane Util. Factor	0.97	0.95		0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	4430	4507		3335	3539	1509	1805	3539	1568	1703	3343	1524
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.10	1.00	1.00	0.28	1.00	1.00
Satd. Flow (perm)	4430	4507		3335	3539	1509	195	3539	1568	507	3343	1524
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	418	599	80	693	1036	39	37	625	568	53	995	475
RTOR Reduction (vph)	0	5	0	0	0	27	0	0	0	0	0	32
Lane Group Flow (vph)	418	674	0	693	1036	12	37	625	568	53	995	443
Heavy Vehicles (%)	4%	4%	0%	5%	2%	7%	0%	2%	3%	6%	8%	6%
Turn Type	Prot	NA		Prot	NA	Perm	pm+pt	NA	pt+ov	pm+pt	NA	pt+ov
Protected Phases	5	2		1	6		3	8	8 1	7	4	4 5
Permitted Phases						6	8			4		
Actuated Green, G (s)	37.9	37.9		68.9	68.9	68.9	85.4	78.4	147.3	85.4	78.4	123.4
Effective Green, g (s)	39.9	39.9		70.9	70.9	68.9	89.4	80.4	151.3	89.4	80.4	120.3
Actuated g/C Ratio	0.18	0.18		0.32	0.32	0.31	0.41	0.37	0.69	0.41	0.37	0.55
Clearance Time (s)	7.1	7.1		6.3	6.3	6.3	6.8	7.6		6.8	7.6	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	803	817		1074	1140	472	145	1293	1078	254	1221	833
v/s Ratio Prot	0.09	c0.15		0.21	c0.29		c0.01	0.18	0.36	0.01	c0.30	0.29
v/s Ratio Perm						0.01	0.09			0.08		
v/c Ratio	0.52	0.83		0.65	0.91	0.03	0.26	0.48	0.53	0.21	0.81	0.53
Uniform Delay, d1	81.4	86.7		63.8	71.5	52.3	81.0	53.8	16.8	59.7	63.1	31.9
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.25	1.19	1.56
Incremental Delay, d2	2.4	9.3		3.0	12.1	0.1	0.9	1.3	1.8	0.4	5.4	2.2
Delay (s)	83.8	96.0		66.8	83.6	52.4	81.9	55.1	18.7	75.1	80.8	51.9
Level of Service	F	F		E	F	D	F	E	B	E	F	D
Approach Delay (s)		91.3			76.3			39.1			71.6	
Approach LOS		F			E			D			E	

Intersection Summary			
HCM 2000 Control Delay	69.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	220.0	Sum of lost time (s)	19.8
Intersection Capacity Utilization	82.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	1616	34	32	600	21	45	27	71	28	44	19
Future Volume (vph)	15	1616	34	32	600	21	45	27	71	28	44	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.6		5.6	5.6		4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frt	1.00	1.00		1.00	0.99		1.00	0.89		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1671	3496		1805	3395		1805	1538		1752	1776	
Flt Permitted	0.38	1.00		0.09	1.00		0.64	1.00		0.40	1.00	
Satd. Flow (perm)	677	3496		165	3395		1210	1538		746	1776	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	16	1757	37	35	652	23	49	29	77	30	48	21
RTOR Reduction (vph)	0	0	0	0	1	0	0	61	0	0	9	0
Lane Group Flow (vph)	16	1794	0	35	674	0	49	45	0	30	60	0
Heavy Vehicles (%)	8%	3%	0%	0%	6%	0%	0%	5%	12%	3%	3%	0%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			7			3	
Permitted Phases	2			6			7			3		
Actuated Green, G (s)	146.9	142.7		150.3	144.4		21.7	21.7		12.3	12.3	
Effective Green, g (s)	148.9	143.7		152.3	145.4		23.7	23.7		14.3	14.3	
Actuated g/C Ratio	0.78	0.76		0.80	0.77		0.12	0.12		0.08	0.08	
Clearance Time (s)	6.6	6.6		6.6	6.6		6.5	6.5		6.5	6.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	557	2644		191	2598		150	191		56	133	
v/s Ratio Prot	0.00	c0.51		c0.01	0.20			0.03			0.03	
v/s Ratio Perm	0.02			0.14			c0.04			c0.04		
v/c Ratio	0.03	0.68		0.18	0.26		0.33	0.23		0.54	0.45	
Uniform Delay, d1	4.5	11.6		10.7	6.5		75.9	75.0		84.7	84.1	
Progression Factor	0.37	0.62		1.00	0.74		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	1.1		0.4	0.2		1.3	0.6		9.5	2.4	
Delay (s)	1.7	8.3		11.1	5.1		77.1	75.6		94.2	86.5	
Level of Service	A	A		B	A		E	E		F	F	
Approach Delay (s)		8.2			5.3			76.1			88.8	
Approach LOS		A			A			E			F	

Intersection Summary			
HCM 2000 Control Delay	14.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	190.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	63.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

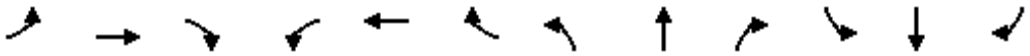


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	877	21	47	1015	19	106	54	45	44	28	12
Future Volume (vph)	19	877	21	47	1015	19	106	54	45	44	28	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.6		5.6	5.6		4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	0.93		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1671	3495		1805	3400		1805	1637		1752	1777	
Flt Permitted	0.23	1.00		0.26	1.00		0.72	1.00		0.47	1.00	
Satd. Flow (perm)	397	3495		489	3400		1373	1637		872	1777	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	21	953	23	51	1103	21	115	59	49	48	30	13
RTOR Reduction (vph)	0	1	0	0	0	0	0	15	0	0	7	0
Lane Group Flow (vph)	21	975	0	51	1124	0	115	93	0	48	36	0
Heavy Vehicles (%)	8%	3%	0%	0%	6%	0%	0%	5%	12%	3%	3%	0%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			7			3	
Permitted Phases	2			6			7			3		
Actuated Green, G (s)	166.0	161.7		172.2	164.8		31.2	31.2		21.8	21.8	
Effective Green, g (s)	168.0	162.7		174.2	165.8		33.2	33.2		23.8	23.8	
Actuated g/C Ratio	0.76	0.74		0.79	0.75		0.15	0.15		0.11	0.11	
Clearance Time (s)	6.6	6.6		6.6	6.6		6.5	6.5		6.5	6.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	333	2584		437	2562		207	247		94	192	
v/s Ratio Prot	0.00	0.28		c0.00	c0.33			0.06			0.02	
v/s Ratio Perm	0.05			0.09			c0.08			0.06		
v/c Ratio	0.06	0.38		0.12	0.44		0.56	0.38		0.51	0.19	
Uniform Delay, d1	7.0	10.4		5.9	10.0		86.6	84.1		92.6	89.3	
Progression Factor	0.07	0.10		0.30	0.21		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.3		0.1	0.5		3.2	1.0		4.6	0.5	
Delay (s)	0.6	1.4		1.9	2.6		89.8	85.0		97.2	89.8	
Level of Service	A	A		A	A		F	F		F	F	
Approach Delay (s)		1.4			2.6			87.5			93.7	
Approach LOS		A			A			F			F	

Intersection Summary			
HCM 2000 Control Delay	13.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	220.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	60.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

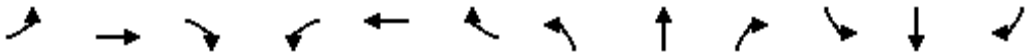
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	811	12	48	1297	11	41	29	63	33	25	15
Future Volume (vph)	28	811	12	48	1297	11	41	29	63	33	25	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.6		5.6	5.6		4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	0.90		1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1671	3499		1805	3403		1805	1554		1752	1761	
Flt Permitted	0.16	1.00		0.29	1.00		0.71	1.00		0.38	1.00	
Satd. Flow (perm)	279	3499		558	3403		1357	1554		702	1761	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	30	882	13	52	1410	12	45	32	68	36	27	16
RTOR Reduction (vph)	0	0	0	0	0	0	0	41	0	0	10	0
Lane Group Flow (vph)	30	895	0	52	1422	0	45	59	0	36	33	0
Heavy Vehicles (%)	8%	3%	0%	0%	6%	0%	0%	5%	12%	3%	3%	0%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			7			3	
Permitted Phases	2			6			7			3		
Actuated Green, G (s)	175.8	170.1		179.0	171.7		22.9	22.9		13.5	13.5	
Effective Green, g (s)	177.8	171.1		181.0	172.7		24.9	24.9		15.5	15.5	
Actuated g/C Ratio	0.81	0.78		0.82	0.78		0.11	0.11		0.07	0.07	
Clearance Time (s)	6.6	6.6		6.6	6.6		6.5	6.5		6.5	6.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	267	2721		506	2671		153	175		49	124	
v/s Ratio Prot	0.00	0.26		c0.00	c0.42			c0.04			0.02	
v/s Ratio Perm	0.09			0.08			0.03			c0.05		
v/c Ratio	0.11	0.33		0.10	0.53		0.29	0.34		0.73	0.26	
Uniform Delay, d1	5.9	7.3		4.0	8.7		89.5	90.0		100.2	96.8	
Progression Factor	0.13	0.16		0.12	0.13		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	0.3		0.1	0.6		1.1	1.2		43.4	1.1	
Delay (s)	0.9	1.4		0.5	1.8		90.6	91.1		143.7	98.0	
Level of Service	A	A		A	A		F	F		F	F	
Approach Delay (s)		1.4			1.7			90.9			118.8	
Approach LOS		A			A			F			F	

Intersection Summary			
HCM 2000 Control Delay	10.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	220.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	57.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



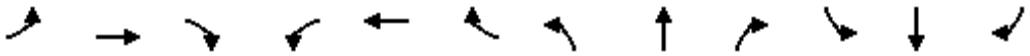
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	1607	87	128	647	2	97	1	148	32	2	13
Future Volume (vph)	8	1607	87	128	647	2	97	1	148	32	2	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	4.6		5.6	4.6			4.5	4.5		4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frt	1.00	0.99		1.00	1.00			1.00	0.85		0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		0.97	
Satd. Flow (prot)	1597	3483		1805	3405			1810	1615		1769	
Flt Permitted	0.38	1.00		0.03	1.00			0.95	1.00		0.97	
Satd. Flow (perm)	645	3483		65	3405			1810	1615		1769	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	9	1747	95	139	703	2	105	1	161	35	2	14
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	146	0	8	0
Lane Group Flow (vph)	9	1842	0	139	705	0	0	106	15	0	43	0
Heavy Vehicles (%)	13%	3%	0%	0%	6%	0%	0%	0%	0%	0%	0%	0%
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		4	4		7	7	
Permitted Phases	2			6					4			
Actuated Green, G (s)	117.0	114.2		136.9	127.5			15.6	15.6		8.9	
Effective Green, g (s)	119.0	116.2		137.9	129.5			17.6	17.6		10.9	
Actuated g/C Ratio	0.63	0.61		0.73	0.68			0.09	0.09		0.06	
Clearance Time (s)	6.6	6.6		6.6	6.6			6.5	6.5		6.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	423	2130		203	2320			167	149		101	
v/s Ratio Prot	0.00	c0.53		c0.06	0.21			c0.06			c0.02	
v/s Ratio Perm	0.01			0.44					0.01			
v/c Ratio	0.02	0.86		0.68	0.30			0.63	0.10		0.43	
Uniform Delay, d1	13.3	30.4		61.3	12.1			83.1	78.9		86.5	
Progression Factor	0.79	0.39		1.47	0.66			1.00	1.00		1.00	
Incremental Delay, d2	0.0	3.9		9.0	0.3			7.7	0.3		2.9	
Delay (s)	10.5	15.7		99.3	8.3			90.8	79.2		89.5	
Level of Service	B	B		F	A			F	E		F	
Approach Delay (s)		15.7			23.3			83.8			89.5	
Approach LOS		B			C			F			F	

Intersection Summary			
HCM 2000 Control Delay	25.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	190.0	Sum of lost time (s)	24.2
Intersection Capacity Utilization	75.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



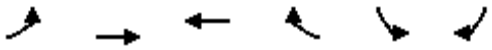
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	835	42	91	1175	5	78	19	157	19	5	38
Future Volume (vph)	23	835	42	91	1175	5	78	19	157	19	5	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	4.6		5.6	4.6			4.5	4.5		4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frt	1.00	0.99		1.00	1.00			1.00	0.85		0.92	
Flt Protected	0.95	1.00		0.95	1.00			0.96	1.00		0.98	
Satd. Flow (prot)	1597	3484		1805	3404			1827	1615		1716	
Flt Permitted	0.17	1.00		0.25	1.00			0.96	1.00		0.98	
Satd. Flow (perm)	285	3484		475	3404			1827	1615		1716	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	25	908	46	99	1277	5	85	21	171	21	5	41
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	157	0	26	0
Lane Group Flow (vph)	25	954	0	99	1282	0	0	106	14	0	41	0
Heavy Vehicles (%)	13%	3%	0%	0%	6%	0%	0%	0%	0%	0%	0%	0%
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		4	4		7	7	
Permitted Phases	2			6					4			
Actuated Green, G (s)	154.2	148.4		160.4	151.5			16.5	16.5		11.0	
Effective Green, g (s)	156.2	150.4		162.4	153.5			18.5	18.5		13.0	
Actuated g/C Ratio	0.71	0.68		0.74	0.70			0.08	0.08		0.06	
Clearance Time (s)	6.6	6.6		6.6	6.6			6.5	6.5		6.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	242	2381		410	2375			153	135		101	
v/s Ratio Prot	0.00	0.27		c0.01	c0.38			c0.06			c0.02	
v/s Ratio Perm	0.07			0.17					0.01			
v/c Ratio	0.10	0.40		0.24	0.54			0.69	0.11		0.40	
Uniform Delay, d1	11.9	15.2		9.8	16.1			98.0	93.1		99.8	
Progression Factor	0.31	0.25		0.63	0.41			1.00	1.00		1.00	
Incremental Delay, d2	0.2	0.5		0.3	0.8			12.7	0.3		2.6	
Delay (s)	3.9	4.3		6.5	7.5			110.7	93.5		102.4	
Level of Service	A	A		A	A			F	F		F	
Approach Delay (s)		4.3			7.4			100.1			102.4	
Approach LOS		A			A			F			F	

Intersection Summary			
HCM 2000 Control Delay	18.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	220.0	Sum of lost time (s)	24.2
Intersection Capacity Utilization	62.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



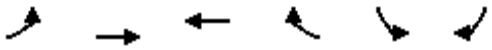
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	789	18	76	1424	7	18	10	117	23	4	32
Future Volume (vph)	14	789	18	76	1424	7	18	10	117	23	4	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	4.6		5.6	4.6			4.5	4.5		4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frt	1.00	1.00		1.00	1.00			1.00	0.85		0.93	
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00		0.98	
Satd. Flow (prot)	1597	3495		1805	3404			1841	1615		1726	
Flt Permitted	0.12	1.00		0.28	1.00			0.97	1.00		0.98	
Satd. Flow (perm)	205	3495		535	3404			1841	1615		1726	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	15	858	20	83	1548	8	20	11	127	25	4	35
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	120	0	21	0
Lane Group Flow (vph)	15	878	0	83	1556	0	0	31	7	0	43	0
Heavy Vehicles (%)	13%	3%	0%	0%	6%	0%	0%	0%	0%	0%	0%	0%
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		4	4		7	7	
Permitted Phases	2			6					4			
Actuated Green, G (s)	159.9	155.7		167.9	159.7			9.7	9.7		11.2	
Effective Green, g (s)	161.9	157.7		169.9	161.7			11.7	11.7		13.2	
Actuated g/C Ratio	0.74	0.72		0.77	0.73			0.05	0.05		0.06	
Clearance Time (s)	6.6	6.6		6.6	6.6			6.5	6.5		6.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	183	2505		466	2501			97	85		103	
v/s Ratio Prot	0.00	0.25		c0.01	c0.46			c0.02			c0.03	
v/s Ratio Perm	0.06			0.13					0.00			
v/c Ratio	0.08	0.35		0.18	0.62			0.32	0.08		0.42	
Uniform Delay, d1	11.6	11.8		7.1	14.2			100.3	99.0		99.7	
Progression Factor	0.33	0.25		0.94	0.51			1.00	1.00		1.00	
Incremental Delay, d2	0.2	0.4		0.2	1.0			1.9	0.4		2.8	
Delay (s)	4.0	3.3		6.9	8.3			102.2	99.4		102.5	
Level of Service	A	A		A	A			F	F		F	
Approach Delay (s)		3.3			8.3			100.0			102.5	
Approach LOS		A			A			F			F	

Intersection Summary			
HCM 2000 Control Delay	14.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	220.0	Sum of lost time (s)	24.2
Intersection Capacity Utilization	67.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



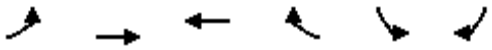
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	26	1708	731	9	11	18
Future Volume (vph)	26	1708	731	9	11	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	5.2	5.2		4.0	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frt	1.00	1.00	1.00		0.92	
Flt Protected	0.95	1.00	1.00		0.98	
Satd. Flow (prot)	1805	3505	3434		1708	
Flt Permitted	0.33	1.00	1.00		0.98	
Satd. Flow (perm)	619	3505	3434		1708	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	28	1857	795	10	12	20
RTOR Reduction (vph)	0	0	0	0	19	0
Lane Group Flow (vph)	28	1857	805	0	13	0
Heavy Vehicles (%)	0%	3%	5%	0%	0%	0%
Turn Type	pm+pt	NA	NA		Prot	
Protected Phases	1	6	2		4	
Permitted Phases	6					
Actuated Green, G (s)	167.4	167.4	155.6		10.4	
Effective Green, g (s)	168.4	168.4	156.6		12.4	
Actuated g/C Ratio	0.89	0.89	0.82		0.07	
Clearance Time (s)	6.2	6.2	6.2		6.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	589	3106	2830		111	
v/s Ratio Prot	0.00	c0.53	0.23		c0.01	
v/s Ratio Perm	0.04					
v/c Ratio	0.05	0.60	0.28		0.12	
Uniform Delay, d1	1.5	2.6	3.8		83.7	
Progression Factor	0.16	0.59	0.09		1.00	
Incremental Delay, d2	0.0	0.5	0.2		0.5	
Delay (s)	0.3	2.0	0.6		84.1	
Level of Service	A	A	A		F	
Approach Delay (s)		2.0	0.6		84.1	
Approach LOS		A	A		F	

Intersection Summary			
HCM 2000 Control Delay	2.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	190.0	Sum of lost time (s)	14.4
Intersection Capacity Utilization	63.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	44	876	1160	29	57	57
Future Volume (vph)	44	876	1160	29	57	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	5.2	5.2		4.0	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frt	1.00	1.00	1.00		0.93	
Flt Protected	0.95	1.00	1.00		0.98	
Satd. Flow (prot)	1805	3505	3429		1729	
Flt Permitted	0.19	1.00	1.00		0.98	
Satd. Flow (perm)	356	3505	3429		1729	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	48	952	1261	32	62	62
RTOR Reduction (vph)	0	0	1	0	18	0
Lane Group Flow (vph)	48	952	1292	0	106	0
Heavy Vehicles (%)	0%	3%	5%	0%	0%	0%
Turn Type	pm+pt	NA	NA		Prot	
Protected Phases	1	6	2		4	
Permitted Phases	6					
Actuated Green, G (s)	189.0	189.0	174.0		18.8	
Effective Green, g (s)	190.0	190.0	175.0		20.8	
Actuated g/C Ratio	0.86	0.86	0.80		0.09	
Clearance Time (s)	6.2	6.2	6.2		6.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	372	3027	2727		163	
v/s Ratio Prot	0.01	c0.27	c0.38		c0.06	
v/s Ratio Perm	0.11					
v/c Ratio	0.13	0.31	0.47		0.65	
Uniform Delay, d1	7.0	2.8	7.4		96.1	
Progression Factor	0.20	0.26	0.10		1.00	
Incremental Delay, d2	0.1	0.3	0.5		8.6	
Delay (s)	1.5	1.0	1.2		104.7	
Level of Service	A	A	A		F	
Approach Delay (s)		1.0	1.2		104.7	
Approach LOS		A	A		F	

Intersection Summary			
HCM 2000 Control Delay	6.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	220.0	Sum of lost time (s)	14.4
Intersection Capacity Utilization	52.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	37	929	1383	29	64	31
Future Volume (vph)	37	929	1383	29	64	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	5.2	5.2		4.0	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frt	1.00	1.00	1.00		0.96	
Flt Protected	0.95	1.00	1.00		0.97	
Satd. Flow (prot)	1805	3505	3431		1757	
Flt Permitted	0.14	1.00	1.00		0.97	
Satd. Flow (perm)	268	3505	3431		1757	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	40	1010	1503	32	70	34
RTOR Reduction (vph)	0	0	0	0	9	0
Lane Group Flow (vph)	40	1010	1535	0	95	0
Heavy Vehicles (%)	0%	3%	5%	0%	0%	0%
Turn Type	pm+pt	NA	NA		Prot	
Protected Phases	1	6	2		4	
Permitted Phases	6					
Actuated Green, G (s)	190.5	190.5	177.3		17.3	
Effective Green, g (s)	191.5	191.5	178.3		19.3	
Actuated g/C Ratio	0.87	0.87	0.81		0.09	
Clearance Time (s)	6.2	6.2	6.2		6.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	289	3050	2780		154	
v/s Ratio Prot	0.01	c0.29	c0.45		c0.05	
v/s Ratio Perm	0.12					
v/c Ratio	0.14	0.33	0.55		0.62	
Uniform Delay, d1	8.5	2.6	7.2		96.8	
Progression Factor	0.32	0.40	0.01		1.00	
Incremental Delay, d2	0.2	0.3	0.4		7.1	
Delay (s)	2.9	1.3	0.5		103.9	
Level of Service	A	A	A		F	
Approach Delay (s)		1.4	0.5		103.9	
Approach LOS		A	A		F	

Intersection Summary			
HCM 2000 Control Delay	4.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	220.0	Sum of lost time (s)	14.4
Intersection Capacity Utilization	55.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1697	22	27	748	5	14
Future Volume (Veh/h)	1697	22	27	748	5	14
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1845	24	29	813	5	15
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	217			618		
pX, platoon unblocked			0.86		0.92	0.86
vC, conflicting volume			1869		2322	934
vC1, stage 1 conf vol					1857	
vC2, stage 2 conf vol					464	
vCu, unblocked vol			1683		1661	595
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)			2.2		3.5	3.3
p0 queue free %			91		96	96
cM capacity (veh/h)			323		116	384

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	1230	639	29	406	406	20
Volume Left	0	0	29	0	0	5
Volume Right	0	24	0	0	0	15
cSH	1700	1700	323	1700	1700	243
Volume to Capacity	0.72	0.38	0.09	0.24	0.24	0.08
Queue Length 95th (ft)	0	0	7	0	0	7
Control Delay (s)	0.0	0.0	17.2	0.0	0.0	21.1
Lane LOS			C			C
Approach Delay (s)	0.0		0.6			21.1
Approach LOS						C

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	57.6%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	900	33	34	1216	16	75
Future Volume (Veh/h)	900	33	34	1216	16	75
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	978	36	37	1322	17	82
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	217			618		
pX, platoon unblocked			0.95		0.79	0.95
vC, conflicting volume			1014		1731	507
vC1, stage 1 conf vol					996	
vC2, stage 2 conf vol					735	
vCu, unblocked vol			907		1093	373
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)			2.2		3.5	3.3
p0 queue free %			95		95	86
cM capacity (veh/h)			708		321	593

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	652	362	37	661	661	99
Volume Left	0	0	37	0	0	17
Volume Right	0	36	0	0	0	82
cSH	1700	1700	708	1700	1700	518
Volume to Capacity	0.38	0.21	0.05	0.39	0.39	0.19
Queue Length 95th (ft)	0	0	4	0	0	17
Control Delay (s)	0.0	0.0	10.4	0.0	0.0	13.6
Lane LOS			B			B
Approach Delay (s)	0.0		0.3			13.6
Approach LOS						B

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	45.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	992	1	5	1509	1	4
Future Volume (Veh/h)	992	1	5	1509	1	4
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1078	1	5	1640	1	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	217			618		
pX, platoon unblocked			0.95		0.63	0.95
vC, conflicting volume			1079		1908	540
vC1, stage 1 conf vol					1078	
vC2, stage 2 conf vol					830	
vCu, unblocked vol			972		875	402
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)			2.2		3.5	3.3
p0 queue free %			99		100	99
cM capacity (veh/h)			668		295	566

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	719	360	5	820	820	5
Volume Left	0	0	5	0	0	1
Volume Right	0	1	0	0	0	4
cSH	1700	1700	668	1700	1700	478
Volume to Capacity	0.42	0.21	0.01	0.48	0.48	0.01
Queue Length 95th (ft)	0	0	1	0	0	1
Control Delay (s)	0.0	0.0	10.4	0.0	0.0	12.6
Lane LOS			B			B
Approach Delay (s)	0.0		0.0			12.6
Approach LOS						B

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	51.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL2	EBL	EBT	EBR2	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Traffic Volume (vph)	3	98	26	2	14	6	7	3	12	2	5	35
Future Volume (vph)	3	98	26	2	14	6	7	3	12	2	5	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			5.0			5.0					5.0	
Lane Util. Factor			1.00			1.00					1.00	
Frt			1.00			0.95					0.91	
Flt Protected			0.96			0.98					0.99	
Satd. Flow (prot)			1477			1719					1710	
Flt Permitted			0.96			0.98					0.91	
Satd. Flow (perm)			1477			1719					1583	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	3	107	28	2	15	7	8	3	13	2	5	38
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	140	0	0	33	0	0	0	0	58	0
Heavy Vehicles (%)	100%	0%	100%	100%	7%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Perm	Split	NA		Split	NA			Perm	Perm	NA	
Protected Phases		3	3		4	4					7	
Permitted Phases	3								7	7		
Actuated Green, G (s)			19.7			8.0					12.4	
Effective Green, g (s)			21.2			9.5					13.9	
Actuated g/C Ratio			0.11			0.05					0.07	
Clearance Time (s)			6.5			6.5					6.5	
Vehicle Extension (s)			3.0			3.0					3.0	
Lane Grp Cap (vph)			164			85					115	
v/s Ratio Prot			c0.09			c0.02						
v/s Ratio Perm											c0.04	
v/c Ratio			0.85			0.39					0.50	
Uniform Delay, d1			82.9			87.4					84.7	
Progression Factor			1.00			1.00					1.00	
Incremental Delay, d2			32.6			2.9					3.5	
Delay (s)			115.4			90.4					88.2	
Level of Service			F			F					F	
Approach Delay (s)			115.4			90.4					88.2	
Approach LOS			F			F					F	

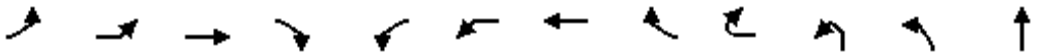
Intersection Summary			
HCM 2000 Control Delay	28.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	190.0	Sum of lost time (s)	25.7
Intersection Capacity Utilization	80.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL2	SBL	SBT	SBR	SBR2	NEL	NET	NER	NER2	SWL2	SWL	SWT
Lane Configurations												
Traffic Volume (vph)	25	3	5	2	4	3	1645	26	7	1	16	745
Future Volume (vph)	25	3	5	2	4	3	1645	26	7	1	16	745
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0			5.6	5.1				5.6	5.1
Lane Util. Factor		1.00	1.00			1.00	0.95				1.00	0.95
Frt		1.00	0.92			1.00	1.00				1.00	0.99
Flt Protected		0.95	1.00			0.95	1.00				0.95	1.00
Satd. Flow (prot)		1805	1745			1752	3599				1805	3482
Flt Permitted		0.61	1.00			0.27	1.00				0.03	1.00
Satd. Flow (perm)		1158	1745			500	3599				65	3482
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	3	5	2	4	3	1788	28	8	1	17	810
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	30	11	0	0	3	1824	0	0	0	18	886
Heavy Vehicles (%)	0%	0%	0%	0%	0%	3%	0%	0%	0%	0%	0%	2%
Turn Type	Perm	Perm	NA			pm+pt	NA			pm+pt	pm+pt	NA
Protected Phases			7			1	6			5	5	2
Permitted Phases	7	7				6				2	2	
Actuated Green, G (s)		12.4	12.4			113.4	112.2				119.0	115.0
Effective Green, g (s)		13.9	13.9			116.4	114.2				122.0	117.0
Actuated g/C Ratio		0.07	0.07			0.61	0.60				0.64	0.62
Clearance Time (s)		6.5	6.5			7.1	7.1				7.1	7.1
Vehicle Extension (s)		3.0	3.0			3.0	4.0				3.0	4.0
Lane Grp Cap (vph)		84	127			324	2163				92	2144
v/s Ratio Prot			0.01			0.00	c0.51				c0.01	c0.25
v/s Ratio Perm		0.03				0.01					0.12	
v/c Ratio		0.36	0.09			0.01	0.84				0.20	0.41
Uniform Delay, d1		83.8	82.1			15.1	30.7				32.5	18.8
Progression Factor		1.00	1.00			1.17	0.60				1.00	1.00
Incremental Delay, d2		2.6	0.3			0.0	3.5				1.0	0.6
Delay (s)		86.4	82.4			17.6	21.9				33.6	19.4
Level of Service		F	F			B	C				C	B
Approach Delay (s)			85.3				21.9					19.7
Approach LOS			F				C					B

Intersection Summary

Movement	SWR	SWR2
Lane Configurations		
Traffic Volume (vph)	61	9
Future Volume (vph)	61	9
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Peak-hour factor, PHF	0.92	0.92
Adj. Flow (vph)	66	10
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	0	0
Heavy Vehicles (%)	7%	0%
Turn Type		
Protected Phases		
Permitted Phases		
Actuated Green, G (s)		
Effective Green, g (s)		
Actuated g/C Ratio		
Clearance Time (s)		
Vehicle Extension (s)		
Lane Grp Cap (vph)		
v/s Ratio Prot		
v/s Ratio Perm		
v/c Ratio		
Uniform Delay, d1		
Progression Factor		
Incremental Delay, d2		
Delay (s)		
Level of Service		
Approach Delay (s)		
Approach LOS		

Intersection Summary

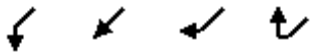


Movement	EBL2	EBL	EBT	EBR	WBL2	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT
Lane Configurations												
Traffic Volume (vph)	4	73	19	3	1	4	26	10	15	5	8	4
Future Volume (vph)	4	73	19	3	1	4	26	10	15	5	8	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			5.0				5.0					5.0
Lane Util. Factor			1.00				1.00					1.00
Frt			1.00				0.94					0.95
Flt Protected			0.96				1.00					0.98
Satd. Flow (prot)			1444				1769					1756
Flt Permitted			0.96				1.00					0.84
Satd. Flow (perm)			1444				1769					1518
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	79	21	3	1	4	28	11	16	5	9	4
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	107	0	0	0	60	0	0	0	0	30
Heavy Vehicles (%)	100%	0%	100%	100%	0%	7%	0%	0%	0%	0%	0%	0%
Turn Type	Perm	Split	NA		Perm	Split	NA			Perm	Perm	NA
Protected Phases		3	3			4	4					7
Permitted Phases	3				4					7	7	
Actuated Green, G (s)			20.1				12.9					8.6
Effective Green, g (s)			21.6				14.4					10.1
Actuated g/C Ratio			0.10				0.07					0.05
Clearance Time (s)			6.5				6.5					6.5
Vehicle Extension (s)			3.0				3.0					3.0
Lane Grp Cap (vph)			141				115					69
v/s Ratio Prot			c0.07				c0.03					
v/s Ratio Perm												c0.02
v/c Ratio			0.76				0.52					0.43
Uniform Delay, d1			96.7				99.5					102.2
Progression Factor			1.00				1.00					1.00
Incremental Delay, d2			20.6				4.2					4.3
Delay (s)			117.3				103.7					106.5
Level of Service			F				F					F
Approach Delay (s)			117.3				103.7					106.5
Approach LOS			F				F					F

Intersection Summary			
HCM 2000 Control Delay	26.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	220.0	Sum of lost time (s)	25.7
Intersection Capacity Utilization	69.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NBR	SBL2	SBL	SBT	SBR	SBR2	NEL2	NEL	NET	NER	NER2	SWL2
Lane Configurations												
Traffic Volume (vph)	11	17	7	6	5	1	5	5	888	51	11	3
Future Volume (vph)	11	17	7	6	5	1	5	5	888	51	11	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			5.0	5.0				5.6	5.1			
Lane Util. Factor			1.00	1.00				1.00	0.95			
Frt			1.00	0.93				1.00	0.99			
Flt Protected			0.95	1.00				0.95	1.00			
Satd. Flow (prot)			1805	1768				1778	3575			
Flt Permitted			0.77	1.00				0.12	1.00			
Satd. Flow (perm)			1461	1768				232	3575			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	12	18	8	7	5	1	5	5	965	55	12	3
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	26	13	0	0	0	10	1032	0	0	0
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%	0%	0%
Turn Type		Perm	Perm	NA			custom	pm+pt	NA			pm+pt
Protected Phases				7				1	6			5
Permitted Phases		7	7				1	6				2
Actuated Green, G (s)			8.6	8.6				141.9	139.3			
Effective Green, g (s)			10.1	10.1				144.9	141.3			
Actuated g/C Ratio			0.05	0.05				0.66	0.64			
Clearance Time (s)			6.5	6.5				7.1	7.1			
Vehicle Extension (s)			3.0	3.0				3.0	4.0			
Lane Grp Cap (vph)			67	81				181	2296			
v/s Ratio Prot				0.01				0.00	0.29			
v/s Ratio Perm			0.02					0.04				
v/c Ratio			0.39	0.16				0.06	0.45			
Uniform Delay, d1			101.9	100.9				18.0	19.8			
Progression Factor			1.00	1.00				0.86	0.59			
Incremental Delay, d2			3.7	0.9				0.1	0.6			
Delay (s)			105.6	101.8				15.6	12.3			
Level of Service			F	F				B	B			
Approach Delay (s)				104.4					12.3			
Approach LOS				F					B			

Intersection Summary



Movement	SWL	SWT	SWR	SWR2
Lane Configurations				
Traffic Volume (vph)	18	1236	68	14
Future Volume (vph)	18	1236	68	14
Ideal Flow (vphpl)	1900	1900	1900	1900
Total Lost time (s)	5.6	5.1		
Lane Util. Factor	1.00	0.95		
Frt	1.00	0.99		
Flt Protected	0.95	1.00		
Satd. Flow (prot)	1805	3498		
Flt Permitted	0.22	1.00		
Satd. Flow (perm)	411	3498		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92
Adj. Flow (vph)	20	1343	74	15
RTOR Reduction (vph)	0	0	0	0
Lane Group Flow (vph)	23	1432	0	0
Heavy Vehicles (%)	0%	2%	7%	0%
Turn Type	pm+pt	NA		
Protected Phases	5	2		
Permitted Phases	2			
Actuated Green, G (s)	147.5	142.1		
Effective Green, g (s)	150.5	144.1		
Actuated g/C Ratio	0.68	0.65		
Clearance Time (s)	7.1	7.1		
Vehicle Extension (s)	3.0	4.0		
Lane Grp Cap (vph)	324	2291		
v/s Ratio Prot	c0.00	c0.41		
v/s Ratio Perm	0.05			
v/c Ratio	0.07	0.63		
Uniform Delay, d1	13.5	22.2		
Progression Factor	1.00	1.00		
Incremental Delay, d2	0.1	1.3		
Delay (s)	13.6	23.5		
Level of Service	B	C		
Approach Delay (s)		23.3		
Approach LOS		C		

Intersection Summary

Movement	EBL2	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	WBR2	NBL2	NBL
Lane Configurations												
Traffic Volume (vph)	5	61	31	4	2	1	4	30	12	5	18	16
Future Volume (vph)	5	61	31	4	2	1	4	30	12	5	18	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			5.0					5.0				
Lane Util. Factor			1.00					1.00				
Frt			0.99					0.96				
Flt Protected			0.97					1.00				
Satd. Flow (prot)			1300					1800				
Flt Permitted			0.97					1.00				
Satd. Flow (perm)			1300					1800				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	5	66	34	4	2	1	4	33	13	5	20	17
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	111	0	0	0	0	56	0	0	0	0
Heavy Vehicles (%)	100%	0%	100%	100%	100%	0%	7%	0%	0%	0%	0%	0%
Turn Type	Perm	Split	NA			Perm	Split	NA			Perm	Perm
Protected Phases		3	3				4	4				
Permitted Phases	3					4					7	7
Actuated Green, G (s)			21.5					12.3				
Effective Green, g (s)			23.0					13.8				
Actuated g/C Ratio			0.10					0.06				
Clearance Time (s)			6.5					6.5				
Vehicle Extension (s)			3.0					3.0				
Lane Grp Cap (vph)			135					112				
v/s Ratio Prot			c0.09					c0.03				
v/s Ratio Perm												
v/c Ratio			0.82					0.50				
Uniform Delay, d1			96.5					99.8				
Progression Factor			1.00					1.00				
Incremental Delay, d2			31.5					3.5				
Delay (s)			128.0					103.2				
Level of Service			F					F				
Approach Delay (s)			128.0					103.2				
Approach LOS			F					F				

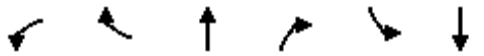
Intersection Summary			
HCM 2000 Control Delay	37.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	220.0	Sum of lost time (s)	25.7
Intersection Capacity Utilization	81.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NBT	NBR	SBL2	SBL	SBT	SBR	SBR2	NEL2	NEL	NET	NER	NER2
Lane Configurations												
Traffic Volume (vph)	20	38	11	1	6	2	2	12	12	797	33	9
Future Volume (vph)	20	38	11	1	6	2	2	12	12	797	33	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0			5.0	5.0				5.6	5.1		
Lane Util. Factor	1.00			1.00	1.00				1.00	0.95		
Frt	0.94			1.00	0.95				1.00	0.99		
Flt Protected	0.98			0.95	1.00				0.95	1.00		
Satd. Flow (prot)	1762			1805	1796				1778	3583		
Flt Permitted	0.87			0.49	1.00				0.05	1.00		
Satd. Flow (perm)	1568			934	1796				90	3583		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	41	12	1	7	2	2	13	13	866	36	10
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	100	0	0	13	11	0	0	0	26	912	0	0
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%	0%
Turn Type	NA		Perm	Perm	NA			custom	pm+pt	NA		
Protected Phases	7				7				1	6		
Permitted Phases			7	7				1	6			
Actuated Green, G (s)	17.8			17.8	17.8				134.8	129.2		
Effective Green, g (s)	19.3			19.3	19.3				137.8	131.2		
Actuated g/C Ratio	0.09			0.09	0.09				0.63	0.60		
Clearance Time (s)	6.5			6.5	6.5				7.1	7.1		
Vehicle Extension (s)	3.0			3.0	3.0				3.0	4.0		
Lane Grp Cap (vph)	137			81	157				110	2136		
v/s Ratio Prot					0.01				c0.01	0.25		
v/s Ratio Perm	c0.06			0.01					0.14			
v/c Ratio	0.73			0.16	0.07				0.24	0.43		
Uniform Delay, d1	97.8			92.9	92.1				34.0	24.0		
Progression Factor	1.00			1.00	1.00				0.70	0.44		
Incremental Delay, d2	17.6			0.9	0.2				1.1	0.6		
Delay (s)	115.4			93.8	92.3				24.9	11.1		
Level of Service	F			F	F				C	B		
Approach Delay (s)	115.4				93.1					11.5		
Approach LOS	F				F					B		

Intersection Summary

Movement	SWL2	SWL	SWT	SWR	SWR2
Lane Configurations					
Traffic Volume (vph)	5	17	1488	93	5
Future Volume (vph)	5	17	1488	93	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900
Total Lost time (s)		5.6	5.1		
Lane Util. Factor		1.00	0.95		
Frt		1.00	0.99		
Flt Protected		0.95	1.00		
Satd. Flow (prot)		1805	3497		
Flt Permitted		0.25	1.00		
Satd. Flow (perm)		471	3497		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	5	18	1617	101	5
RTOR Reduction (vph)	0	0	0	0	0
Lane Group Flow (vph)	0	23	1723	0	0
Heavy Vehicles (%)	0%	0%	2%	7%	0%
Turn Type	pm+pt	pm+pt	NA		
Protected Phases	5	5	2		
Permitted Phases	2	2			
Actuated Green, G (s)		134.6	129.1		
Effective Green, g (s)		137.6	131.1		
Actuated g/C Ratio		0.63	0.60		
Clearance Time (s)		7.1	7.1		
Vehicle Extension (s)		3.0	4.0		
Lane Grp Cap (vph)		337	2083		
v/s Ratio Prot		0.00	c0.49		
v/s Ratio Perm		0.04			
v/c Ratio		0.07	0.83		
Uniform Delay, d1		17.4	35.4		
Progression Factor		1.00	1.00		
Incremental Delay, d2		0.1	3.9		
Delay (s)		17.5	39.4		
Level of Service		B	D		
Approach Delay (s)			39.1		
Approach LOS			D		

Intersection Summary



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	22	53	87	146	85	53
Future Volume (Veh/h)	22	53	87	146	85	53
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	24	58	95	159	92	58
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		3				
Median type			None			None
Median storage veh)						
Upstream signal (ft)						366
pX, platoon unblocked	0.99					
vC, conflicting volume	416	174			254	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	400	174			254	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	96	93			93	
cM capacity (veh/h)	555	869			1311	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	82	254	150
Volume Left	24	0	92
Volume Right	58	159	0
cSH	1228	1700	1311
Volume to Capacity	0.07	0.15	0.07
Queue Length 95th (ft)	5	0	6
Control Delay (s)	10.1	0.0	5.1
Lane LOS	B		A
Approach Delay (s)	10.1	0.0	5.1
Approach LOS	B		

Intersection Summary			
Average Delay	3.3		
Intersection Capacity Utilization	34.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	48	117	60	31	21	54
Future Volume (Veh/h)	48	117	60	31	21	54
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	52	127	65	34	23	59
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		3				
Median type			None			None
Median storage veh)						
Upstream signal (ft)						366
pX, platoon unblocked						
vC, conflicting volume	187	82			99	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	187	82			99	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	93	87			98	
cM capacity (veh/h)	790	978			1494	

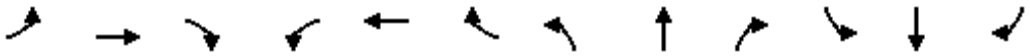
Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	179	99	82
Volume Left	52	0	23
Volume Right	127	34	0
cSH	1378	1700	1494
Volume to Capacity	0.13	0.06	0.02
Queue Length 95th (ft)	11	0	1
Control Delay (s)	9.4	0.0	2.2
Lane LOS	A		A
Approach Delay (s)	9.4	0.0	2.2
Approach LOS	A		

Intersection Summary			
Average Delay	5.2		
Intersection Capacity Utilization	20.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	34	29	73	15	22	81
Future Volume (Veh/h)	34	29	73	15	22	81
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	37	32	79	16	24	88
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		3				
Median type			None			None
Median storage veh)						
Upstream signal (ft)						366
pX, platoon unblocked						
vC, conflicting volume	223	87			95	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	223	87			95	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	95	97			98	
cM capacity (veh/h)	753	971			1499	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	69	95	112
Volume Left	37	0	24
Volume Right	32	16	0
cSH	1404	1700	1499
Volume to Capacity	0.05	0.06	0.02
Queue Length 95th (ft)	4	0	1
Control Delay (s)	9.5	0.0	1.7
Lane LOS	A		A
Approach Delay (s)	9.5	0.0	1.7
Approach LOS	A		

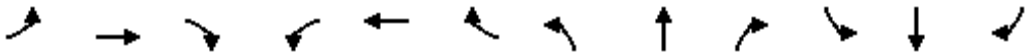
Intersection Summary			
Average Delay	3.1		
Intersection Capacity Utilization	22.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	11	214	4	58	72	189	2	22	205	213	22	6
Future Volume (vph)	11	214	4	58	72	189	2	22	205	213	22	6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	12	233	4	63	78	205	2	24	223	232	24	7

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	249	346	249	263
Volume Left (vph)	12	63	2	232
Volume Right (vph)	4	205	223	7
Hadj (s)	0.03	-0.29	-0.50	0.19
Departure Headway (s)	6.3	5.8	5.8	6.4
Degree Utilization, x	0.43	0.55	0.40	0.47
Capacity (veh/h)	509	570	544	498
Control Delay (s)	14.0	15.7	12.7	15.0
Approach Delay (s)	14.0	15.7	12.7	15.0
Approach LOS	B	C	B	C

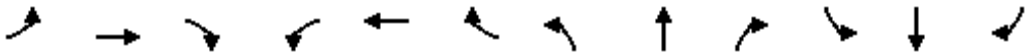
Intersection Summary				
Delay	14.5			
Level of Service	B			
Intersection Capacity Utilization	71.3%	ICU Level of Service	C	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	11	39	3	72	125	111	5	83	32	45	79	13
Future Volume (vph)	11	39	3	72	125	111	5	83	32	45	79	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	12	42	3	78	136	121	5	90	35	49	86	14

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	57	335	130	149
Volume Left (vph)	12	78	5	49
Volume Right (vph)	3	121	35	14
Hadj (s)	0.04	-0.14	-0.12	0.04
Departure Headway (s)	5.1	4.6	5.0	5.1
Degree Utilization, x	0.08	0.42	0.18	0.21
Capacity (veh/h)	639	749	666	650
Control Delay (s)	8.5	10.9	9.0	9.4
Approach Delay (s)	8.5	10.9	9.0	9.4
Approach LOS	A	B	A	A

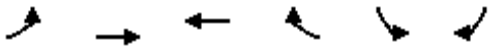
Intersection Summary				
Delay	10.0			
Level of Service	B			
Intersection Capacity Utilization	44.8%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	9	16	4	24	35	36	8	83	13	22	78	23
Future Volume (vph)	9	16	4	24	35	36	8	83	13	22	78	23
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	10	17	4	26	38	39	9	90	14	24	85	25

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	31	103	113	134
Volume Left (vph)	10	26	9	24
Volume Right (vph)	4	39	14	25
Hadj (s)	0.02	-0.14	-0.02	-0.04
Departure Headway (s)	4.6	4.4	4.3	4.3
Degree Utilization, x	0.04	0.12	0.14	0.16
Capacity (veh/h)	724	773	795	799
Control Delay (s)	7.8	8.0	8.0	8.1
Approach Delay (s)	7.8	8.0	8.0	8.1
Approach LOS	A	A	A	A

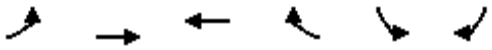
Intersection Summary				
Delay	8.0			
Level of Service	A			
Intersection Capacity Utilization	25.4%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Stop	Stop		Stop	
Traffic Volume (vph)	61	27	28	22	9	20
Future Volume (vph)	61	27	28	22	9	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	66	29	30	24	10	22

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total (vph)	95	54	32
Volume Left (vph)	66	0	10
Volume Right (vph)	0	24	22
Hadj (s)	0.17	-0.23	-0.32
Departure Headway (s)	4.2	3.8	3.9
Degree Utilization, x	0.11	0.06	0.03
Capacity (veh/h)	846	924	881
Control Delay (s)	7.7	7.1	7.0
Approach Delay (s)	7.7	7.1	7.0
Approach LOS	A	A	A

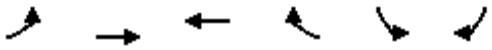
Intersection Summary			
Delay	7.4		
Level of Service	A		
Intersection Capacity Utilization	21.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Stop	Stop		Stop	
Traffic Volume (vph)	22	9	16	19	13	27
Future Volume (vph)	22	9	16	19	13	27
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	24	10	17	21	14	29

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total (vph)	34	38	43
Volume Left (vph)	24	0	14
Volume Right (vph)	0	21	29
Hadj (s)	0.18	-0.30	-0.31
Departure Headway (s)	4.2	3.7	3.7
Degree Utilization, x	0.04	0.04	0.04
Capacity (veh/h)	842	949	932
Control Delay (s)	7.4	6.9	6.9
Approach Delay (s)	7.4	6.9	6.9
Approach LOS	A	A	A

Intersection Summary			
Delay	7.0		
Level of Service	A		
Intersection Capacity Utilization	18.4%	ICU Level of Service	A
Analysis Period (min)	15		



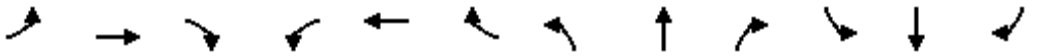
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Stop	Stop		Stop	
Traffic Volume (vph)	68	24	28	20	7	23
Future Volume (vph)	68	24	28	20	7	23
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	74	26	30	22	8	25

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total (vph)	100	52	33
Volume Left (vph)	74	0	8
Volume Right (vph)	0	22	25
Hadj (s)	0.18	-0.22	-0.37
Departure Headway (s)	4.2	3.8	3.9
Degree Utilization, x	0.12	0.06	0.04
Capacity (veh/h)	844	919	891
Control Delay (s)	7.7	7.1	7.0
Approach Delay (s)	7.7	7.1	7.0
Approach LOS	A	A	A

Intersection Summary			
Delay	7.4		
Level of Service	A		
Intersection Capacity Utilization	21.7%	ICU Level of Service	A
Analysis Period (min)	15		

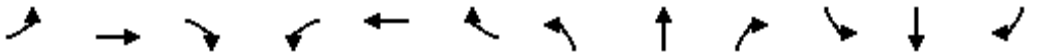
APPENDIX D

2027 Background Future Capacity Analysis Worksheets



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	506	890	17	346	724	36	9	986	733	43	368	246
Future Volume (vph)	506	890	17	346	724	36	9	986	733	43	368	246
Ideal Flow (vphpl)	2500	2500	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1		4.3	4.3	6.3	4.8	5.6	5.6	4.8	5.6	5.6
Lane Util. Factor	0.97	0.95		0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	4430	4558		3335	3539	1509	1805	3539	1568	1703	3343	1524
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.41	1.00	1.00	0.07	1.00	1.00
Satd. Flow (perm)	4430	4558		3335	3539	1509	788	3539	1568	121	3343	1524
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	550	967	18	376	787	39	10	1072	797	47	400	267
RTOR Reduction (vph)	0	1	0	0	0	31	0	0	0	0	0	61
Lane Group Flow (vph)	550	984	0	376	787	8	10	1072	797	47	400	206
Heavy Vehicles (%)	4%	4%	0%	5%	2%	7%	0%	2%	3%	6%	8%	6%
Turn Type	Prot	NA		Prot	NA	Perm	pm+pt	NA	pt+ov	pm+pt	NA	pt+ov
Protected Phases	5	2		1	6		3	8	8 1	7	4	4 5
Permitted Phases						6	8			4		
Actuated Green, G (s)	59.9	59.9		37.8	37.8	37.8	64.5	57.4	95.2	64.5	57.4	124.4
Effective Green, g (s)	61.9	61.9		39.8	39.8	37.8	68.5	59.4	99.2	68.5	59.4	121.3
Actuated g/C Ratio	0.33	0.33		0.21	0.21	0.20	0.36	0.31	0.52	0.36	0.31	0.64
Clearance Time (s)	7.1	7.1		6.3	6.3	6.3	6.8	7.6		6.8	7.6	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	1443	1484		698	741	300	332	1106	818	119	1045	972
v/s Ratio Prot	0.12	c0.22		0.11	c0.22		0.00	0.30	c0.51	c0.02	0.12	0.14
v/s Ratio Perm						0.01	0.01			0.12		
v/c Ratio	0.38	0.66		0.54	1.06	0.03	0.03	0.97	0.97	0.39	0.38	0.21
Uniform Delay, d1	49.3	55.1		66.9	75.1	61.3	47.2	64.4	44.2	83.6	51.0	14.4
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.15	1.22	2.70
Incremental Delay, d2	0.8	2.4		3.0	50.8	0.2	0.0	20.6	25.8	2.1	1.0	0.5
Delay (s)	50.1	57.4		69.9	125.9	61.4	47.2	85.0	70.0	98.4	63.1	39.3
Level of Service	D	E		E	F	E	D	F	E	F	E	D
Approach Delay (s)		54.8			106.3			78.4			56.5	
Approach LOS		D			F			E			E	

Intersection Summary			
HCM 2000 Control Delay	75.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	190.0	Sum of lost time (s)	19.8
Intersection Capacity Utilization	83.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

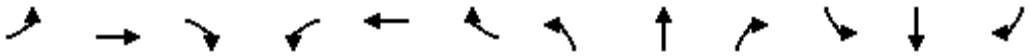


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	465	555	3	620	887	53	30	807	459	72	656	417
Future Volume (vph)	465	555	3	620	887	53	30	807	459	72	656	417
Ideal Flow (vphpl)	2500	2500	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1		4.3	4.3	6.3	4.8	5.6	5.6	4.8	5.6	5.6
Lane Util. Factor	0.97	0.95		0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	4430	4565		3335	3539	1509	1805	3539	1568	1703	3343	1524
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.23	1.00	1.00	0.15	1.00	1.00
Satd. Flow (perm)	4430	4565		3335	3539	1509	443	3539	1568	273	3343	1524
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	505	603	3	674	964	58	33	877	499	78	713	453
RTOR Reduction (vph)	0	0	0	0	0	40	0	0	0	0	0	42
Lane Group Flow (vph)	505	606	0	674	964	18	33	877	499	78	713	411
Heavy Vehicles (%)	4%	4%	0%	5%	2%	7%	0%	2%	3%	6%	8%	6%
Turn Type	Prot	NA		Prot	NA	Perm	pm+pt	NA	pt+ov	pm+pt	NA	pt+ov
Protected Phases	5	2		1	6		3	8	8 1	7	4	4 5
Permitted Phases						6	8			4		
Actuated Green, G (s)	37.9	37.9		68.9	68.9	68.9	85.4	78.4	147.3	85.4	78.4	123.4
Effective Green, g (s)	39.9	39.9		70.9	70.9	68.9	89.4	80.4	151.3	89.4	80.4	120.3
Actuated g/C Ratio	0.18	0.18		0.32	0.32	0.31	0.41	0.37	0.69	0.41	0.37	0.55
Clearance Time (s)	7.1	7.1		6.3	6.3	6.3	6.8	7.6		6.8	7.6	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	803	827		1074	1140	472	235	1293	1078	169	1221	833
v/s Ratio Prot	0.11	c0.13		0.20	c0.27		0.01	c0.25	0.32	c0.02	0.21	0.27
v/s Ratio Perm						0.01	0.05			0.17		
v/c Ratio	0.63	0.73		0.63	0.85	0.04	0.14	0.68	0.46	0.46	0.58	0.49
Uniform Delay, d1	83.2	85.0		63.3	69.5	52.5	62.3	58.9	15.7	78.7	56.3	30.9
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	0.92	0.98	1.15
Incremental Delay, d2	3.7	5.7		2.8	7.8	0.2	0.3	2.9	1.4	1.8	1.9	1.9
Delay (s)	86.9	90.7		66.1	77.2	52.7	62.6	61.8	17.2	74.6	57.1	37.5
Level of Service	F	F		E	E	D	E	E	B	E	E	D
Approach Delay (s)		89.0			72.0			46.0			51.1	
Approach LOS		F			E			D			D	

Intersection Summary			
HCM 2000 Control Delay	64.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	220.0	Sum of lost time (s)	19.8
Intersection Capacity Utilization	79.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

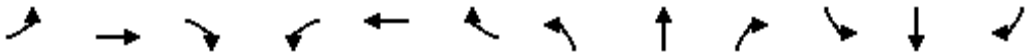
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	417	603	74	640	1018	36	34	606	528	49	960	482
Future Volume (vph)	417	603	74	640	1018	36	34	606	528	49	960	482
Ideal Flow (vphpl)	2500	2500	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1		4.3	4.3	6.3	4.8	5.6	5.6	4.8	5.6	5.6
Lane Util. Factor	0.97	0.95		0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	4430	4512		3335	3539	1509	1805	3539	1568	1703	3343	1524
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.08	1.00	1.00	0.26	1.00	1.00
Satd. Flow (perm)	4430	4512		3335	3539	1509	161	3539	1568	471	3343	1524
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	453	655	80	696	1107	39	37	659	574	53	1043	524
RTOR Reduction (vph)	0	4	0	0	0	27	0	0	0	0	0	29
Lane Group Flow (vph)	453	731	0	696	1107	12	37	659	574	53	1043	495
Heavy Vehicles (%)	4%	4%	0%	5%	2%	7%	0%	2%	3%	6%	8%	6%
Turn Type	Prot	NA		Prot	NA	Perm	pm+pt	NA	pt+ov	pm+pt	NA	pt+ov
Protected Phases	5	2		1	6		3	8	8 1	7	4	4 5
Permitted Phases						6	8			4		
Actuated Green, G (s)	37.9	37.9		68.9	68.9	68.9	85.4	78.4	147.3	85.4	78.4	123.4
Effective Green, g (s)	39.9	39.9		70.9	70.9	68.9	89.4	80.4	151.3	89.4	80.4	120.3
Actuated g/C Ratio	0.18	0.18		0.32	0.32	0.31	0.41	0.37	0.69	0.41	0.37	0.55
Clearance Time (s)	7.1	7.1		6.3	6.3	6.3	6.8	7.6		6.8	7.6	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	803	818		1074	1140	472	132	1293	1078	241	1221	833
v/s Ratio Prot	0.10	c0.16		0.21	c0.31		c0.01	0.19	0.37	0.01	c0.31	0.32
v/s Ratio Perm						0.01	0.10			0.08		
v/c Ratio	0.56	0.89		0.65	0.97	0.03	0.28	0.51	0.53	0.22	0.85	0.59
Uniform Delay, d1	82.1	88.0		63.9	73.5	52.3	84.9	54.4	16.9	61.5	64.4	33.5
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.22	1.17	1.48
Incremental Delay, d2	2.9	14.2		3.0	20.5	0.1	1.2	1.4	1.9	0.4	6.8	2.7
Delay (s)	85.0	102.2		66.9	94.1	52.4	86.0	55.9	18.8	75.5	82.3	52.3
Level of Service	F	F		E	F	D	F	E	B	E	F	D
Approach Delay (s)		95.6			82.9			40.0			72.4	
Approach LOS		F			F			D			E	

Intersection Summary			
HCM 2000 Control Delay	73.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	220.0	Sum of lost time (s)	19.8
Intersection Capacity Utilization	86.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



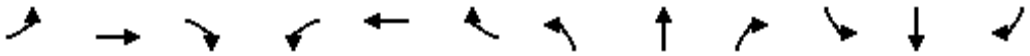
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	1680	34	32	636	21	46	27	71	28	44	19
Future Volume (vph)	15	1680	34	32	636	21	46	27	71	28	44	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.6		5.6	5.6		4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	0.89		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1671	3496		1805	3395		1805	1538		1752	1776	
Flt Permitted	0.37	1.00		0.08	1.00		0.64	1.00		0.41	1.00	
Satd. Flow (perm)	648	3496		146	3395		1211	1538		750	1776	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	16	1826	37	35	691	23	50	29	77	30	48	21
RTOR Reduction (vph)	0	0	0	0	1	0	0	61	0	0	9	0
Lane Group Flow (vph)	16	1863	0	35	713	0	50	45	0	30	60	0
Heavy Vehicles (%)	8%	3%	0%	0%	6%	0%	0%	5%	12%	3%	3%	0%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			7			3	
Permitted Phases	2			6			7			3		
Actuated Green, G (s)	146.8	142.6		150.2	144.3		21.8	21.8		12.4	12.4	
Effective Green, g (s)	148.8	143.6		152.2	145.3		23.8	23.8		14.4	14.4	
Actuated g/C Ratio	0.78	0.76		0.80	0.76		0.13	0.13		0.08	0.08	
Clearance Time (s)	6.6	6.6		6.6	6.6		6.5	6.5		6.5	6.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	535	2642		177	2596		151	192		56	134	
v/s Ratio Prot	0.00	c0.53		c0.01	0.21			0.03			0.03	
v/s Ratio Perm	0.02			0.15			c0.04			c0.04		
v/c Ratio	0.03	0.70		0.20	0.27		0.33	0.23		0.54	0.45	
Uniform Delay, d1	4.6	12.1		12.1	6.7		75.8	74.9		84.6	84.0	
Progression Factor	0.35	0.65		1.11	0.71		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	1.2		0.5	0.3		1.3	0.6		9.5	2.4	
Delay (s)	1.6	9.1		14.0	5.0		77.1	75.5		94.1	86.3	
Level of Service	A	A		B	A		E	E		F	F	
Approach Delay (s)		9.0			5.4			76.0			88.7	
Approach LOS		A			A			E			F	

Intersection Summary			
HCM 2000 Control Delay	14.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	190.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	65.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



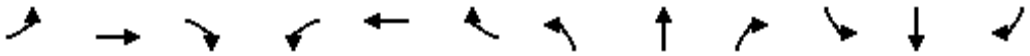
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	929	21	47	1071	19	107	54	45	44	28	12
Future Volume (vph)	19	929	21	47	1071	19	107	54	45	44	28	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.6		5.6	5.6		4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	0.93		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1671	3495		1805	3400		1805	1637		1752	1777	
Flt Permitted	0.21	1.00		0.24	1.00		0.72	1.00		0.47	1.00	
Satd. Flow (perm)	367	3495		456	3400		1373	1637		874	1777	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	21	1010	23	51	1164	21	116	59	49	48	30	13
RTOR Reduction (vph)	0	1	0	0	0	0	0	15	0	0	7	0
Lane Group Flow (vph)	21	1032	0	51	1185	0	116	93	0	48	36	0
Heavy Vehicles (%)	8%	3%	0%	0%	6%	0%	0%	5%	12%	3%	3%	0%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			7			3	
Permitted Phases	2			6			7			3		
Actuated Green, G (s)	165.9	161.6		172.1	164.7		31.3	31.3		21.9	21.9	
Effective Green, g (s)	167.9	162.6		174.1	165.7		33.3	33.3		23.9	23.9	
Actuated g/C Ratio	0.76	0.74		0.79	0.75		0.15	0.15		0.11	0.11	
Clearance Time (s)	6.6	6.6		6.6	6.6		6.5	6.5		6.5	6.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	311	2583		412	2560		207	247		94	193	
v/s Ratio Prot	0.00	0.30		c0.00	c0.35			0.06			0.02	
v/s Ratio Perm	0.05			0.09			c0.08			0.05		
v/c Ratio	0.07	0.40		0.12	0.46		0.56	0.38		0.51	0.19	
Uniform Delay, d1	7.2	10.6		6.2	10.3		86.6	84.0		92.5	89.2	
Progression Factor	0.07	0.10		0.29	0.20		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.4		0.1	0.5		3.4	1.0		4.6	0.5	
Delay (s)	0.6	1.5		1.9	2.6		90.0	85.0		97.2	89.7	
Level of Service	A	A		A	A		F	F		F	F	
Approach Delay (s)		1.4			2.6			87.6			93.6	
Approach LOS		A			A			F			F	

Intersection Summary			
HCM 2000 Control Delay	12.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	220.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	60.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



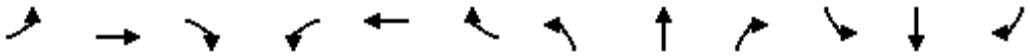
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	874	13	48	1386	11	41	29	63	33	25	15
Future Volume (vph)	28	874	13	48	1386	11	41	29	63	33	25	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.6		5.6	5.6		4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	0.90		1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1671	3499		1805	3403		1805	1554		1752	1761	
Flt Permitted	0.14	1.00		0.27	1.00		0.71	1.00		0.38	1.00	
Satd. Flow (perm)	246	3499		515	3403		1357	1554		702	1761	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	30	950	14	52	1507	12	45	32	68	36	27	16
RTOR Reduction (vph)	0	0	0	0	0	0	0	41	0	0	10	0
Lane Group Flow (vph)	30	964	0	52	1519	0	45	59	0	36	33	0
Heavy Vehicles (%)	8%	3%	0%	0%	6%	0%	0%	5%	12%	3%	3%	0%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			7			3	
Permitted Phases	2			6			7			3		
Actuated Green, G (s)	175.8	170.1		179.0	171.7		22.9	22.9		13.5	13.5	
Effective Green, g (s)	177.8	171.1		181.0	172.7		24.9	24.9		15.5	15.5	
Actuated g/C Ratio	0.81	0.78		0.82	0.78		0.11	0.11		0.07	0.07	
Clearance Time (s)	6.6	6.6		6.6	6.6		6.5	6.5		6.5	6.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	242	2721		472	2671		153	175		49	124	
v/s Ratio Prot	0.00	0.28		c0.00	c0.45			c0.04			0.02	
v/s Ratio Perm	0.10			0.09			0.03			c0.05		
v/c Ratio	0.12	0.35		0.11	0.57		0.29	0.34		0.73	0.26	
Uniform Delay, d1	6.5	7.5		4.1	9.2		89.5	90.0		100.2	96.8	
Progression Factor	0.14	0.16		0.11	0.12		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	0.3		0.1	0.7		1.1	1.2		43.4	1.1	
Delay (s)	1.1	1.5		0.5	1.8		90.6	91.1		143.7	98.0	
Level of Service	A	A		A	A		F	F		F	F	
Approach Delay (s)		1.5			1.8			90.9			118.8	
Approach LOS		A			A			F			F	

Intersection Summary			
HCM 2000 Control Delay	9.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	220.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	57.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



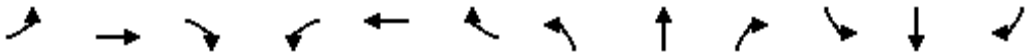
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	1671	87	132	682	2	98	1	167	32	2	13
Future Volume (vph)	8	1671	87	132	682	2	98	1	167	32	2	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	4.6		5.6	4.6			4.5	4.5		4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frt	1.00	0.99		1.00	1.00			1.00	0.85		0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		0.97	
Satd. Flow (prot)	1597	3484		1805	3405			1810	1615		1769	
Flt Permitted	0.37	1.00		0.03	1.00			0.95	1.00		0.97	
Satd. Flow (perm)	621	3484		63	3405			1810	1615		1769	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	9	1816	95	143	741	2	107	1	182	35	2	14
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	165	0	8	0
Lane Group Flow (vph)	9	1911	0	143	743	0	0	108	17	0	43	0
Heavy Vehicles (%)	13%	3%	0%	0%	6%	0%	0%	0%	0%	0%	0%	0%
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		4	4		7	7	
Permitted Phases	2			6					4			
Actuated Green, G (s)	116.3	113.5		136.8	127.4			15.7	15.7		8.9	
Effective Green, g (s)	118.3	115.5		137.8	129.4			17.7	17.7		10.9	
Actuated g/C Ratio	0.62	0.61		0.73	0.68			0.09	0.09		0.06	
Clearance Time (s)	6.6	6.6		6.6	6.6			6.5	6.5		6.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	406	2117		207	2318			168	150		101	
v/s Ratio Prot	0.00	c0.55		c0.06	0.22			c0.06			c0.02	
v/s Ratio Perm	0.01			0.43					0.01			
v/c Ratio	0.02	0.90		0.69	0.32			0.64	0.11		0.43	
Uniform Delay, d1	13.6	32.4		63.3	12.4			83.1	79.0		86.5	
Progression Factor	0.88	0.43		1.45	0.65			1.00	1.00		1.00	
Incremental Delay, d2	0.0	5.3		9.3	0.4			8.1	0.3		2.9	
Delay (s)	11.9	19.2		100.8	8.4			91.3	79.3		89.5	
Level of Service	B	B		F	A			F	E		F	
Approach Delay (s)		19.2			23.3			83.7			89.5	
Approach LOS		B			C			F			F	

Intersection Summary			
HCM 2000 Control Delay	27.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	190.0	Sum of lost time (s)	24.2
Intersection Capacity Utilization	77.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



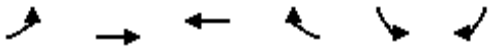
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	887	42	105	1231	5	79	19	173	19	5	38
Future Volume (vph)	23	887	42	105	1231	5	79	19	173	19	5	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	4.6		5.6	4.6			4.5	4.5		4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frt	1.00	0.99		1.00	1.00			1.00	0.85		0.92	
Flt Protected	0.95	1.00		0.95	1.00			0.96	1.00		0.98	
Satd. Flow (prot)	1597	3486		1805	3404			1827	1615		1716	
Flt Permitted	0.16	1.00		0.23	1.00			0.96	1.00		0.98	
Satd. Flow (perm)	262	3486		439	3404			1827	1615		1716	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	25	964	46	114	1338	5	86	21	188	21	5	41
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	172	0	26	0
Lane Group Flow (vph)	25	1010	0	114	1343	0	0	107	16	0	41	0
Heavy Vehicles (%)	13%	3%	0%	0%	6%	0%	0%	0%	0%	0%	0%	0%
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		4	4		7	7	
Permitted Phases	2			6					4			
Actuated Green, G (s)	153.6	147.8		160.8	151.4			16.6	16.6		11.0	
Effective Green, g (s)	155.6	149.8		162.8	153.4			18.6	18.6		13.0	
Actuated g/C Ratio	0.71	0.68		0.74	0.70			0.08	0.08		0.06	
Clearance Time (s)	6.6	6.6		6.6	6.6			6.5	6.5		6.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	226	2373		389	2373			154	136		101	
v/s Ratio Prot	0.00	0.29		c0.01	c0.39			c0.06			c0.02	
v/s Ratio Perm	0.07			0.20					0.01			
v/c Ratio	0.11	0.43		0.29	0.57			0.69	0.12		0.40	
Uniform Delay, d1	12.6	15.8		10.3	16.7			97.9	93.1		99.8	
Progression Factor	0.30	0.24		0.64	0.40			1.00	1.00		1.00	
Incremental Delay, d2	0.2	0.5		0.4	0.9			12.8	0.4		2.6	
Delay (s)	4.0	4.3		6.9	7.6			110.7	93.5		102.4	
Level of Service	A	A		A	A			F	F		F	
Approach Delay (s)		4.3			7.5			99.7			102.4	
Approach LOS		A			A			F			F	

Intersection Summary			
HCM 2000 Control Delay	18.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	220.0	Sum of lost time (s)	24.2
Intersection Capacity Utilization	64.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



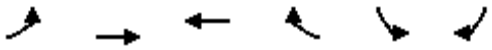
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	851	19	101	1513	7	18	10	130	23	4	32
Future Volume (vph)	14	851	19	101	1513	7	18	10	130	23	4	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	4.6		5.6	4.6			4.5	4.5		4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frt	1.00	1.00		1.00	1.00			1.00	0.85		0.93	
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00		0.98	
Satd. Flow (prot)	1597	3495		1805	3404			1841	1615		1726	
Flt Permitted	0.11	1.00		0.26	1.00			0.97	1.00		0.98	
Satd. Flow (perm)	177	3495		488	3404			1841	1615		1726	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	15	925	21	110	1645	8	20	11	141	25	4	35
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	133	0	21	0
Lane Group Flow (vph)	15	946	0	110	1653	0	0	31	8	0	43	0
Heavy Vehicles (%)	13%	3%	0%	0%	6%	0%	0%	0%	0%	0%	0%	0%
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		4	4		7	7	
Permitted Phases	2			6					4			
Actuated Green, G (s)	159.0	154.8		168.4	159.5			9.9	9.9		11.2	
Effective Green, g (s)	161.0	156.8		170.4	161.5			11.9	11.9		13.2	
Actuated g/C Ratio	0.73	0.71		0.77	0.73			0.05	0.05		0.06	
Clearance Time (s)	6.6	6.6		6.6	6.6			6.5	6.5		6.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	163	2490		437	2498			99	87		103	
v/s Ratio Prot	0.00	0.27		c0.01	c0.49			c0.02			c0.03	
v/s Ratio Perm	0.07			0.18					0.00			
v/c Ratio	0.09	0.38		0.25	0.66			0.31	0.09		0.42	
Uniform Delay, d1	13.0	12.4		7.6	15.1			100.1	98.9		99.7	
Progression Factor	0.33	0.24		1.02	0.56			1.00	1.00		1.00	
Incremental Delay, d2	0.2	0.4		0.3	1.2			1.8	0.4		2.8	
Delay (s)	4.5	3.3		8.0	9.6			101.9	99.3		102.5	
Level of Service	A	A		A	A			F	F		F	
Approach Delay (s)		3.4			9.5			99.8			102.5	
Approach LOS		A			A			F			F	

Intersection Summary			
HCM 2000 Control Delay	14.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	220.0	Sum of lost time (s)	24.2
Intersection Capacity Utilization	70.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



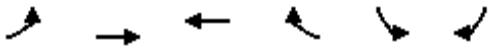
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	26	1791	770	9	11	18
Future Volume (vph)	26	1791	770	9	11	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	5.2	5.2		4.0	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frt	1.00	1.00	1.00		0.92	
Flt Protected	0.95	1.00	1.00		0.98	
Satd. Flow (prot)	1805	3505	3434		1708	
Flt Permitted	0.31	1.00	1.00		0.98	
Satd. Flow (perm)	591	3505	3434		1708	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	28	1947	837	10	12	20
RTOR Reduction (vph)	0	0	0	0	19	0
Lane Group Flow (vph)	28	1947	847	0	13	0
Heavy Vehicles (%)	0%	3%	5%	0%	0%	0%
Turn Type	pm+pt	NA	NA		Prot	
Protected Phases	1	6	2		4	
Permitted Phases	6					
Actuated Green, G (s)	167.4	167.4	155.6		10.4	
Effective Green, g (s)	168.4	168.4	156.6		12.4	
Actuated g/C Ratio	0.89	0.89	0.82		0.07	
Clearance Time (s)	6.2	6.2	6.2		6.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	565	3106	2830		111	
v/s Ratio Prot	0.00	c0.56	0.25		c0.01	
v/s Ratio Perm	0.04					
v/c Ratio	0.05	0.63	0.30		0.12	
Uniform Delay, d1	1.6	2.8	3.9		83.7	
Progression Factor	0.17	0.70	0.08		1.00	
Incremental Delay, d2	0.0	0.5	0.3		0.5	
Delay (s)	0.3	2.5	0.6		84.1	
Level of Service	A	A	A		F	
Approach Delay (s)		2.4	0.6		84.1	
Approach LOS		A	A		F	

Intersection Summary			
HCM 2000 Control Delay	2.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	190.0	Sum of lost time (s)	14.4
Intersection Capacity Utilization	65.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	44	943	1229	29	57	57
Future Volume (vph)	44	943	1229	29	57	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	5.2	5.2		4.0	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frt	1.00	1.00	1.00		0.93	
Flt Protected	0.95	1.00	1.00		0.98	
Satd. Flow (prot)	1805	3505	3430		1729	
Flt Permitted	0.17	1.00	1.00		0.98	
Satd. Flow (perm)	325	3505	3430		1729	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	48	1025	1336	32	62	62
RTOR Reduction (vph)	0	0	1	0	18	0
Lane Group Flow (vph)	48	1025	1367	0	106	0
Heavy Vehicles (%)	0%	3%	5%	0%	0%	0%
Turn Type	pm+pt	NA	NA		Prot	
Protected Phases	1	6	2		4	
Permitted Phases	6					
Actuated Green, G (s)	189.0	189.0	174.0		18.8	
Effective Green, g (s)	190.0	190.0	175.0		20.8	
Actuated g/C Ratio	0.86	0.86	0.80		0.09	
Clearance Time (s)	6.2	6.2	6.2		6.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	346	3027	2728		163	
v/s Ratio Prot	0.01	c0.29	c0.40		c0.06	
v/s Ratio Perm	0.11					
v/c Ratio	0.14	0.34	0.50		0.65	
Uniform Delay, d1	7.8	2.9	7.7		96.1	
Progression Factor	0.20	0.24	0.10		1.00	
Incremental Delay, d2	0.2	0.3	0.5		8.6	
Delay (s)	1.7	1.0	1.3		104.7	
Level of Service	A	A	A		F	
Approach Delay (s)		1.0	1.3		104.7	
Approach LOS		A	A		F	

Intersection Summary			
HCM 2000 Control Delay	6.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	220.0	Sum of lost time (s)	14.4
Intersection Capacity Utilization	52.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	37	1003	1497	29	64	31
Future Volume (vph)	37	1003	1497	29	64	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	5.2	5.2		4.0	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frt	1.00	1.00	1.00		0.96	
Flt Protected	0.95	1.00	1.00		0.97	
Satd. Flow (prot)	1805	3505	3431		1757	
Flt Permitted	0.12	1.00	1.00		0.97	
Satd. Flow (perm)	228	3505	3431		1757	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	40	1090	1627	32	70	34
RTOR Reduction (vph)	0	0	0	0	9	0
Lane Group Flow (vph)	40	1090	1659	0	95	0
Heavy Vehicles (%)	0%	3%	5%	0%	0%	0%
Turn Type	pm+pt	NA	NA		Prot	
Protected Phases	1	6	2		4	
Permitted Phases	6					
Actuated Green, G (s)	190.5	190.5	177.3		17.3	
Effective Green, g (s)	191.5	191.5	178.3		19.3	
Actuated g/C Ratio	0.87	0.87	0.81		0.09	
Clearance Time (s)	6.2	6.2	6.2		6.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	255	3050	2780		154	
v/s Ratio Prot	0.01	c0.31	c0.48		c0.05	
v/s Ratio Perm	0.13					
v/c Ratio	0.16	0.36	0.60		0.62	
Uniform Delay, d1	10.4	2.7	7.7		96.8	
Progression Factor	0.29	0.37	0.01		1.00	
Incremental Delay, d2	0.3	0.3	0.4		7.1	
Delay (s)	3.3	1.3	0.5		103.9	
Level of Service	A	A	A		F	
Approach Delay (s)		1.4	0.5		103.9	
Approach LOS		A	A		F	

Intersection Summary			
HCM 2000 Control Delay	4.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	220.0	Sum of lost time (s)	14.4
Intersection Capacity Utilization	58.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1780	22	27	787	5	14
Future Volume (Veh/h)	1780	22	27	787	5	14
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1935	24	29	855	5	15
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	217			618		
pX, platoon unblocked			0.84		0.90	0.84
vC, conflicting volume			1959		2432	980
vC1, stage 1 conf vol					1947	
vC2, stage 2 conf vol					486	
vCu, unblocked vol			1757		1714	587
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)			2.2		3.5	3.3
p0 queue free %			90		95	96
cM capacity (veh/h)			295		103	379

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	1290	669	29	428	428	20
Volume Left	0	0	29	0	0	5
Volume Right	0	24	0	0	0	15
cSH	1700	1700	295	1700	1700	227
Volume to Capacity	0.76	0.39	0.10	0.25	0.25	0.09
Queue Length 95th (ft)	0	0	8	0	0	7
Control Delay (s)	0.0	0.0	18.5	0.0	0.0	22.4
Lane LOS			C			C
Approach Delay (s)	0.0		0.6			22.4
Approach LOS						C

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	59.9%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	967	33	34	1285	16	75
Future Volume (Veh/h)	967	33	34	1285	16	75
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1051	36	37	1397	17	82
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	217			618		
pX, platoon unblocked			0.94		0.77	0.94
vC, conflicting volume			1087		1842	544
vC1, stage 1 conf vol					1069	
vC2, stage 2 conf vol					772	
vCu, unblocked vol			971		1153	395
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)			2.2		3.5	3.3
p0 queue free %			94		94	86
cM capacity (veh/h)			665		297	570

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	701	386	37	698	698	99
Volume Left	0	0	37	0	0	17
Volume Right	0	36	0	0	0	82
cSH	1700	1700	665	1700	1700	492
Volume to Capacity	0.41	0.23	0.06	0.41	0.41	0.20
Queue Length 95th (ft)	0	0	4	0	0	19
Control Delay (s)	0.0	0.0	10.7	0.0	0.0	14.2
Lane LOS			B			B
Approach Delay (s)	0.0		0.3			14.2
Approach LOS						B

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	47.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1066	1	5	1623	1	4
Future Volume (Veh/h)	1066	1	5	1623	1	4
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1159	1	5	1764	1	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	217			618		
pX, platoon unblocked			0.94		0.56	0.94
vC, conflicting volume			1160		2052	580
vC1, stage 1 conf vol					1160	
vC2, stage 2 conf vol					892	
vCu, unblocked vol			1044		845	427
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)			2.2		3.5	3.3
p0 queue free %			99		100	99
cM capacity (veh/h)			623		268	542

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	773	387	5	882	882	5
Volume Left	0	0	5	0	0	1
Volume Right	0	1	0	0	0	4
cSH	1700	1700	623	1700	1700	450
Volume to Capacity	0.45	0.23	0.01	0.52	0.52	0.01
Queue Length 95th (ft)	0	0	1	0	0	1
Control Delay (s)	0.0	0.0	10.8	0.0	0.0	13.1
Lane LOS			B			B
Approach Delay (s)	0.0		0.0			13.1
Approach LOS						B

Intersection Summary				
Average Delay	0.0			
Intersection Capacity Utilization	54.9%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL2	EBL	EBT	EBR2	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Traffic Volume (vph)	3	98	26	2	14	6	7	3	12	2	5	35
Future Volume (vph)	3	98	26	2	14	6	7	3	12	2	5	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			5.0			5.0					5.0	
Lane Util. Factor			1.00			1.00					1.00	
Frt			1.00			0.95					0.91	
Flt Protected			0.96			0.98					0.99	
Satd. Flow (prot)			1477			1719					1710	
Flt Permitted			0.96			0.98					0.91	
Satd. Flow (perm)			1477			1719					1583	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	3	107	28	2	15	7	8	3	13	2	5	38
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	140	0	0	33	0	0	0	0	58	0
Heavy Vehicles (%)	100%	0%	100%	100%	7%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Perm	Split	NA		Split	NA			Perm	Perm	NA	
Protected Phases		3	3		4	4					7	
Permitted Phases	3								7	7		
Actuated Green, G (s)			19.7			8.0					12.4	
Effective Green, g (s)			21.2			9.5					13.9	
Actuated g/C Ratio			0.11			0.05					0.07	
Clearance Time (s)			6.5			6.5					6.5	
Vehicle Extension (s)			3.0			3.0					3.0	
Lane Grp Cap (vph)			164			85					115	
v/s Ratio Prot			c0.09			c0.02						
v/s Ratio Perm											c0.04	
v/c Ratio			0.85			0.39					0.50	
Uniform Delay, d1			82.9			87.4					84.7	
Progression Factor			1.00			1.00					1.00	
Incremental Delay, d2			32.6			2.9					3.5	
Delay (s)			115.4			90.4					88.2	
Level of Service			F			F					F	
Approach Delay (s)			115.4			90.4					88.2	
Approach LOS			F			F					F	

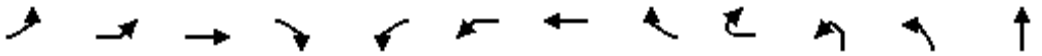
Intersection Summary			
HCM 2000 Control Delay	29.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	190.0	Sum of lost time (s)	25.7
Intersection Capacity Utilization	82.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL2	SBL	SBT	SBR	SBR2	NEL	NET	NER	NER2	SWL2	SWL	SWT
Lane Configurations												
Traffic Volume (vph)	25	3	5	2	4	3	1728	26	7	1	16	784
Future Volume (vph)	25	3	5	2	4	3	1728	26	7	1	16	784
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0			5.6	5.1				5.6	5.1
Lane Util. Factor		1.00	1.00			1.00	0.95				1.00	0.95
Frt		1.00	0.92			1.00	1.00				1.00	0.99
Flt Protected		0.95	1.00			0.95	1.00				0.95	1.00
Satd. Flow (prot)		1805	1745			1752	3600				1805	3484
Flt Permitted		0.61	1.00			0.26	1.00				0.03	1.00
Satd. Flow (perm)		1158	1745			472	3600				65	3484
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	3	5	2	4	3	1878	28	8	1	17	852
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	30	11	0	0	3	1914	0	0	0	18	928
Heavy Vehicles (%)	0%	0%	0%	0%	0%	3%	0%	0%	0%	0%	0%	2%
Turn Type	Perm	Perm	NA			pm+pt	NA			pm+pt	pm+pt	NA
Protected Phases			7			1	6			5	5	2
Permitted Phases	7	7				6				2	2	
Actuated Green, G (s)		12.4	12.4			113.4	112.2				119.0	115.0
Effective Green, g (s)		13.9	13.9			116.4	114.2				122.0	117.0
Actuated g/C Ratio		0.07	0.07			0.61	0.60				0.64	0.62
Clearance Time (s)		6.5	6.5			7.1	7.1				7.1	7.1
Vehicle Extension (s)		3.0	3.0			3.0	4.0				3.0	4.0
Lane Grp Cap (vph)		84	127			307	2163				92	2145
v/s Ratio Prot			0.01			0.00	c0.53				c0.01	c0.27
v/s Ratio Perm		0.03				0.01					0.12	
v/c Ratio		0.36	0.09			0.01	0.88				0.20	0.43
Uniform Delay, d1		83.8	82.1			15.3	32.3				36.9	19.1
Progression Factor		1.00	1.00			1.18	0.61				1.00	1.00
Incremental Delay, d2		2.6	0.3			0.0	4.7				1.0	0.6
Delay (s)		86.4	82.4			18.1	24.2				37.9	19.8
Level of Service		F	F			B	C				D	B
Approach Delay (s)			85.3				24.2					20.1
Approach LOS			F				C					C

Intersection Summary

Movement	SWR	SWR2
Lane Configurations		
Traffic Volume (vph)	61	9
Future Volume (vph)	61	9
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Peak-hour factor, PHF	0.92	0.92
Adj. Flow (vph)	66	10
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	0	0
Heavy Vehicles (%)	7%	0%
Turn Type		
Protected Phases		
Permitted Phases		
Actuated Green, G (s)		
Effective Green, g (s)		
Actuated g/C Ratio		
Clearance Time (s)		
Vehicle Extension (s)		
Lane Grp Cap (vph)		
v/s Ratio Prot		
v/s Ratio Perm		
v/c Ratio		
Uniform Delay, d1		
Progression Factor		
Incremental Delay, d2		
Delay (s)		
Level of Service		
Approach Delay (s)		
Approach LOS		

Intersection Summary

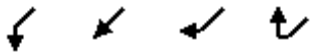


Movement	EBL2	EBL	EBT	EBR	WBL2	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT
Lane Configurations												
Traffic Volume (vph)	4	73	19	3	1	4	26	10	15	5	8	4
Future Volume (vph)	4	73	19	3	1	4	26	10	15	5	8	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			5.0				5.0					5.0
Lane Util. Factor			1.00				1.00					1.00
Frt			1.00				0.94					0.95
Flt Protected			0.96				1.00					0.98
Satd. Flow (prot)			1444				1769					1756
Flt Permitted			0.96				1.00					0.84
Satd. Flow (perm)			1444				1769					1518
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	79	21	3	1	4	28	11	16	5	9	4
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	107	0	0	0	60	0	0	0	0	30
Heavy Vehicles (%)	100%	0%	100%	100%	0%	7%	0%	0%	0%	0%	0%	0%
Turn Type	Perm	Split	NA		Perm	Split	NA			Perm	Perm	NA
Protected Phases		3	3			4	4					7
Permitted Phases	3				4					7	7	
Actuated Green, G (s)			20.1				12.9					8.6
Effective Green, g (s)			21.6				14.4					10.1
Actuated g/C Ratio			0.10				0.07					0.05
Clearance Time (s)			6.5				6.5					6.5
Vehicle Extension (s)			3.0				3.0					3.0
Lane Grp Cap (vph)			141				115					69
v/s Ratio Prot			c0.07				c0.03					
v/s Ratio Perm												c0.02
v/c Ratio			0.76				0.52					0.43
Uniform Delay, d1			96.7				99.5					102.2
Progression Factor			1.00				1.00					1.00
Incremental Delay, d2			20.6				4.2					4.3
Delay (s)			117.3				103.7					106.5
Level of Service			F				F					F
Approach Delay (s)			117.3				103.7					106.5
Approach LOS			F				F					F

Intersection Summary			
HCM 2000 Control Delay	27.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	220.0	Sum of lost time (s)	25.7
Intersection Capacity Utilization	71.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NBR	SBL2	SBL	SBT	SBR	SBR2	NEL2	NEL	NET	NER	NER2	SWL2
Lane Configurations												
Traffic Volume (vph)	11	17	7	6	5	1	5	5	955	51	11	3
Future Volume (vph)	11	17	7	6	5	1	5	5	955	51	11	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			5.0	5.0				5.6	5.1			
Lane Util. Factor			1.00	1.00				1.00	0.95			
Frt			1.00	0.93				1.00	0.99			
Flt Protected			0.95	1.00				0.95	1.00			
Satd. Flow (prot)			1805	1768				1778	3577			
Flt Permitted			0.77	1.00				0.11	1.00			
Satd. Flow (perm)			1461	1768				203	3577			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	12	18	8	7	5	1	5	5	1038	55	12	3
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	26	13	0	0	0	10	1105	0	0	0
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%	0%	0%
Turn Type		Perm	Perm	NA			custom	pm+pt	NA			pm+pt
Protected Phases				7				1	6			5
Permitted Phases		7	7				1	6				2
Actuated Green, G (s)			8.6	8.6				141.9	139.3			
Effective Green, g (s)			10.1	10.1				144.9	141.3			
Actuated g/C Ratio			0.05	0.05				0.66	0.64			
Clearance Time (s)			6.5	6.5				7.1	7.1			
Vehicle Extension (s)			3.0	3.0				3.0	4.0			
Lane Grp Cap (vph)			67	81				163	2297			
v/s Ratio Prot				0.01				0.00	0.31			
v/s Ratio Perm			0.02					0.04				
v/c Ratio			0.39	0.16				0.06	0.48			
Uniform Delay, d1			101.9	100.9				19.2	20.4			
Progression Factor			1.00	1.00				0.90	0.61			
Incremental Delay, d2			3.7	0.9				0.2	0.7			
Delay (s)			105.6	101.8				17.4	13.1			
Level of Service			F	F				B	B			
Approach Delay (s)				104.4					13.2			
Approach LOS				F					B			

Intersection Summary



Movement	SWL	SWT	SWR	SWR2
Lane Configurations				
Traffic Volume (vph)	18	1305	68	14
Future Volume (vph)	18	1305	68	14
Ideal Flow (vphpl)	1900	1900	1900	1900
Total Lost time (s)	5.6	5.1		
Lane Util. Factor	1.00	0.95		
Frt	1.00	0.99		
Flt Protected	0.95	1.00		
Satd. Flow (prot)	1805	3500		
Flt Permitted	0.19	1.00		
Satd. Flow (perm)	370	3500		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92
Adj. Flow (vph)	20	1418	74	15
RTOR Reduction (vph)	0	0	0	0
Lane Group Flow (vph)	23	1507	0	0
Heavy Vehicles (%)	0%	2%	7%	0%
Turn Type	pm+pt	NA		
Protected Phases	5	2		
Permitted Phases	2			
Actuated Green, G (s)	147.5	142.1		
Effective Green, g (s)	150.5	144.1		
Actuated g/C Ratio	0.68	0.65		
Clearance Time (s)	7.1	7.1		
Vehicle Extension (s)	3.0	4.0		
Lane Grp Cap (vph)	298	2292		
v/s Ratio Prot	c0.00	c0.43		
v/s Ratio Perm	0.05			
v/c Ratio	0.08	0.66		
Uniform Delay, d1	14.1	23.0		
Progression Factor	1.00	1.00		
Incremental Delay, d2	0.1	1.5		
Delay (s)	14.2	24.5		
Level of Service	B	C		
Approach Delay (s)		24.3		
Approach LOS		C		

Intersection Summary

Movement	EBL2	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	WBR2	NBL2	NBL
Lane Configurations												
Traffic Volume (vph)	5	61	31	4	2	1	4	30	12	5	18	16
Future Volume (vph)	5	61	31	4	2	1	4	30	12	5	18	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			5.0					5.0				
Lane Util. Factor			1.00					1.00				
Frt			0.99					0.96				
Flt Protected			0.97					1.00				
Satd. Flow (prot)			1300					1800				
Flt Permitted			0.97					1.00				
Satd. Flow (perm)			1300					1800				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	5	66	34	4	2	1	4	33	13	5	20	17
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	111	0	0	0	0	56	0	0	0	0
Heavy Vehicles (%)	100%	0%	100%	100%	100%	0%	7%	0%	0%	0%	0%	0%
Turn Type	Perm	Split	NA			Perm	Split	NA			Perm	Perm
Protected Phases		3	3				4	4				
Permitted Phases	3					4					7	7
Actuated Green, G (s)			21.5					12.3				
Effective Green, g (s)			23.0					13.8				
Actuated g/C Ratio			0.10					0.06				
Clearance Time (s)			6.5					6.5				
Vehicle Extension (s)			3.0					3.0				
Lane Grp Cap (vph)			135					112				
v/s Ratio Prot			c0.09					c0.03				
v/s Ratio Perm												
v/c Ratio			0.82					0.50				
Uniform Delay, d1			96.5					99.8				
Progression Factor			1.00					1.00				
Incremental Delay, d2			31.5					3.5				
Delay (s)			128.0					103.2				
Level of Service			F					F				
Approach Delay (s)			128.0					103.2				
Approach LOS			F					F				

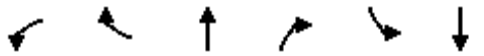
Intersection Summary			
HCM 2000 Control Delay	40.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	220.0	Sum of lost time (s)	25.7
Intersection Capacity Utilization	84.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NBT	NBR	SBL2	SBL	SBT	SBR	SBR2	NEL2	NEL	NET	NER	NER2
Lane Configurations												
Traffic Volume (vph)	20	38	11	1	6	2	2	12	12	871	33	9
Future Volume (vph)	20	38	11	1	6	2	2	12	12	871	33	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0			5.0	5.0				5.6	5.1		
Lane Util. Factor	1.00			1.00	1.00				1.00	0.95		
Frt	0.94			1.00	0.95				1.00	0.99		
Flt Protected	0.98			0.95	1.00				0.95	1.00		
Satd. Flow (prot)	1762			1805	1796				1778	3585		
Flt Permitted	0.87			0.49	1.00				0.03	1.00		
Satd. Flow (perm)	1568			934	1796				57	3585		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	41	12	1	7	2	2	13	13	947	36	10
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	100	0	0	13	11	0	0	0	26	993	0	0
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%	0%
Turn Type	NA		Perm	Perm	NA			custom	pm+pt	NA		
Protected Phases	7				7				1	6		
Permitted Phases			7	7				1	6			
Actuated Green, G (s)	17.8			17.8	17.8				134.8	129.2		
Effective Green, g (s)	19.3			19.3	19.3				137.8	131.2		
Actuated g/C Ratio	0.09			0.09	0.09				0.63	0.60		
Clearance Time (s)	6.5			6.5	6.5				7.1	7.1		
Vehicle Extension (s)	3.0			3.0	3.0				3.0	4.0		
Lane Grp Cap (vph)	137			81	157				91	2137		
v/s Ratio Prot					0.01				c0.01	0.28		
v/s Ratio Perm	c0.06			0.01					0.17			
v/c Ratio	0.73			0.16	0.07				0.29	0.46		
Uniform Delay, d1	97.8			92.9	92.1				40.8	24.8		
Progression Factor	1.00			1.00	1.00				1.61	0.42		
Incremental Delay, d2	17.6			0.9	0.2				1.6	0.7		
Delay (s)	115.4			93.8	92.3				67.2	11.2		
Level of Service	F			F	F				E	B		
Approach Delay (s)	115.4				93.1					12.6		
Approach LOS	F				F					B		

Intersection Summary

Movement	SWL2	SWL	SWT	SWR	SWR2
Lane Configurations					
Traffic Volume (vph)	5	17	1602	93	5
Future Volume (vph)	5	17	1602	93	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900
Total Lost time (s)		5.6	5.1		
Lane Util. Factor		1.00	0.95		
Frt		1.00	0.99		
Flt Protected		0.95	1.00		
Satd. Flow (prot)		1805	3500		
Flt Permitted		0.22	1.00		
Satd. Flow (perm)		418	3500		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	5	18	1741	101	5
RTOR Reduction (vph)	0	0	0	0	0
Lane Group Flow (vph)	0	23	1847	0	0
Heavy Vehicles (%)	0%	0%	2%	7%	0%
Turn Type	pm+pt	pm+pt	NA		
Protected Phases	5	5	2		
Permitted Phases	2	2			
Actuated Green, G (s)		134.6	129.1		
Effective Green, g (s)		137.6	131.1		
Actuated g/C Ratio		0.63	0.60		
Clearance Time (s)		7.1	7.1		
Vehicle Extension (s)		3.0	4.0		
Lane Grp Cap (vph)		305	2085		
v/s Ratio Prot		0.00	c0.53		
v/s Ratio Perm		0.04			
v/c Ratio		0.08	0.89		
Uniform Delay, d1		17.9	38.0		
Progression Factor		1.00	1.00		
Incremental Delay, d2		0.1	6.0		
Delay (s)		18.0	44.0		
Level of Service		B	D		
Approach Delay (s)			43.7		
Approach LOS			D		

Intersection Summary



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	22	54	87	146	85	53
Future Volume (Veh/h)	22	54	87	146	85	53
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	24	59	95	159	92	58
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		3				
Median type			None			None
Median storage veh)						
Upstream signal (ft)						366
pX, platoon unblocked	0.99					
vC, conflicting volume	416	174			254	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	401	174			254	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	96	93			93	
cM capacity (veh/h)	555	869			1311	

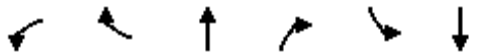
Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	83	254	150
Volume Left	24	0	92
Volume Right	59	159	0
cSH	1222	1700	1311
Volume to Capacity	0.07	0.15	0.07
Queue Length 95th (ft)	5	0	6
Control Delay (s)	10.1	0.0	5.1
Lane LOS	B		A
Approach Delay (s)	10.1	0.0	5.1
Approach LOS	B		

Intersection Summary			
Average Delay	3.3		
Intersection Capacity Utilization	34.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	48	118	60	31	21	54
Future Volume (Veh/h)	48	118	60	31	21	54
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	52	128	65	34	23	59
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		3				
Median type			None			None
Median storage veh)						
Upstream signal (ft)						366
pX, platoon unblocked						
vC, conflicting volume	187	82			99	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	187	82			99	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	93	87			98	
cM capacity (veh/h)	790	978			1494	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	180	99	82
Volume Left	52	0	23
Volume Right	128	34	0
cSH	1375	1700	1494
Volume to Capacity	0.13	0.06	0.02
Queue Length 95th (ft)	11	0	1
Control Delay (s)	9.4	0.0	2.2
Lane LOS	A		A
Approach Delay (s)	9.4	0.0	2.2
Approach LOS	A		

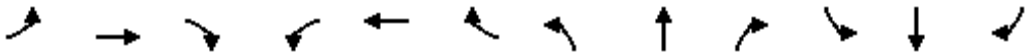
Intersection Summary			
Average Delay	5.2		
Intersection Capacity Utilization	20.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	34	29	73	15	23	81
Future Volume (Veh/h)	34	29	73	15	23	81
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	37	32	79	16	25	88
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		3				
Median type			None			None
Median storage veh)						
Upstream signal (ft)						366
pX, platoon unblocked						
vC, conflicting volume	225	87			95	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	225	87			95	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	95	97			98	
cM capacity (veh/h)	750	971			1499	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	69	95	113
Volume Left	37	0	25
Volume Right	32	16	0
cSH	1399	1700	1499
Volume to Capacity	0.05	0.06	0.02
Queue Length 95th (ft)	4	0	1
Control Delay (s)	9.5	0.0	1.7
Lane LOS	A		A
Approach Delay (s)	9.5	0.0	1.7
Approach LOS	A		

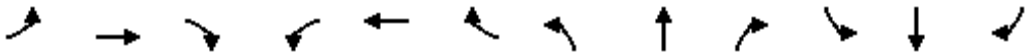
Intersection Summary			
Average Delay	3.1		
Intersection Capacity Utilization	22.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	11	214	4	58	72	189	3	41	205	209	26	6
Future Volume (vph)	11	214	4	58	72	189	3	41	205	209	26	6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	12	233	4	63	78	205	3	45	223	227	28	7

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	249	346	271	262
Volume Left (vph)	12	63	3	227
Volume Right (vph)	4	205	223	7
Hadj (s)	0.03	-0.29	-0.46	0.19
Departure Headway (s)	6.4	5.9	5.9	6.5
Degree Utilization, x	0.44	0.56	0.45	0.48
Capacity (veh/h)	500	560	540	491
Control Delay (s)	14.3	16.2	13.6	15.3
Approach Delay (s)	14.3	16.2	13.6	15.3
Approach LOS	B	C	B	C

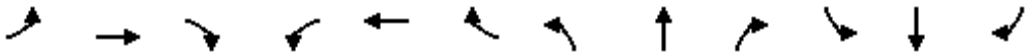
Intersection Summary				
Delay	14.9			
Level of Service	B			
Intersection Capacity Utilization	72.3%	ICU Level of Service	C	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	11	39	3	72	125	111	6	99	32	45	93	13
Future Volume (vph)	11	39	3	72	125	111	6	99	32	45	93	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	12	42	3	78	136	121	7	108	35	49	101	14

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	57	335	150	164
Volume Left (vph)	12	78	7	49
Volume Right (vph)	3	121	35	14
Hadj (s)	0.04	-0.14	-0.10	0.04
Departure Headway (s)	5.2	4.7	5.0	5.1
Degree Utilization, x	0.08	0.43	0.21	0.23
Capacity (veh/h)	620	731	658	644
Control Delay (s)	8.7	11.2	9.3	9.7
Approach Delay (s)	8.7	11.2	9.3	9.7
Approach LOS	A	B	A	A

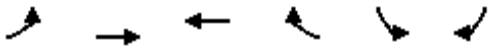
Intersection Summary				
Delay	10.2			
Level of Service	B			
Intersection Capacity Utilization	49.7%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	9	16	5	24	35	36	8	96	13	22	104	23
Future Volume (vph)	9	16	5	24	35	36	8	96	13	22	104	23
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	10	17	5	26	38	39	9	104	14	24	113	25

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	32	103	127	162
Volume Left (vph)	10	26	9	24
Volume Right (vph)	5	39	14	25
Hadj (s)	0.00	-0.14	-0.02	-0.03
Departure Headway (s)	4.7	4.5	4.4	4.3
Degree Utilization, x	0.04	0.13	0.15	0.19
Capacity (veh/h)	706	751	786	792
Control Delay (s)	7.9	8.1	8.2	8.4
Approach Delay (s)	7.9	8.1	8.2	8.4
Approach LOS	A	A	A	A

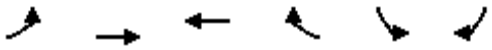
Intersection Summary			
Delay	8.2		
Level of Service	A		
Intersection Capacity Utilization	27.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Stop	Stop		Stop	
Traffic Volume (vph)	61	27	28	22	9	20
Future Volume (vph)	61	27	28	22	9	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	66	29	30	24	10	22

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total (vph)	95	54	32
Volume Left (vph)	66	0	10
Volume Right (vph)	0	24	22
Hadj (s)	0.17	-0.23	-0.32
Departure Headway (s)	4.2	3.8	3.9
Degree Utilization, x	0.11	0.06	0.03
Capacity (veh/h)	846	924	881
Control Delay (s)	7.7	7.1	7.0
Approach Delay (s)	7.7	7.1	7.0
Approach LOS	A	A	A

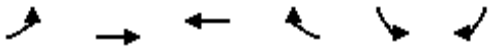
Intersection Summary			
Delay	7.4		
Level of Service	A		
Intersection Capacity Utilization	21.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Stop	Stop		Stop	
Traffic Volume (vph)	22	9	16	19	13	27
Future Volume (vph)	22	9	16	19	13	27
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	24	10	17	21	14	29

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total (vph)	34	38	43
Volume Left (vph)	24	0	14
Volume Right (vph)	0	21	29
Hadj (s)	0.18	-0.30	-0.31
Departure Headway (s)	4.2	3.7	3.7
Degree Utilization, x	0.04	0.04	0.04
Capacity (veh/h)	842	949	932
Control Delay (s)	7.4	6.9	6.9
Approach Delay (s)	7.4	6.9	6.9
Approach LOS	A	A	A

Intersection Summary			
Delay	7.0		
Level of Service	A		
Intersection Capacity Utilization	18.4%	ICU Level of Service	A
Analysis Period (min)	15		



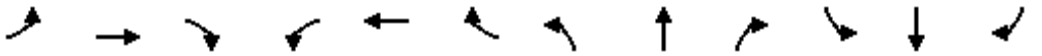
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Stop	Stop		Stop	
Traffic Volume (vph)	68	24	28	20	7	23
Future Volume (vph)	68	24	28	20	7	23
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	74	26	30	22	8	25

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total (vph)	100	52	33
Volume Left (vph)	74	0	8
Volume Right (vph)	0	22	25
Hadj (s)	0.18	-0.22	-0.37
Departure Headway (s)	4.2	3.8	3.9
Degree Utilization, x	0.12	0.06	0.04
Capacity (veh/h)	844	919	891
Control Delay (s)	7.7	7.1	7.0
Approach Delay (s)	7.7	7.1	7.0
Approach LOS	A	A	A

Intersection Summary			
Delay	7.4		
Level of Service	A		
Intersection Capacity Utilization	21.7%	ICU Level of Service	A
Analysis Period (min)	15		

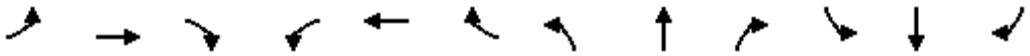
APPENDIX E

2027 Total Future Capacity Analysis Worksheets



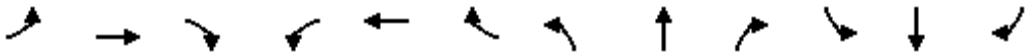
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	376	730	17	342	657	36	9	870	732	43	318	184
Future Volume (vph)	376	730	17	342	657	36	9	870	732	43	318	184
Ideal Flow (vphpl)	2500	2500	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1		4.3	4.3	6.3	4.8	5.6	5.6	4.8	5.6	5.6
Lane Util. Factor	0.97	0.95		0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	4430	4556		3335	3539	1509	1805	3539	1568	1703	3343	1524
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.46	1.00	1.00	0.08	1.00	1.00
Satd. Flow (perm)	4430	4556		3335	3539	1509	875	3539	1568	137	3343	1524
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	409	793	18	372	714	39	10	946	796	47	346	200
RTOR Reduction (vph)	0	1	0	0	0	31	0	0	0	0	0	63
Lane Group Flow (vph)	409	810	0	372	714	8	10	946	796	47	346	137
Heavy Vehicles (%)	4%	4%	0%	5%	2%	7%	0%	2%	3%	6%	8%	6%
Turn Type	Prot	NA		Prot	NA	Perm	pm+pt	NA	pt+ov	pm+pt	NA	pt+ov
Protected Phases	5	2		1	6		3	8	8 1	7	4	4 5
Permitted Phases						6	8			4		
Actuated Green, G (s)	59.9	59.9		37.8	37.8	37.8	64.5	57.4	95.2	64.5	57.4	124.4
Effective Green, g (s)	61.9	61.9		39.8	39.8	37.8	68.5	59.4	99.2	68.5	59.4	121.3
Actuated g/C Ratio	0.33	0.33		0.21	0.21	0.20	0.36	0.31	0.52	0.36	0.31	0.64
Clearance Time (s)	7.1	7.1		6.3	6.3	6.3	6.8	7.6		6.8	7.6	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	1443	1484		698	741	300	360	1106	818	124	1045	972
v/s Ratio Prot	0.09	c0.18		0.11	0.20		0.00	0.27	c0.51	c0.02	0.10	0.09
v/s Ratio Perm						0.01	0.01			0.12		
v/c Ratio	0.28	0.55		0.53	0.96	0.03	0.03	0.86	0.97	0.38	0.33	0.14
Uniform Delay, d1	47.6	52.5		66.8	74.4	61.3	45.3	61.3	44.1	79.0	50.1	13.7
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.16	1.30	5.55
Incremental Delay, d2	0.5	1.4		2.9	25.3	0.2	0.0	8.5	25.6	1.9	0.8	0.3
Delay (s)	48.1	54.0		69.7	99.7	61.4	45.4	69.8	69.7	93.8	66.2	76.1
Level of Service	D	D		E	F	E	D	E	E	F	E	E
Approach Delay (s)		52.0			88.4			69.6			71.7	
Approach LOS		D			F			E			E	

Intersection Summary			
HCM 2000 Control Delay	69.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	190.0	Sum of lost time (s)	19.8
Intersection Capacity Utilization	79.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	1542	12	32	551	21	20	5	71	28	0	19
Future Volume (vph)	15	1542	12	32	551	21	20	5	71	28	0	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.6		5.6	5.6		4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frt	1.00	1.00		1.00	0.99		1.00	0.86		1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1671	3502		1805	3394		1805	1463		1752	1615	
Flt Permitted	0.41	1.00		0.10	1.00		0.74	1.00		0.48	1.00	
Satd. Flow (perm)	719	3502		199	3394		1413	1463		892	1615	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	16	1676	13	35	599	23	22	5	77	30	0	21
RTOR Reduction (vph)	0	0	0	0	1	0	0	68	0	0	20	0
Lane Group Flow (vph)	16	1689	0	35	621	0	22	14	0	30	1	0
Heavy Vehicles (%)	8%	3%	0%	0%	6%	0%	0%	5%	12%	3%	3%	0%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			7			3	
Permitted Phases	2			6			7			3		
Actuated Green, G (s)	148.5	144.3		151.5	145.8		20.3	20.3		9.2	9.2	
Effective Green, g (s)	150.5	145.3		153.5	146.8		22.3	22.3		11.2	11.2	
Actuated g/C Ratio	0.79	0.76		0.81	0.77		0.12	0.12		0.06	0.06	
Clearance Time (s)	6.6	6.6		6.6	6.6		6.5	6.5		6.5	6.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	595	2678		217	2622		165	171		52	95	
v/s Ratio Prot	0.00	c0.48		c0.01	0.18			0.01			0.00	
v/s Ratio Perm	0.02			0.12			c0.02			c0.03		
v/c Ratio	0.03	0.63		0.16	0.24		0.13	0.08		0.58	0.01	
Uniform Delay, d1	4.2	10.2		8.3	6.0		75.2	74.7		87.1	84.2	
Progression Factor	0.42	0.57		0.25	0.11		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	1.0		0.3	0.2		0.4	0.2		14.6	0.1	
Delay (s)	1.7	6.7		2.4	0.9		75.6	74.9		101.7	84.2	
Level of Service	A	A		A	A		E	E		F	F	
Approach Delay (s)		6.7			0.9			75.1			94.5	
Approach LOS		A			A			E			F	

Intersection Summary			
HCM 2000 Control Delay	9.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	190.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	59.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



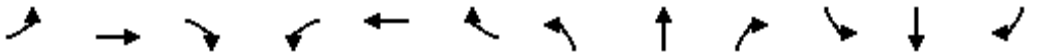
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	1618	5	4	688	2	7	1	53	32	2	13
Future Volume (vph)	8	1618	5	4	688	2	7	1	53	32	2	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	4.6		5.6	4.6			4.5	4.5		4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frt	1.00	1.00		1.00	1.00			1.00	0.85		0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.96	1.00		0.97	
Satd. Flow (prot)	1597	3504		1805	3405			1819	1615		1769	
Flt Permitted	0.34	1.00		0.09	1.00			0.96	1.00		0.97	
Satd. Flow (perm)	566	3504		163	3405			1819	1615		1769	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	9	1759	5	4	748	2	8	1	58	35	2	14
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	55	0	8	0
Lane Group Flow (vph)	9	1764	0	4	750	0	0	9	3	0	43	0
Heavy Vehicles (%)	13%	3%	0%	0%	6%	0%	0%	0%	0%	0%	0%	0%
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		4	4		7	7	
Permitted Phases	2			6					4			
Actuated Green, G (s)	140.0	137.2		137.2	135.8			7.3	7.3		8.9	
Effective Green, g (s)	142.0	139.2		139.2	137.8			9.3	9.3		10.9	
Actuated g/C Ratio	0.75	0.73		0.73	0.73			0.05	0.05		0.06	
Clearance Time (s)	6.6	6.6		6.6	6.6			6.5	6.5		6.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	443	2567		140	2469			89	79		101	
v/s Ratio Prot	c0.00	c0.50		0.00	0.22			c0.00			c0.02	
v/s Ratio Perm	0.01			0.02					0.00			
v/c Ratio	0.02	0.69		0.03	0.30			0.10	0.04		0.43	
Uniform Delay, d1	6.4	13.7		13.0	9.2			86.4	86.1		86.5	
Progression Factor	0.69	0.28		0.53	0.45			1.00	1.00		1.00	
Incremental Delay, d2	0.0	1.2		0.1	0.3			0.5	0.2		2.9	
Delay (s)	4.5	5.1		7.0	4.4			86.9	86.3		89.5	
Level of Service	A	A		A	A			F	F		F	
Approach Delay (s)		5.0			4.4			86.3			89.5	
Approach LOS		A			A			F			F	

Intersection Summary			
HCM 2000 Control Delay	8.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	190.0	Sum of lost time (s)	24.2
Intersection Capacity Utilization	67.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1701	3	0	694	0	0
Future Volume (Veh/h)	1701	3	0	694	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1849	3	0	754	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	173			384		
pX, platoon unblocked			0.72		0.75	0.72
vC, conflicting volume			1852		2228	926
vC1, stage 1 conf vol					1850	
vC2, stage 2 conf vol					377	
vCu, unblocked vol			1408		1642	125
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			346		135	651

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	1233	619	377	377	0
Volume Left	0	0	0	0	0
Volume Right	0	3	0	0	0
cSH	1700	1700	1700	1700	1700
Volume to Capacity	0.73	0.36	0.22	0.22	0.00
Queue Length 95th (ft)	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0
Lane LOS					A
Approach Delay (s)	0.0		0.0		0.0
Approach LOS					A

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	50.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	1593	29	7	612	9	36	0	44	11	0	18
Future Volume (vph)	26	1593	29	7	612	9	36	0	44	11	0	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.2		5.0	5.2			6.2	6.2		6.2	6.2
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	1.00		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		0.95	1.00
Satd. Flow (prot)	1805	3496		1770	3433			1770	1583		1805	1615
Flt Permitted	0.37	1.00		0.10	1.00			0.95	1.00		0.95	1.00
Satd. Flow (perm)	708	3496		186	3433			1770	1583		1805	1615
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	28	1732	32	8	665	10	39	0	48	12	0	20
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	46	0	0	19
Lane Group Flow (vph)	28	1763	0	8	675	0	0	39	2	0	12	1
Heavy Vehicles (%)	0%	3%	2%	2%	5%	0%	2%	2%	2%	0%	2%	0%
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases	2			6					4			3
Actuated Green, G (s)	153.4	147.8		147.8	145.0			7.0	7.0		8.8	8.8
Effective Green, g (s)	155.4	148.8		147.8	146.0			7.0	7.0		8.8	8.8
Actuated g/C Ratio	0.82	0.78		0.78	0.77			0.04	0.04		0.05	0.05
Clearance Time (s)	5.0	6.2		5.0	6.2			6.2	6.2		6.2	6.2
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	617	2737		168	2637			65	58		83	74
v/s Ratio Prot	c0.00	c0.50		0.00	0.20			c0.02			c0.01	
v/s Ratio Perm	0.04			0.04					0.00			0.00
v/c Ratio	0.05	0.64		0.05	0.26			0.60	0.03		0.14	0.01
Uniform Delay, d1	3.4	9.0		8.2	6.3			90.1	88.2		87.0	86.5
Progression Factor	1.33	0.77		0.98	0.81			1.00	1.00		1.00	1.00
Incremental Delay, d2	0.0	0.9		0.1	0.2			34.8	1.0		3.6	0.3
Delay (s)	4.5	7.9		8.1	5.4			124.9	89.2		90.6	86.8
Level of Service	A	A		A	A			F	F		F	F
Approach Delay (s)		7.9			5.4			105.2			88.2	
Approach LOS		A			A			F			F	

Intersection Summary			
HCM 2000 Control Delay	11.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	190.0	Sum of lost time (s)	22.6
Intersection Capacity Utilization	71.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1647	1	16	630	11	20
Future Volume (Veh/h)	1647	1	16	630	11	20
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1790	1	17	685	12	22
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	378			458		
pX, platoon unblocked			0.77		0.82	0.77
vC, conflicting volume			1791		2167	896
vC1, stage 1 conf vol					1790	
vC2, stage 2 conf vol					376	
vCu, unblocked vol			1423		1439	256
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)			2.2		3.5	3.3
p0 queue free %			95		91	96
cM capacity (veh/h)			363		141	570

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	1193	598	17	342	342	34
Volume Left	0	0	17	0	0	12
Volume Right	0	1	0	0	0	22
cSH	1700	1700	363	1700	1700	275
Volume to Capacity	0.70	0.35	0.05	0.20	0.20	0.12
Queue Length 95th (ft)	0	0	4	0	0	10
Control Delay (s)	0.0	0.0	15.4	0.0	0.0	20.0
Lane LOS			C			C
Approach Delay (s)	0.0		0.4			20.0
Approach LOS						C

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	55.6%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1667	0	0	646	0	7
Future Volume (Veh/h)	1667	0	0	646	0	7
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1812	0	0	702	0	8
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	536			300		
pX, platoon unblocked			0.76		0.81	0.76
vC, conflicting volume			1812		2163	906
vC1, stage 1 conf vol					1812	
vC2, stage 2 conf vol					351	
vCu, unblocked vol			1443		1413	255
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	99
cM capacity (veh/h)			355		137	568

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	906	906	351	351	8
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	8
cSH	1700	1700	1700	1700	568
Volume to Capacity	0.53	0.53	0.21	0.21	0.01
Queue Length 95th (ft)	0	0	0	0	1
Control Delay (s)	0.0	0.0	0.0	0.0	11.4
Lane LOS					B
Approach Delay (s)	0.0		0.0		11.4
Approach LOS					B

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	56.1%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL2	EBL	EBT	EBR2	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Traffic Volume (vph)	3	98	26	2	14	6	7	3	12	2	5	35
Future Volume (vph)	3	98	26	2	14	6	7	3	12	2	5	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			5.0			5.0					5.0	
Lane Util. Factor			1.00			1.00					1.00	
Frt			1.00			0.95					0.91	
Flt Protected			0.96			0.98					0.99	
Satd. Flow (prot)			1477			1719					1710	
Flt Permitted			0.96			0.98					0.91	
Satd. Flow (perm)			1477			1719					1583	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	3	107	28	2	15	7	8	3	13	2	5	38
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	140	0	0	33	0	0	0	0	58	0
Heavy Vehicles (%)	100%	0%	100%	100%	7%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Perm	Split	NA		Split	NA			Perm	Perm	NA	
Protected Phases		3	3		4	4					7	
Permitted Phases	3								7	7		
Actuated Green, G (s)			19.7			8.0					12.4	
Effective Green, g (s)			21.2			9.5					13.9	
Actuated g/C Ratio			0.11			0.05					0.07	
Clearance Time (s)			6.5			6.5					6.5	
Vehicle Extension (s)			3.0			3.0					3.0	
Lane Grp Cap (vph)			164			85					115	
v/s Ratio Prot			c0.09			c0.02						
v/s Ratio Perm											c0.04	
v/c Ratio			0.85			0.39					0.50	
Uniform Delay, d1			82.9			87.4					84.7	
Progression Factor			1.00			1.00					1.00	
Incremental Delay, d2			32.6			2.9					3.5	
Delay (s)			115.4			90.4					88.2	
Level of Service			F			F					F	
Approach Delay (s)			115.4			90.4					88.2	
Approach LOS			F			F					F	

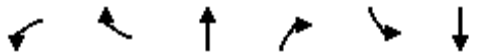
Intersection Summary			
HCM 2000 Control Delay	25.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	190.0	Sum of lost time (s)	25.7
Intersection Capacity Utilization	79.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL2	SBL	SBT	SBR	SBR2	NEL	NET	NER	NER2	SWL2	SWL	SWT
Lane Configurations												
Traffic Volume (vph)	25	3	5	2	4	3	1608	26	7	1	16	616
Future Volume (vph)	25	3	5	2	4	3	1608	26	7	1	16	616
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0			5.6	5.1				5.6	5.1
Lane Util. Factor		1.00	1.00			1.00	0.95				1.00	0.95
Frt		1.00	0.92			1.00	1.00				1.00	0.98
Flt Protected		0.95	1.00			0.95	1.00				0.95	1.00
Satd. Flow (prot)		1805	1745			1752	3599				1805	3471
Flt Permitted		0.61	1.00			0.33	1.00				0.04	1.00
Satd. Flow (perm)		1158	1745			605	3599				76	3471
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	3	5	2	4	3	1748	28	8	1	17	670
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	30	11	0	0	3	1784	0	0	0	18	746
Heavy Vehicles (%)	0%	0%	0%	0%	0%	3%	0%	0%	0%	0%	0%	2%
Turn Type	Perm	Perm	NA			pm+pt	NA			pm+pt	pm+pt	NA
Protected Phases			7			1	6			5	5	2
Permitted Phases	7	7				6				2	2	
Actuated Green, G (s)		12.4	12.4			113.4	112.2				119.0	115.0
Effective Green, g (s)		13.9	13.9			116.4	114.2				122.0	117.0
Actuated g/C Ratio		0.07	0.07			0.61	0.60				0.64	0.62
Clearance Time (s)		6.5	6.5			7.1	7.1				7.1	7.1
Vehicle Extension (s)		3.0	3.0			3.0	4.0				3.0	4.0
Lane Grp Cap (vph)		84	127			386	2163				98	2137
v/s Ratio Prot			0.01			0.00	c0.50				c0.01	c0.21
v/s Ratio Perm		0.03				0.00					0.11	
v/c Ratio		0.36	0.09			0.01	0.82				0.18	0.35
Uniform Delay, d1		83.8	82.1			14.7	30.0				30.6	17.9
Progression Factor		1.00	1.00			0.31	0.44				1.00	1.00
Incremental Delay, d2		2.6	0.3			0.0	3.0				0.9	0.5
Delay (s)		86.4	82.4			4.6	16.3				31.5	18.3
Level of Service		F	F			A	B				C	B
Approach Delay (s)			85.3				16.3					18.6
Approach LOS			F				B					B

Intersection Summary

Movement	SWR	SWR2
Lane Configurations		
Traffic Volume (vph)	61	9
Future Volume (vph)	61	9
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Peak-hour factor, PHF	0.92	0.92
Adj. Flow (vph)	66	10
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	0	0
Heavy Vehicles (%)	7%	0%
Turn Type		
Protected Phases		
Permitted Phases		
Actuated Green, G (s)		
Effective Green, g (s)		
Actuated g/C Ratio		
Clearance Time (s)		
Vehicle Extension (s)		
Lane Grp Cap (vph)		
v/s Ratio Prot		
v/s Ratio Perm		
v/c Ratio		
Uniform Delay, d1		
Progression Factor		
Incremental Delay, d2		
Delay (s)		
Level of Service		
Approach Delay (s)		
Approach LOS		

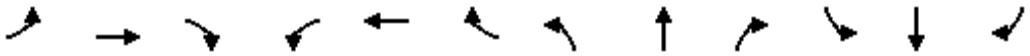
Intersection Summary



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	1	6	87	1	19	53
Future Volume (Veh/h)	1	6	87	1	19	53
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	7	95	1	21	58
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		3				
Median type			None			None
Median storage veh)						
Upstream signal (ft)						366
pX, platoon unblocked						
vC, conflicting volume	196	96			96	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	196	96			96	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	99			99	
cM capacity (veh/h)	782	961			1498	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	8	96	79
Volume Left	1	0	21
Volume Right	7	1	0
cSH	1098	1700	1498
Volume to Capacity	0.01	0.06	0.01
Queue Length 95th (ft)	1	0	1
Control Delay (s)	8.9	0.0	2.1
Lane LOS	A		A
Approach Delay (s)	8.9	0.0	2.1
Approach LOS	A		

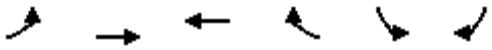
Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	20.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	11	3	4	23	4	4	2	22	8	2	22	6
Future Volume (vph)	11	3	4	23	4	4	2	22	8	2	22	6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	12	3	4	25	4	4	2	24	9	2	24	7

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	19	33	35	33
Volume Left (vph)	12	25	2	2
Volume Right (vph)	4	4	9	7
Hadj (s)	0.03	0.11	-0.11	-0.08
Departure Headway (s)	4.1	4.2	3.9	4.0
Degree Utilization, x	0.02	0.04	0.04	0.04
Capacity (veh/h)	855	844	889	890
Control Delay (s)	7.2	7.3	7.1	7.1
Approach Delay (s)	7.2	7.3	7.1	7.1
Approach LOS	A	A	A	A

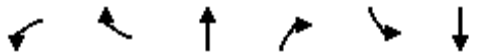
Intersection Summary			
Delay	7.2		
Level of Service	A		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Stop	Stop		Stop	
Traffic Volume (vph)	61	27	28	22	9	20
Future Volume (vph)	61	27	28	22	9	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	66	29	30	24	10	22

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total (vph)	95	54	32
Volume Left (vph)	66	0	10
Volume Right (vph)	0	24	22
Hadj (s)	0.17	-0.23	-0.32
Departure Headway (s)	4.2	3.8	3.9
Degree Utilization, x	0.11	0.06	0.03
Capacity (veh/h)	846	924	881
Control Delay (s)	7.7	7.1	7.0
Approach Delay (s)	7.7	7.1	7.0
Approach LOS	A	A	A

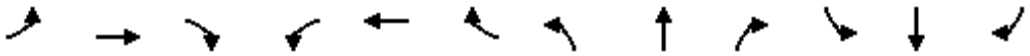
Intersection Summary			
Delay	7.4		
Level of Service	A		
Intersection Capacity Utilization	21.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	80	0	27	9
Future Volume (Veh/h)	0	0	80	0	27	9
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	87	0	29	10
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						90
pX, platoon unblocked						
vC, conflicting volume	155	87			87	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	155	87			87	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			98	
cM capacity (veh/h)	820	971			1509	

Direction, Lane #	NB 1	SB 1
Volume Total	87	39
Volume Left	0	29
Volume Right	0	0
cSH	1700	1509
Volume to Capacity	0.05	0.02
Queue Length 95th (ft)	0	1
Control Delay (s)	0.0	5.6
Lane LOS		A
Approach Delay (s)	0.0	5.6
Approach LOS		

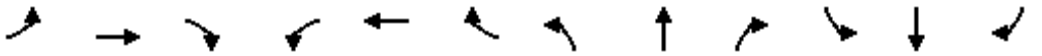
Intersection Summary				
Average Delay	1.7			
Intersection Capacity Utilization	12.0%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	7	0	0	0	0	0	28	0	0	17	0
Future Volume (Veh/h)	3	7	0	0	0	0	0	28	0	0	17	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	3	8	0	0	0	0	0	30	0	0	18	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	48	48	18	52	48	30	18			30		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	48	48	18	52	48	30	18			30		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	99	100	100	100	100	100			100		
cM capacity (veh/h)	953	844	1061	940	844	1044	1599			1583		

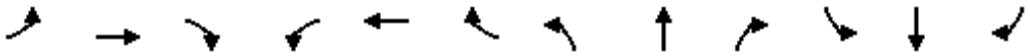
Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	11	30	18
Volume Left	3	0	0
Volume Right	0	0	0
cSH	871	1700	1583
Volume to Capacity	0.01	0.02	0.00
Queue Length 95th (ft)	1	0	0
Control Delay (s)	9.2	0.0	0.0
Lane LOS	A		
Approach Delay (s)	9.2	0.0	0.0
Approach LOS	A		

Intersection Summary				
Average Delay	1.7			
Intersection Capacity Utilization	13.3%	ICU Level of Service	A	
Analysis Period (min)	15			



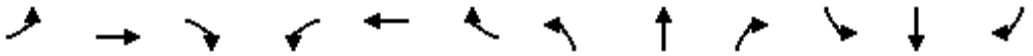
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	432	507	3	617	836	53	30	808	457	72	630	358
Future Volume (vph)	432	507	3	617	836	53	30	808	457	72	630	358
Ideal Flow (vphpl)	2500	2500	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1		4.3	4.3	6.3	4.8	5.6	5.6	4.8	5.6	5.6
Lane Util. Factor	0.97	0.95		0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	4430	4565		3335	3539	1509	1805	3539	1568	1703	3343	1524
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.25	1.00	1.00	0.15	1.00	1.00
Satd. Flow (perm)	4430	4565		3335	3539	1509	472	3539	1568	272	3343	1524
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	470	551	3	671	909	58	33	878	497	78	685	389
RTOR Reduction (vph)	0	0	0	0	0	40	0	0	0	0	0	44
Lane Group Flow (vph)	470	554	0	671	909	18	33	878	497	78	685	345
Heavy Vehicles (%)	4%	4%	0%	5%	2%	7%	0%	2%	3%	6%	8%	6%
Turn Type	Prot	NA		Prot	NA	Perm	pm+pt	NA	pt+ov	pm+pt	NA	pt+ov
Protected Phases	5	2		1	6		3	8	8 1	7	4	4 5
Permitted Phases						6	8			4		
Actuated Green, G (s)	37.9	37.9		68.9	68.9	68.9	85.4	78.4	147.3	85.4	78.4	123.4
Effective Green, g (s)	39.9	39.9		70.9	70.9	68.9	89.4	80.4	151.3	89.4	80.4	120.3
Actuated g/C Ratio	0.18	0.18		0.32	0.32	0.31	0.41	0.37	0.69	0.41	0.37	0.55
Clearance Time (s)	7.1	7.1		6.3	6.3	6.3	6.8	7.6		6.8	7.6	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	803	827		1074	1140	472	246	1293	1078	169	1221	833
v/s Ratio Prot	0.11	c0.12		0.20	c0.26		0.01	c0.25	0.32	c0.02	0.20	0.23
v/s Ratio Perm						0.01	0.05			0.17		
v/c Ratio	0.59	0.67		0.62	0.80	0.04	0.13	0.68	0.46	0.46	0.56	0.41
Uniform Delay, d1	82.5	83.9		63.3	68.0	52.5	60.9	58.9	15.7	78.8	55.7	29.2
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.20	1.07	1.24
Incremental Delay, d2	3.1	4.3		2.7	5.8	0.2	0.2	2.9	1.4	1.8	1.7	1.4
Delay (s)	85.6	88.2		66.0	73.8	52.7	61.1	61.8	17.1	96.6	61.5	37.5
Level of Service	F	F		E	E	D	E	E	B	F	E	D
Approach Delay (s)		87.0			69.9			46.0			55.8	
Approach LOS		F			E			D			E	

Intersection Summary			
HCM 2000 Control Delay	63.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	220.0	Sum of lost time (s)	19.8
Intersection Capacity Utilization	77.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	920	16	47	1071	19	22	33	45	44	21	12
Future Volume (vph)	19	920	16	47	1071	19	22	33	45	44	21	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.6		5.6	5.6		4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	0.91		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1671	3498		1805	3400		1805	1592		1752	1763	
Flt Permitted	0.22	1.00		0.25	1.00		0.73	1.00		0.49	1.00	
Satd. Flow (perm)	379	3498		477	3400		1394	1592		909	1763	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	21	1000	17	51	1164	21	24	36	49	48	23	13
RTOR Reduction (vph)	0	0	0	0	0	0	0	26	0	0	9	0
Lane Group Flow (vph)	21	1017	0	51	1185	0	24	59	0	48	27	0
Heavy Vehicles (%)	8%	3%	0%	0%	6%	0%	0%	5%	12%	3%	3%	0%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			7			3	
Permitted Phases	2			6			7			3		
Actuated Green, G (s)	172.7	168.5		178.9	171.6		24.5	24.5		15.1	15.1	
Effective Green, g (s)	174.7	169.5		180.9	172.6		26.5	26.5		17.1	17.1	
Actuated g/C Ratio	0.79	0.77		0.82	0.78		0.12	0.12		0.08	0.08	
Clearance Time (s)	6.6	6.6		6.6	6.6		6.5	6.5		6.5	6.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	331	2695		442	2667		167	191		70	137	
v/s Ratio Prot	0.00	0.29		c0.00	c0.35			c0.04			0.02	
v/s Ratio Perm	0.05			0.09			0.02			c0.05		
v/c Ratio	0.06	0.38		0.12	0.44		0.14	0.31		0.69	0.20	
Uniform Delay, d1	5.4	8.2		4.5	7.8		86.6	88.4		98.8	95.0	
Progression Factor	0.08	0.12		0.16	0.09		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.3		0.1	0.5		0.4	0.9		24.3	0.7	
Delay (s)	0.5	1.3		0.8	1.2		87.0	89.3		123.2	95.7	
Level of Service	A	A		A	A		F	F		F	F	
Approach Delay (s)		1.3			1.2			88.8			111.4	
Approach LOS		A			A			F			F	

Intersection Summary			
HCM 2000 Control Delay	8.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	220.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	56.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



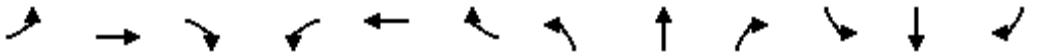
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	896	24	70	1264	5	45	19	85	19	5	38
Future Volume (vph)	23	896	24	70	1264	5	45	19	85	19	5	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	4.6		5.6	4.6			4.5	4.5		4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frt	1.00	1.00		1.00	1.00			1.00	0.85		0.92	
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00		0.98	
Satd. Flow (prot)	1597	3494		1805	3405			1836	1615		1716	
Flt Permitted	0.15	1.00		0.24	1.00			0.97	1.00		0.98	
Satd. Flow (perm)	252	3494		456	3405			1836	1615		1716	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	25	974	26	76	1374	5	49	21	92	21	5	41
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	85	0	26	0
Lane Group Flow (vph)	25	1000	0	76	1379	0	0	70	7	0	41	0
Heavy Vehicles (%)	13%	3%	0%	0%	6%	0%	0%	0%	0%	0%	0%	0%
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		4	4		7	7	
Permitted Phases	2			6					4			
Actuated Green, G (s)	157.7	151.9		162.5	154.3			13.7	13.7		11.0	
Effective Green, g (s)	159.7	153.9		164.5	156.3			15.7	15.7		13.0	
Actuated g/C Ratio	0.73	0.70		0.75	0.71			0.07	0.07		0.06	
Clearance Time (s)	6.6	6.6		6.6	6.6			6.5	6.5		6.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	224	2444		397	2419			131	115		101	
v/s Ratio Prot	0.00	0.29		c0.01	c0.41			c0.04			c0.02	
v/s Ratio Perm	0.08			0.13					0.00			
v/c Ratio	0.11	0.41		0.19	0.57			0.53	0.06		0.40	
Uniform Delay, d1	11.6	13.9		9.0	15.5			98.6	95.2		99.8	
Progression Factor	0.33	0.24		1.84	1.27			1.00	1.00		1.00	
Incremental Delay, d2	0.2	0.5		0.2	0.8			4.1	0.2		2.6	
Delay (s)	4.0	3.9		16.7	20.5			102.8	95.5		102.4	
Level of Service	A	A		B	C			F	F		F	
Approach Delay (s)		3.9			20.3			98.6			102.4	
Approach LOS		A			C			F			F	

Intersection Summary			
HCM 2000 Control Delay	20.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	220.0	Sum of lost time (s)	24.2
Intersection Capacity Utilization	63.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	993	8	0	1339	0	7
Future Volume (Veh/h)	993	8	0	1339	0	7
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1079	9	0	1455	0	8
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	173			384		
pX, platoon unblocked			0.88		0.85	0.88
vC, conflicting volume			1088		1811	544
vC1, stage 1 conf vol					1084	
vC2, stage 2 conf vol					728	
vCu, unblocked vol			826		969	208
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	99
cM capacity (veh/h)			704		330	702

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	719	369	728	728	8
Volume Left	0	0	0	0	0
Volume Right	0	9	0	0	8
cSH	1700	1700	1700	1700	702
Volume to Capacity	0.42	0.22	0.43	0.43	0.01
Queue Length 95th (ft)	0	0	0	0	1
Control Delay (s)	0.0	0.0	0.0	0.0	10.2
Lane LOS					B
Approach Delay (s)	0.0		0.0		10.2
Approach LOS					B

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	40.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	784	81	38	1145	29	82	0	20	57	0	57
Future Volume (vph)	44	784	81	38	1145	29	82	0	20	57	0	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.2		5.0	5.2			6.2	6.2		6.2	6.2
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	0.99		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		0.95	1.00
Satd. Flow (prot)	1805	3459		1770	3429			1770	1583		1805	1615
Flt Permitted	0.15	1.00		0.26	1.00			0.95	1.00		0.95	1.00
Satd. Flow (perm)	293	3459		480	3429			1770	1583		1805	1615
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	48	852	88	41	1245	32	89	0	22	62	0	62
RTOR Reduction (vph)	0	3	0	0	1	0	0	0	20	0	0	56
Lane Group Flow (vph)	48	937	0	41	1276	0	0	89	2	0	62	6
Heavy Vehicles (%)	0%	3%	2%	2%	5%	0%	2%	2%	2%	0%	2%	0%
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases	2			6					4			3
Actuated Green, G (s)	151.4	143.9		148.2	142.3			24.8	24.8		21.8	21.8
Effective Green, g (s)	153.4	144.9		148.2	143.3			24.8	24.8		21.8	21.8
Actuated g/C Ratio	0.70	0.66		0.67	0.65			0.11	0.11		0.10	0.10
Clearance Time (s)	5.0	6.2		5.0	6.2			6.2	6.2		6.2	6.2
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	262	2278		357	2233			199	178		178	160
v/s Ratio Prot	c0.01	0.27		0.00	c0.37			c0.05			c0.03	
v/s Ratio Perm	0.12			0.07					0.00			0.00
v/c Ratio	0.18	0.41		0.11	0.57			0.45	0.01		0.35	0.04
Uniform Delay, d1	14.9	17.6		13.1	21.3			91.2	86.7		92.5	89.6
Progression Factor	0.72	0.99		1.39	1.99			1.00	1.00		1.00	1.00
Incremental Delay, d2	0.3	0.5		0.1	0.9			7.1	0.1		5.3	0.4
Delay (s)	11.1	18.0		18.4	43.3			98.3	86.9		97.8	90.1
Level of Service	B	B		B	D			F	F		F	F
Approach Delay (s)		17.6			42.5			96.0			93.9	
Approach LOS		B			D			F			F	

Intersection Summary			
HCM 2000 Control Delay	37.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	220.0	Sum of lost time (s)	22.6
Intersection Capacity Utilization	58.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	855	5	49	1233	23	19
Future Volume (Veh/h)	855	5	49	1233	23	19
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	929	5	53	1340	25	21
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	378			458		
pX, platoon unblocked			0.88		0.81	0.88
vC, conflicting volume			934		1708	467
vC1, stage 1 conf vol					932	
vC2, stage 2 conf vol					776	
vCu, unblocked vol			642		725	109
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)			2.2		3.5	3.3
p0 queue free %			94		94	97
cM capacity (veh/h)			822		403	809

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	619	315	53	670	670	46
Volume Left	0	0	53	0	0	25
Volume Right	0	5	0	0	0	21
cSH	1700	1700	822	1700	1700	523
Volume to Capacity	0.36	0.19	0.06	0.39	0.39	0.09
Queue Length 95th (ft)	0	0	5	0	0	7
Control Delay (s)	0.0	0.0	9.7	0.0	0.0	12.5
Lane LOS			A			B
Approach Delay (s)	0.0		0.4			12.5
Approach LOS						B

Intersection Summary				
Average Delay	0.5			
Intersection Capacity Utilization	44.1%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	874	0	0	1282	0	44
Future Volume (Veh/h)	874	0	0	1282	0	44
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	950	0	0	1393	0	48
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	536			300		
pX, platoon unblocked			0.88		0.81	0.88
vC, conflicting volume			950		1646	475
vC1, stage 1 conf vol					950	
vC2, stage 2 conf vol					696	
vCu, unblocked vol			665		651	123
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	94
cM capacity (veh/h)			808		403	794

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	475	475	696	696	48
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	48
cSH	1700	1700	1700	1700	794
Volume to Capacity	0.28	0.28	0.41	0.41	0.06
Queue Length 95th (ft)	0	0	0	0	5
Control Delay (s)	0.0	0.0	0.0	0.0	9.8
Lane LOS					A
Approach Delay (s)	0.0		0.0		9.8
Approach LOS					A

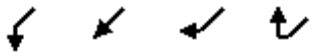
Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	38.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL2	EBL	EBT	EBR	WBL2	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT
Lane Configurations												
Traffic Volume (vph)	4	73	19	3	1	4	26	10	15	5	8	4
Future Volume (vph)	4	73	19	3	1	4	26	10	15	5	8	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			5.0				5.0					5.0
Lane Util. Factor			1.00				1.00					1.00
Frt			1.00				0.94					0.95
Flt Protected			0.96				1.00					0.98
Satd. Flow (prot)			1444				1769					1756
Flt Permitted			0.96				1.00					0.84
Satd. Flow (perm)			1444				1769					1518
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	79	21	3	1	4	28	11	16	5	9	4
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	107	0	0	0	60	0	0	0	0	30
Heavy Vehicles (%)	100%	0%	100%	100%	0%	7%	0%	0%	0%	0%	0%	0%
Turn Type	Perm	Split	NA		Perm	Split	NA			Perm	Perm	NA
Protected Phases		3	3			4	4					7
Permitted Phases	3				4					7	7	
Actuated Green, G (s)			20.1				12.9					8.6
Effective Green, g (s)			21.6				14.4					10.1
Actuated g/C Ratio			0.10				0.07					0.05
Clearance Time (s)			6.5				6.5					6.5
Vehicle Extension (s)			3.0				3.0					3.0
Lane Grp Cap (vph)			141				115					69
v/s Ratio Prot			c0.07				c0.03					
v/s Ratio Perm												c0.02
v/c Ratio			0.76				0.52					0.43
Uniform Delay, d1			96.7				99.5					102.2
Progression Factor			1.00				1.00					1.00
Incremental Delay, d2			20.6				4.2					4.3
Delay (s)			117.3				103.7					106.5
Level of Service			F				F					F
Approach Delay (s)			117.3				103.7					106.5
Approach LOS			F				F					F

Intersection Summary			
HCM 2000 Control Delay	28.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	220.0	Sum of lost time (s)	25.7
Intersection Capacity Utilization	70.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

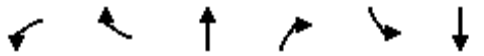
Movement	NBR	SBL2	SBL	SBT	SBR	SBR2	NEL2	NEL	NET	NER	NER2	SWL2
Lane Configurations												
Traffic Volume (vph)	11	17	7	6	5	1	5	5	831	51	11	3
Future Volume (vph)	11	17	7	6	5	1	5	5	831	51	11	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			5.0	5.0				5.6	5.1			
Lane Util. Factor			1.00	1.00				1.00	0.95			
Frt			1.00	0.93				1.00	0.99			
Flt Protected			0.95	1.00				0.95	1.00			
Satd. Flow (prot)			1805	1768				1778	3573			
Flt Permitted			0.77	1.00				0.12	1.00			
Satd. Flow (perm)			1461	1768				219	3573			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	12	18	8	7	5	1	5	5	903	55	12	3
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	26	13	0	0	0	10	970	0	0	0
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%	0%	0%
Turn Type		Perm	Perm	NA			custom	pm+pt	NA			pm+pt
Protected Phases				7				1	6			5
Permitted Phases		7	7				1	6				2
Actuated Green, G (s)			8.6	8.6				141.9	139.3			
Effective Green, g (s)			10.1	10.1				144.9	141.3			
Actuated g/C Ratio			0.05	0.05				0.66	0.64			
Clearance Time (s)			6.5	6.5				7.1	7.1			
Vehicle Extension (s)			3.0	3.0				3.0	4.0			
Lane Grp Cap (vph)			67	81				173	2294			
v/s Ratio Prot				0.01				0.00	0.27			
v/s Ratio Perm			0.02					0.04				
v/c Ratio			0.39	0.16				0.06	0.42			
Uniform Delay, d1			101.9	100.9				18.5	19.3			
Progression Factor			1.00	1.00				1.23	0.75			
Incremental Delay, d2			3.7	0.9				0.1	0.5			
Delay (s)			105.6	101.8				22.9	15.1			
Level of Service			F	F				C	B			
Approach Delay (s)				104.4					15.2			
Approach LOS				F					B			

Intersection Summary



Movement	SWL	SWT	SWR	SWR2
Lane Configurations				
Traffic Volume (vph)	18	1268	68	14
Future Volume (vph)	18	1268	68	14
Ideal Flow (vphpl)	1900	1900	1900	1900
Total Lost time (s)	5.6	5.1		
Lane Util. Factor	1.00	0.95		
Frt	1.00	0.99		
Flt Protected	0.95	1.00		
Satd. Flow (prot)	1805	3499		
Flt Permitted	0.24	1.00		
Satd. Flow (perm)	448	3499		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92
Adj. Flow (vph)	20	1378	74	15
RTOR Reduction (vph)	0	0	0	0
Lane Group Flow (vph)	23	1467	0	0
Heavy Vehicles (%)	0%	2%	7%	0%
Turn Type	pm+pt	NA		
Protected Phases	5	2		
Permitted Phases	2			
Actuated Green, G (s)	147.5	142.1		
Effective Green, g (s)	150.5	144.1		
Actuated g/C Ratio	0.68	0.65		
Clearance Time (s)	7.1	7.1		
Vehicle Extension (s)	3.0	4.0		
Lane Grp Cap (vph)	349	2291		
v/s Ratio Prot	c0.00	c0.42		
v/s Ratio Perm	0.04			
v/c Ratio	0.07	0.64		
Uniform Delay, d1	13.1	22.6		
Progression Factor	1.00	1.00		
Incremental Delay, d2	0.1	1.4		
Delay (s)	13.2	23.9		
Level of Service	B	C		
Approach Delay (s)		23.8		
Approach LOS		C		

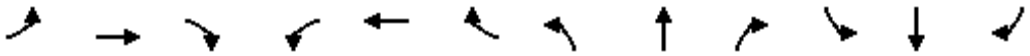
Intersection Summary



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	48	12	60	9	8	54
Future Volume (Veh/h)	48	12	60	9	8	54
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	52	13	65	10	9	59
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		3				
Median type			None			None
Median storage veh)						
Upstream signal (ft)						366
pX, platoon unblocked						
vC, conflicting volume	147	70			75	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	147	70			75	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	94	99			99	
cM capacity (veh/h)	840	993			1524	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	65	75	68
Volume Left	52	0	9
Volume Right	13	10	0
cSH	1050	1700	1524
Volume to Capacity	0.06	0.04	0.01
Queue Length 95th (ft)	5	0	0
Control Delay (s)	9.4	0.0	1.0
Lane LOS	A		A
Approach Delay (s)	9.4	0.0	1.0
Approach LOS	A		

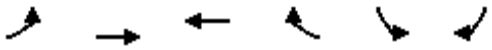
Intersection Summary			
Average Delay	3.3		
Intersection Capacity Utilization	19.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	11	4	3	21	21	7	5	83	20	5	79	13
Future Volume (vph)	11	4	3	21	21	7	5	83	20	5	79	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	12	4	3	23	23	8	5	90	22	5	86	14

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	19	54	117	105
Volume Left (vph)	12	23	5	5
Volume Right (vph)	3	8	22	14
Hadj (s)	0.07	0.03	-0.07	-0.04
Departure Headway (s)	4.5	4.4	4.1	4.2
Degree Utilization, x	0.02	0.07	0.13	0.12
Capacity (veh/h)	754	761	850	846
Control Delay (s)	7.6	7.8	7.7	7.7
Approach Delay (s)	7.6	7.8	7.7	7.7
Approach LOS	A	A	A	A

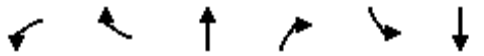
Intersection Summary				
Delay	7.7			
Level of Service	A			
Intersection Capacity Utilization	17.3%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Stop	Stop		Stop	
Traffic Volume (vph)	22	9	16	19	13	27
Future Volume (vph)	22	9	16	19	13	27
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	24	10	17	21	14	29

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total (vph)	34	38	43
Volume Left (vph)	24	0	14
Volume Right (vph)	0	21	29
Hadj (s)	0.18	-0.30	-0.31
Departure Headway (s)	4.2	3.7	3.7
Degree Utilization, x	0.04	0.04	0.04
Capacity (veh/h)	842	949	932
Control Delay (s)	7.4	6.9	6.9
Approach Delay (s)	7.4	6.9	6.9
Approach LOS	A	A	A

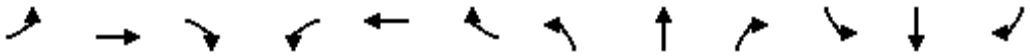
Intersection Summary			
Delay	7.0		
Level of Service	A		
Intersection Capacity Utilization	18.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	102	0	74	46
Future Volume (Veh/h)	0	0	102	0	74	46
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	111	0	80	50
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						90
pX, platoon unblocked	0.99					
vC, conflicting volume	321	111			111	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	313	111			111	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			95	
cM capacity (veh/h)	639	942			1479	

Direction, Lane #	NB 1	SB 1
Volume Total	111	130
Volume Left	0	80
Volume Right	0	0
cSH	1700	1479
Volume to Capacity	0.07	0.05
Queue Length 95th (ft)	0	4
Control Delay (s)	0.0	4.8
Lane LOS		A
Approach Delay (s)	0.0	4.8
Approach LOS		

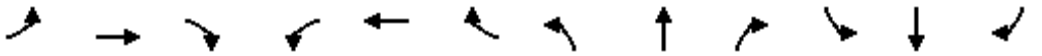
Intersection Summary			
Average Delay	2.6		
Intersection Capacity Utilization	16.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	44	1	0	0	0	0	24	0	0	54	0
Future Volume (Veh/h)	18	44	1	0	0	0	0	24	0	0	54	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	20	48	1	0	0	0	0	26	0	0	59	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	85	85	59	110	85	26	59			26		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	85	85	59	110	85	26	59			26		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	98	94	100	100	100	100	100			100		
cM capacity (veh/h)	901	805	1007	828	805	1050	1545			1588		

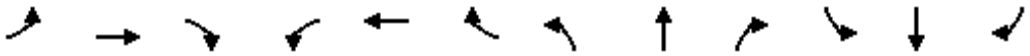
Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	69	26	59
Volume Left	20	0	0
Volume Right	1	0	0
cSH	833	1700	1588
Volume to Capacity	0.08	0.02	0.00
Queue Length 95th (ft)	7	0	0
Control Delay (s)	9.7	0.0	0.0
Lane LOS	A		
Approach Delay (s)	9.7	0.0	0.0
Approach LOS	A		

Intersection Summary				
Average Delay	4.4			
Intersection Capacity Utilization	13.4%	ICU Level of Service	A	
Analysis Period (min)	15			



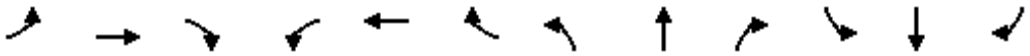
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	433	552	74	638	953	36	34	617	524	49	949	470
Future Volume (vph)	433	552	74	638	953	36	34	617	524	49	949	470
Ideal Flow (vphpl)	2500	2500	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1		4.3	4.3	6.3	4.8	5.6	5.6	4.8	5.6	5.6
Lane Util. Factor	0.97	0.95		0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	4430	4507		3335	3539	1509	1805	3539	1568	1703	3343	1524
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.09	1.00	1.00	0.26	1.00	1.00
Satd. Flow (perm)	4430	4507		3335	3539	1509	168	3539	1568	459	3343	1524
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	471	600	80	693	1036	39	37	671	570	53	1032	511
RTOR Reduction (vph)	0	5	0	0	0	27	0	0	0	0	0	30
Lane Group Flow (vph)	471	675	0	693	1036	12	37	671	570	53	1032	481
Heavy Vehicles (%)	4%	4%	0%	5%	2%	7%	0%	2%	3%	6%	8%	6%
Turn Type	Prot	NA		Prot	NA	Perm	pm+pt	NA	pt+ov	pm+pt	NA	pt+ov
Protected Phases	5	2		1	6		3	8	8 1	7	4	4 5
Permitted Phases						6	8			4		
Actuated Green, G (s)	37.9	37.9		68.9	68.9	68.9	85.4	78.4	147.3	85.4	78.4	123.4
Effective Green, g (s)	39.9	39.9		70.9	70.9	68.9	89.4	80.4	151.3	89.4	80.4	120.3
Actuated g/C Ratio	0.18	0.18		0.32	0.32	0.31	0.41	0.37	0.69	0.41	0.37	0.55
Clearance Time (s)	7.1	7.1		6.3	6.3	6.3	6.8	7.6		6.8	7.6	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	803	817		1074	1140	472	135	1293	1078	237	1221	833
v/s Ratio Prot	0.11	c0.15		0.21	c0.29		c0.01	0.19	0.36	0.01	c0.31	0.32
v/s Ratio Perm						0.01	0.10			0.08		
v/c Ratio	0.59	0.83		0.65	0.91	0.03	0.27	0.52	0.53	0.22	0.85	0.58
Uniform Delay, d1	82.5	86.7		63.8	71.5	52.3	84.0	54.7	16.9	62.1	64.1	33.0
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.08	1.05	1.11
Incremental Delay, d2	3.1	9.4		3.0	12.1	0.1	1.1	1.5	1.9	0.4	6.4	2.5
Delay (s)	85.6	96.1		66.8	83.6	52.4	85.1	56.1	18.7	67.2	73.8	39.2
Level of Service	F	F		E	F	D	F	E	B	E	E	D
Approach Delay (s)		91.8			76.3			40.3			62.5	
Approach LOS		F			E			D			E	

Intersection Summary			
HCM 2000 Control Delay	67.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	220.0	Sum of lost time (s)	19.8
Intersection Capacity Utilization	84.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	906	11	48	1387	11	19	23	63	33	22	15
Future Volume (vph)	28	906	11	48	1387	11	19	23	63	33	22	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.6		5.6	5.6		4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	0.89		1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1671	3500		1805	3403		1805	1536		1752	1754	
Flt Permitted	0.14	1.00		0.26	1.00		0.73	1.00		0.41	1.00	
Satd. Flow (perm)	246	3500		496	3403		1380	1536		762	1754	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	30	985	12	52	1508	12	21	25	68	36	24	16
RTOR Reduction (vph)	0	0	0	0	0	0	0	52	0	0	11	0
Lane Group Flow (vph)	30	997	0	52	1520	0	21	41	0	36	29	0
Heavy Vehicles (%)	8%	3%	0%	0%	6%	0%	0%	5%	12%	3%	3%	0%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			7			3	
Permitted Phases	2			6			7			3		
Actuated Green, G (s)	176.2	170.5		179.4	172.1		22.5	22.5		13.1	13.1	
Effective Green, g (s)	178.2	171.5		181.4	173.1		24.5	24.5		15.1	15.1	
Actuated g/C Ratio	0.81	0.78		0.82	0.79		0.11	0.11		0.07	0.07	
Clearance Time (s)	6.6	6.6		6.6	6.6		6.5	6.5		6.5	6.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	242	2728		458	2677		153	171		52	120	
v/s Ratio Prot	0.00	0.28		c0.00	c0.45			c0.03			0.02	
v/s Ratio Perm	0.10			0.09			0.02			c0.05		
v/c Ratio	0.12	0.37		0.11	0.57		0.14	0.24		0.69	0.24	
Uniform Delay, d1	6.4	7.5		4.1	9.0		88.2	89.3		100.2	97.0	
Progression Factor	0.13	0.16		0.13	0.25		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	0.3		0.1	0.7		0.4	0.7		33.0	1.0	
Delay (s)	1.0	1.5		0.6	2.9		88.6	90.0		133.1	98.1	
Level of Service	A	A		A	A		F	F		F	F	
Approach Delay (s)		1.5			2.8			89.8			114.7	
Approach LOS		A			A			F			F	

Intersection Summary			
HCM 2000 Control Delay	9.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	220.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	56.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



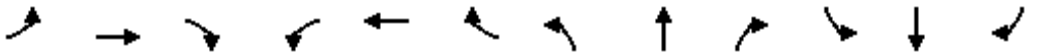
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	892	12	68	1522	7	10	10	98	23	4	32
Future Volume (vph)	14	892	12	68	1522	7	10	10	98	23	4	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	4.6		5.6	4.6			4.5	4.5		4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frt	1.00	1.00		1.00	1.00			1.00	0.85		0.93	
Flt Protected	0.95	1.00		0.95	1.00			0.98	1.00		0.98	
Satd. Flow (prot)	1597	3499		1805	3404			1854	1615		1726	
Flt Permitted	0.10	1.00		0.25	1.00			0.98	1.00		0.98	
Satd. Flow (perm)	175	3499		472	3404			1854	1615		1726	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	15	970	13	74	1654	8	11	11	107	25	4	35
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	102	0	21	0
Lane Group Flow (vph)	15	983	0	74	1662	0	0	22	5	0	43	0
Heavy Vehicles (%)	13%	3%	0%	0%	6%	0%	0%	0%	0%	0%	0%	0%
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		4	4		7	7	
Permitted Phases	2			6					4			
Actuated Green, G (s)	161.0	156.8		168.4	160.5			8.9	8.9		11.2	
Effective Green, g (s)	163.0	158.8		170.4	162.5			10.9	10.9		13.2	
Actuated g/C Ratio	0.74	0.72		0.77	0.74			0.05	0.05		0.06	
Clearance Time (s)	6.6	6.6		6.6	6.6			6.5	6.5		6.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	163	2525		419	2514			91	80		103	
v/s Ratio Prot	0.00	0.28		c0.01	c0.49			c0.01			c0.03	
v/s Ratio Perm	0.07			0.13					0.00			
v/c Ratio	0.09	0.39		0.18	0.66			0.24	0.07		0.42	
Uniform Delay, d1	12.6	11.8		7.3	14.7			100.6	99.7		99.7	
Progression Factor	0.32	0.23		1.89	1.55			1.00	1.00		1.00	
Incremental Delay, d2	0.2	0.4		0.2	1.1			1.4	0.4		2.8	
Delay (s)	4.3	3.1		14.0	23.8			102.0	100.0		102.5	
Level of Service	A	A		B	C			F	F		F	
Approach Delay (s)		3.1			23.4			100.4			102.5	
Approach LOS		A			C			F			F	

Intersection Summary			
HCM 2000 Control Delay	21.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	220.0	Sum of lost time (s)	24.2
Intersection Capacity Utilization	70.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1002	10	0	1597	0	8
Future Volume (Veh/h)	1002	10	0	1597	0	8
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1089	11	0	1736	0	9
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	173			384		
pX, platoon unblocked			0.89		0.77	0.89
vC, conflicting volume			1100		1962	550
vC1, stage 1 conf vol					1094	
vC2, stage 2 conf vol					868	
vCu, unblocked vol			868		1015	251
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	99
cM capacity (veh/h)			688		316	667

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	726	374	868	868	9
Volume Left	0	0	0	0	0
Volume Right	0	11	0	0	9
cSH	1700	1700	1700	1700	667
Volume to Capacity	0.43	0.22	0.51	0.51	0.01
Queue Length 95th (ft)	0	0	0	0	1
Control Delay (s)	0.0	0.0	0.0	0.0	10.5
Lane LOS					B
Approach Delay (s)	0.0		0.0		10.5
Approach LOS					B

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	47.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	921	89	46	1394	29	78	0	18	64	0	31
Future Volume (vph)	37	921	89	46	1394	29	78	0	18	64	0	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.2		5.0	5.2			6.2	6.2		6.2	6.2
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	0.99		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		0.95	1.00
Satd. Flow (prot)	1805	3461		1770	3431			1770	1583		1805	1615
Flt Permitted	0.10	1.00		0.20	1.00			0.95	1.00		0.95	1.00
Satd. Flow (perm)	193	3461		374	3431			1770	1583		1805	1615
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	40	1001	97	50	1515	32	85	0	20	70	0	34
RTOR Reduction (vph)	0	3	0	0	1	0	0	0	18	0	0	31
Lane Group Flow (vph)	40	1095	0	50	1546	0	0	85	2	0	70	3
Heavy Vehicles (%)	0%	3%	2%	2%	5%	0%	2%	2%	2%	0%	2%	0%
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases	2			6					4			3
Actuated Green, G (s)	148.1	142.2		151.5	143.9			24.8	24.8		21.8	21.8
Effective Green, g (s)	150.1	143.2		151.5	144.9			24.8	24.8		21.8	21.8
Actuated g/C Ratio	0.68	0.65		0.69	0.66			0.11	0.11		0.10	0.10
Clearance Time (s)	5.0	6.2		5.0	6.2			6.2	6.2		6.2	6.2
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	182	2252		305	2259			199	178		178	160
v/s Ratio Prot	c0.01	0.32		0.01	c0.45			c0.05			c0.04	
v/s Ratio Perm	0.14			0.11					0.00			0.00
v/c Ratio	0.22	0.49		0.16	0.68			0.43	0.01		0.39	0.02
Uniform Delay, d1	19.3	19.6		13.7	23.3			91.0	86.7		92.9	89.5
Progression Factor	0.81	1.34		0.74	1.74			1.00	1.00		1.00	1.00
Incremental Delay, d2	0.6	0.7		0.1	0.9			6.6	0.1		6.4	0.2
Delay (s)	16.2	26.9		10.3	41.6			97.6	86.9		99.3	89.7
Level of Service	B	C		B	D			F	F		F	F
Approach Delay (s)		26.5			40.6			95.5			96.2	
Approach LOS		C			D			F			F	

Intersection Summary			
HCM 2000 Control Delay	39.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	220.0	Sum of lost time (s)	22.6
Intersection Capacity Utilization	65.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	998	5	55	1547	20	15
Future Volume (Veh/h)	998	5	55	1547	20	15
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1085	5	60	1682	22	16
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	378			458		
pX, platoon unblocked			0.84		0.64	0.84
vC, conflicting volume			1090		2048	545
vC1, stage 1 conf vol					1088	
vC2, stage 2 conf vol					961	
vCu, unblocked vol			727		374	79
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)			2.2		3.5	3.3
p0 queue free %			92		94	98
cM capacity (veh/h)			733		361	812

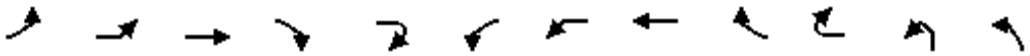
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	723	367	60	841	841	38
Volume Left	0	0	60	0	0	22
Volume Right	0	5	0	0	0	16
cSH	1700	1700	733	1700	1700	471
Volume to Capacity	0.43	0.22	0.08	0.49	0.49	0.08
Queue Length 95th (ft)	0	0	7	0	0	7
Control Delay (s)	0.0	0.0	10.4	0.0	0.0	13.3
Lane LOS			B			B
Approach Delay (s)	0.0		0.4			13.3
Approach LOS						B

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	52.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1013	0	0	1602	0	42
Future Volume (Veh/h)	1013	0	0	1602	0	42
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1101	0	0	1741	0	46
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	536			300		
pX, platoon unblocked			0.84		0.63	0.84
vC, conflicting volume			1101		1972	550
vC1, stage 1 conf vol					1101	
vC2, stage 2 conf vol					870	
vCu, unblocked vol			744		256	89
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	94
cM capacity (veh/h)			724		415	800

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	550	550	870	870	46
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	46
cSH	1700	1700	1700	1700	800
Volume to Capacity	0.32	0.32	0.51	0.51	0.06
Queue Length 95th (ft)	0	0	0	0	5
Control Delay (s)	0.0	0.0	0.0	0.0	9.8
Lane LOS					A
Approach Delay (s)	0.0		0.0		9.8
Approach LOS					A

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	47.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL2	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	WBR2	NBL2	NBL
Lane Configurations												
Traffic Volume (vph)	5	61	31	4	2	1	4	30	12	5	18	16
Future Volume (vph)	5	61	31	4	2	1	4	30	12	5	18	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			5.0					5.0				
Lane Util. Factor			1.00					1.00				
Frt			0.99					0.96				
Flt Protected			0.97					1.00				
Satd. Flow (prot)			1300					1800				
Flt Permitted			0.97					1.00				
Satd. Flow (perm)			1300					1800				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	5	66	34	4	2	1	4	33	13	5	20	17
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	111	0	0	0	0	56	0	0	0	0
Heavy Vehicles (%)	100%	0%	100%	100%	100%	0%	7%	0%	0%	0%	0%	0%
Turn Type	Perm	Split	NA			Perm	Split	NA			Perm	Perm
Protected Phases		3	3				4	4				
Permitted Phases	3					4					7	7
Actuated Green, G (s)			21.5					12.3				
Effective Green, g (s)			23.0					13.8				
Actuated g/C Ratio			0.10					0.06				
Clearance Time (s)			6.5					6.5				
Vehicle Extension (s)			3.0					3.0				
Lane Grp Cap (vph)			135					112				
v/s Ratio Prot			c0.09					c0.03				
v/s Ratio Perm												
v/c Ratio			0.82					0.50				
Uniform Delay, d1			96.5					99.8				
Progression Factor			1.00					1.00				
Incremental Delay, d2			31.5					3.5				
Delay (s)			128.0					103.2				
Level of Service			F					F				
Approach Delay (s)			128.0					103.2				
Approach LOS			F					F				

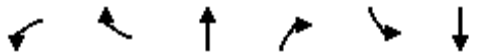
Intersection Summary			
HCM 2000 Control Delay	44.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	220.0	Sum of lost time (s)	25.7
Intersection Capacity Utilization	83.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NBT	NBR	SBL2	SBL	SBT	SBR	SBR2	NEL2	NEL	NET	NER	NER2
Lane Configurations												
Traffic Volume (vph)	20	38	11	1	6	2	2	12	12	856	33	9
Future Volume (vph)	20	38	11	1	6	2	2	12	12	856	33	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0			5.0	5.0				5.6	5.1		
Lane Util. Factor	1.00			1.00	1.00				1.00	0.95		
Frt	0.94			1.00	0.95				1.00	0.99		
Flt Protected	0.98			0.95	1.00				0.95	1.00		
Satd. Flow (prot)	1762			1805	1796				1778	3584		
Flt Permitted	0.87			0.49	1.00				0.03	1.00		
Satd. Flow (perm)	1568			934	1796				62	3584		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	41	12	1	7	2	2	13	13	930	36	10
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	100	0	0	13	11	0	0	0	26	976	0	0
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%	0%
Turn Type	NA		Perm	Perm	NA			custom	pm+pt	NA		
Protected Phases	7				7				1	6		
Permitted Phases			7	7				1	6			
Actuated Green, G (s)	17.8			17.8	17.8				134.8	129.2		
Effective Green, g (s)	19.3			19.3	19.3				137.8	131.2		
Actuated g/C Ratio	0.09			0.09	0.09				0.63	0.60		
Clearance Time (s)	6.5			6.5	6.5				7.1	7.1		
Vehicle Extension (s)	3.0			3.0	3.0				3.0	4.0		
Lane Grp Cap (vph)	137			81	157				94	2137		
v/s Ratio Prot					0.01				c0.01	0.27		
v/s Ratio Perm	c0.06			0.01					0.16			
v/c Ratio	0.73			0.16	0.07				0.28	0.46		
Uniform Delay, d1	97.8			92.9	92.1				39.1	24.6		
Progression Factor	1.00			1.00	1.00				2.52	1.02		
Incremental Delay, d2	17.6			0.9	0.2				1.5	0.6		
Delay (s)	115.4			93.8	92.3				100.0	25.7		
Level of Service	F			F	F				F	C		
Approach Delay (s)	115.4				93.1					27.7		
Approach LOS	F				F					C		

Intersection Summary

Movement	SWL2	SWL	SWT	SWR	SWR2
Lane Configurations					
Traffic Volume (vph)	5	17	1576	93	5
Future Volume (vph)	5	17	1576	93	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900
Total Lost time (s)		5.6	5.1		
Lane Util. Factor		1.00	0.95		
Frt		1.00	0.99		
Flt Protected		0.95	1.00		
Satd. Flow (prot)		1805	3499		
Flt Permitted		0.23	1.00		
Satd. Flow (perm)		428	3499		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	5	18	1713	101	5
RTOR Reduction (vph)	0	0	0	0	0
Lane Group Flow (vph)	0	23	1819	0	0
Heavy Vehicles (%)	0%	0%	2%	7%	0%
Turn Type	pm+pt	pm+pt	NA		
Protected Phases	5	5	2		
Permitted Phases	2	2			
Actuated Green, G (s)		134.6	129.1		
Effective Green, g (s)		137.6	131.1		
Actuated g/C Ratio		0.63	0.60		
Clearance Time (s)		7.1	7.1		
Vehicle Extension (s)		3.0	4.0		
Lane Grp Cap (vph)		311	2085		
v/s Ratio Prot		0.00	c0.52		
v/s Ratio Perm		0.04			
v/c Ratio		0.07	0.87		
Uniform Delay, d1		17.8	37.4		
Progression Factor		1.00	1.00		
Incremental Delay, d2		0.1	5.4		
Delay (s)		17.9	42.8		
Level of Service		B	D		
Approach Delay (s)			42.5		
Approach LOS			D		

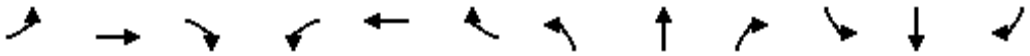
Intersection Summary



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	34	1	73	7	18	81
Future Volume (Veh/h)	34	1	73	7	18	81
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	37	1	79	8	20	88
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		3				
Median type			None			None
Median storage veh)						
Upstream signal (ft)						366
pX, platoon unblocked						
vC, conflicting volume	211	83			87	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	211	83			87	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	95	100			99	
cM capacity (veh/h)	767	976			1509	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	38	87	108
Volume Left	37	0	20
Volume Right	1	8	0
cSH	788	1700	1509
Volume to Capacity	0.05	0.05	0.01
Queue Length 95th (ft)	4	0	1
Control Delay (s)	9.9	0.0	1.5
Lane LOS	A		A
Approach Delay (s)	9.9	0.0	1.5
Approach LOS	A		

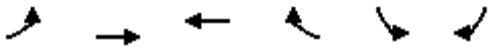
Intersection Summary			
Average Delay	2.3		
Intersection Capacity Utilization	21.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	9	5	4	19	8	8	8	83	23	8	78	23
Future Volume (vph)	9	5	4	19	8	8	8	83	23	8	78	23
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	10	5	4	21	9	9	9	90	25	9	85	25

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	19	39	124	119
Volume Left (vph)	10	21	9	9
Volume Right (vph)	4	9	25	25
Hadj (s)	0.01	0.00	-0.07	-0.08
Departure Headway (s)	4.5	4.4	4.1	4.1
Degree Utilization, x	0.02	0.05	0.14	0.13
Capacity (veh/h)	756	755	857	863
Control Delay (s)	7.6	7.7	7.7	7.7
Approach Delay (s)	7.6	7.7	7.7	7.7
Approach LOS	A	A	A	A

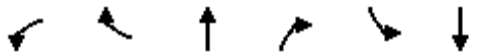
Intersection Summary				
Delay	7.7			
Level of Service	A			
Intersection Capacity Utilization	18.0%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Stop	Stop		Stop	
Traffic Volume (vph)	68	24	28	20	7	23
Future Volume (vph)	68	24	28	20	7	23
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	74	26	30	22	8	25

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total (vph)	100	52	33
Volume Left (vph)	74	0	8
Volume Right (vph)	0	22	25
Hadj (s)	0.18	-0.22	-0.37
Departure Headway (s)	4.2	3.8	3.9
Degree Utilization, x	0.12	0.06	0.04
Capacity (veh/h)	844	919	891
Control Delay (s)	7.7	7.1	7.0
Approach Delay (s)	7.7	7.1	7.0
Approach LOS	A	A	A

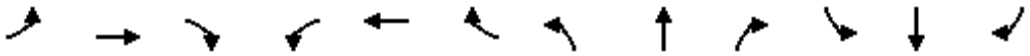
Intersection Summary			
Delay	7.4		
Level of Service	A		
Intersection Capacity Utilization	21.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	96	0	80	55
Future Volume (Veh/h)	0	0	96	0	80	55
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	104	0	87	60
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						90
pX, platoon unblocked	0.99					
vC, conflicting volume	338	104			104	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	328	104			104	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			94	
cM capacity (veh/h)	622	951			1488	

Direction, Lane #	NB 1	SB 1
Volume Total	104	147
Volume Left	0	87
Volume Right	0	0
cSH	1700	1488
Volume to Capacity	0.06	0.06
Queue Length 95th (ft)	0	5
Control Delay (s)	0.0	4.7
Lane LOS		A
Approach Delay (s)	0.0	4.7
Approach LOS		

Intersection Summary			
Average Delay	2.7		
Intersection Capacity Utilization	17.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	42	2	0	0	0	0	18	0	0	60	0
Future Volume (Veh/h)	17	42	2	0	0	0	0	18	0	0	60	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	18	46	2	0	0	0	0	20	0	0	65	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	85	85	65	110	85	20	65			20		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	85	85	65	110	85	20	65			20		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	98	94	100	100	100	100	100			100		
cM capacity (veh/h)	901	805	999	829	805	1058	1537			1596		

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	66	20	65
Volume Left	18	0	0
Volume Right	2	0	0
cSH	834	1700	1596
Volume to Capacity	0.08	0.01	0.00
Queue Length 95th (ft)	6	0	0
Control Delay (s)	9.7	0.0	0.0
Lane LOS	A		
Approach Delay (s)	9.7	0.0	0.0
Approach LOS	A		

Intersection Summary				
Average Delay	4.2			
Intersection Capacity Utilization	13.3%	ICU Level of Service	A	
Analysis Period (min)	15			