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10869 FAIRFAX BOULEVARD

TRAFFIC IMPACT STUDY

March 8, 2021

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**10869 FAIRFAX BOULEVARD
(NON-CHAPTER 870)
TRAFFIC IMPACT STUDY
CITY OF FAIRFAX, VIRGINIA**

March 8, 2021

Prepared for:

Tahoorra Foods, Inc.

Prepared by:

Lester E. Adkins III, P.E.

leadkins@wellsandassociates.com

Benja D. McDowell

bdmcdowell@wellsandassociates.com

Wells + Associates, Inc.

703.365.9262

www.WellsAndAssociates.com



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EXECUTIVE SUMMARY

SITE LOCATION AND STUDY AREA

This report presents the results of a traffic impact study conducted in support of a proposed commercial redevelopment in the City of Fairfax, Virginia. The subject property, identified as tax parcel 57-1 ((14)) 33 (the “Subject Property”) is located on the south side of Fairfax Boulevard, east of Hallman Street, and west of Walnut Street.

The Subject Property is currently zoned CR (“Commercial Retail”). The property is currently developed with a restaurant use and related surface parking with two (2) entrances along Fairfax Boulevard.

The study area for the TIS includes the area along Fairfax Boulevard bounded by Second Street/Hallman Street to the west a Walnut Street/Fairchester Drive to the east.

DESCRIPTION OF PROPOSED PROJECT

The Applicant, Tahoor Foods Inc., requests a Special Use Permit (SUP) to redevelop the site with a new ±2,275 gross square foot (GSF) fast-food restaurant with drive-through. The existing restaurant will be razed. Access to Fairfax Boulevard will consolidate the two (2) existing entrances into a single, centralized entrance.

CONCLUSIONS

The principal findings of this traffic impact study are as follows:

1. The Applicant is proposing to raze an existing ±1,740 square foot sit-down restaurant to develop a new ±2,275 square foot fast-food restaurant with drive-through by way of a Special Use Permit (SUP) application.
2. Under existing conditions, the signalized study intersection of Fairfax Boulevard/Walnut Street/Fairchester Boulevard currently operates at an overall LOS “B” in both weekday AM and PM peak hours. Certain side street approaches to Fairfax Boulevard at the unsignalized study intersections currently exceed LOS “D” conditions. The 95th percentile turning movement queues do not exceed existing available turn lane storage.

3. Under 2022 background future traffic conditions (without the proposed redevelopment) with the addition of regional growth and traffic associated with approved nearby developments, the signalized study intersection of Fairfax Boulevard/Walnut Street/Fairchester Boulevard would continue to operate at an overall LOS “B” in both weekday AM and PM peak hours. Certain side street approaches to Fairfax Boulevard at the unsignalized study intersections would continue to or begin to exceed LOS “D” conditions. The 95th percentile turning movement queues do not exceed available turn lane storage, consistent with existing conditions.
4. The proposed redevelopment is estimated to generate the following new site trips:
 - 91 weekday AM peak hour trips (46 inbound, 45 outbound)
 - 74 weekday PM peak hour trips (38 inbound, 36 outbound)
 - 1,071 weekday average daily trips
5. Under 2022 total future conditions (with the proposed redevelopment), certain approaches to the study intersections would experience minor increases in delay but generally remain consistent with background future conditions. The 95th percentile turning movement queues do not exceed available turn lane storage, consistent with existing and background future conditions.
6. No additional improvements beyond those depicted on the Applicant’s development plan are recommended to mitigate site-generated traffic.

Section 1 INTRODUCTION

PURPOSE

This report presents the results of a non-Chapter 870 Traffic Impact Study (TIS) completed on behalf of Tahoorra Foods Inc. In the Commonwealth of Virginia, all land development proposals, which meet certain specific trip generation thresholds, are subject to the regulations outlined in VDOT's *Traffic Impact Analysis Regulations Administrative Guidelines* dated December 2018 (the "Administrative Guidelines" or "Guidelines"). According to the Guidelines, a development proposal is generally considered to substantially impact the transportation network if it generates 5,000 or more daily vehicle trips. Based on a review of the Applicant's proposed project, a Chapter 870 compliant TIA was **not** required.

However, a TIS was requested of the Applicant by the City of Fairfax (The "City") in order to assess the impacts, if any, associated with the proposed Project. The purpose of this report then is to address the results of such an analysis. To that end, representatives of the project team met with City staff to identify the study scope and agreed on certain specific study parameters. A copy of the executed scoping agreement is included in Appendix A.

STUDY OBJECTIVES

The objectives of the TIS are to:

- Evaluate baseline weekday AM and weekday PM peak hour traffic of the adjacent street conditions (year 2021).
- Provide an analysis of peak hour traffic conditions without and with the build out of the new Project for a projected build-out year of 2022.
- Identify development-related traffic impacts (if any), and
- Recommend improvements required to mitigate any potential adverse effects which might be caused by the proposed Project.

Utilizing a four-step process consisting of trip generation, trip distribution, trip adjustments and traffic assignments; future conditions were forecasted and intersections were evaluated in terms of levels of service and queuing both with and without the Project for a projected build out year of 2022. Appropriate mitigation measures were then identified and evaluated to remediate impacted levels of service, where applicable and appropriate.

This study was conducted in general accordance with the 24 VAC 30-155-60 regulations. Sources of data for this analysis included traffic counts conducted by Wells + Associates, VDOT, the Institute of Transportation Engineers (ITE), The City of Fairfax, the Highway Capacity Manual 2000, Synchro version 10.0, and the files and libraries of Wells + Associates.

Tasks undertaken in this study included the following:

1. Reviewed the Applicant's proposed plans and other background data.
2. Conducted a field reconnaissance of existing roadway and intersection geometries, traffic controls, and speed limits.
3. Participated in meetings/correspondence with VDOT, City staff, and the project team to establish the general study scope and specific analysis parameters.
4. Conducted and/or obtained traffic counts at the study intersections during the weekday AM and weekday PM peak periods.
5. Analyzed existing 2021 levels of service and vehicle queues at each of the key study intersections during the typical weekday peak hours.
6. Estimated the number of weekday peak hour trips that would be generated by regional growth, approved/unbuilt developments (i.e. pipeline projects).
7. For year 2022 (build out), forecasted background future traffic forecasts (without the proposed project) based on baseline traffic counts, regional traffic growth, and pipeline traffic.
8. Calculated weekday peak hour background (without the proposed Project) levels of service and vehicle queues at each of the key study intersections for year 2022 based on background traffic forecasts and any applicable future approved and/or proffered but unbuilt intersection traffic controls and geometries.
9. Estimated the number of weekday AM and weekday PM peak hour trips that would be generated by build-out of the proposed Project based on ITE trip generation rates.
10. Developed weekday AM and weekday PM peak hour total future traffic forecasts based on adding the proposed Project's site-generated traffic assignments to the background traffic forecasts for the projected build out year of 2022 plus any additional traffic adjustments.
11. Calculated peak hour total future levels of service and vehicle queues for each of the key study intersections based on projected total future traffic forecasts, existing/future traffic controls, and intersection geometries for 2022.
12. Identified off-site improvements and/or network improvements and/or enhancements required to accommodate future traffic volumes with the proposed Project.

STUDY METHODOLOGY

Synchro software (version 10) was used to evaluate levels of service at the study intersections during the weekday AM and weekday PM peak hours. Synchro is a macroscopic model used for optimizing traffic signal timing and performing capacity analyses. The software can model existing traffic signal timings or optimize splits, offsets, and cycle lengths for individual intersections, an arterial, or a complete network. Synchro allows the user to evaluate the effects of changing intersection geometrics, traffic demands, traffic control, and/or traffic signal settings as well as optimize traffic signal timings.

The levels of service reported for the signalized intersections analyzed herein were taken from the Highway Capacity Manual 2000 (HCM) reports generated by Synchro version 10. Level of service descriptions are included in Appendix B. The base Synchro files were obtained from the City. It should be noted that when Synchro files are received from an external source, it is common practice to not make any unnecessary corrections or adjustments. In the review of the City's files, the street labeled as Cedar Lane was renamed to Walnut Street.

STUDY AREA

This study was conducted in accordance with the parameters set forth in the scoping document that was agreed to by City staff and the Applicant's representatives (see Appendix A). The study area was selected based on those intersections potentially affected by the proposed Project. The study area/site location is shown on Figure 1-1.

For purposes of this analysis, the following intersections are included in the study area:

1. Fairfax Boulevard/Second Street
2. Fairfax Boulevard/Hallman Street
3. Fairfax Boulevard/Existing Western Site Entrance
4. Fairfax Boulevard/New Site Entrance (Future Intersection)
5. Fairfax Boulevard/Existing Eastern Site Entrance
6. Fairfax Boulevard/Walnut Street & Fairchester Drive

Figure 1-2 depicts the location of the study intersections.

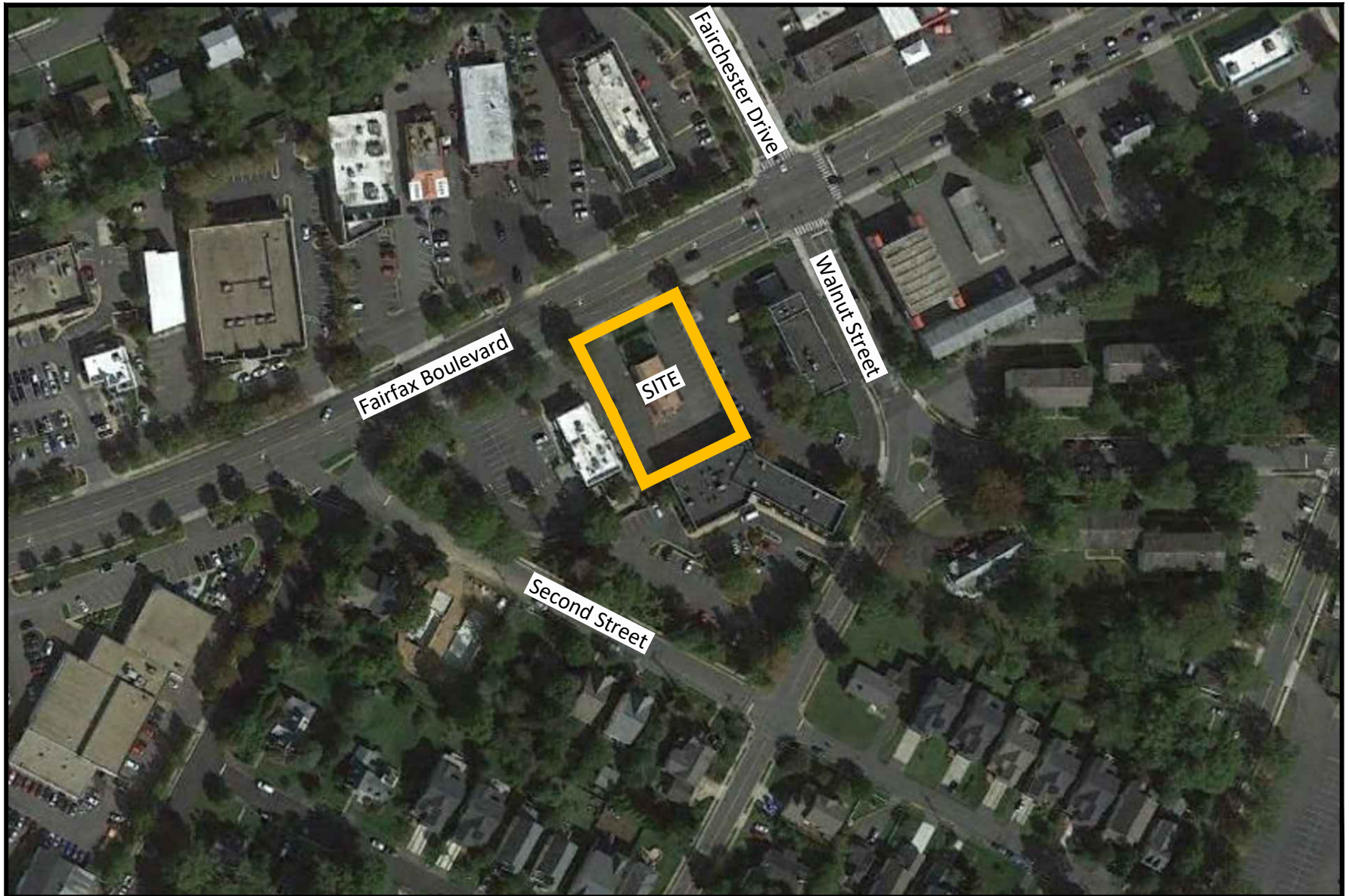


Figure 1-1
Site Location



NORTH

10869 Fairfax Boulevard
City of Fairfax, Virginia

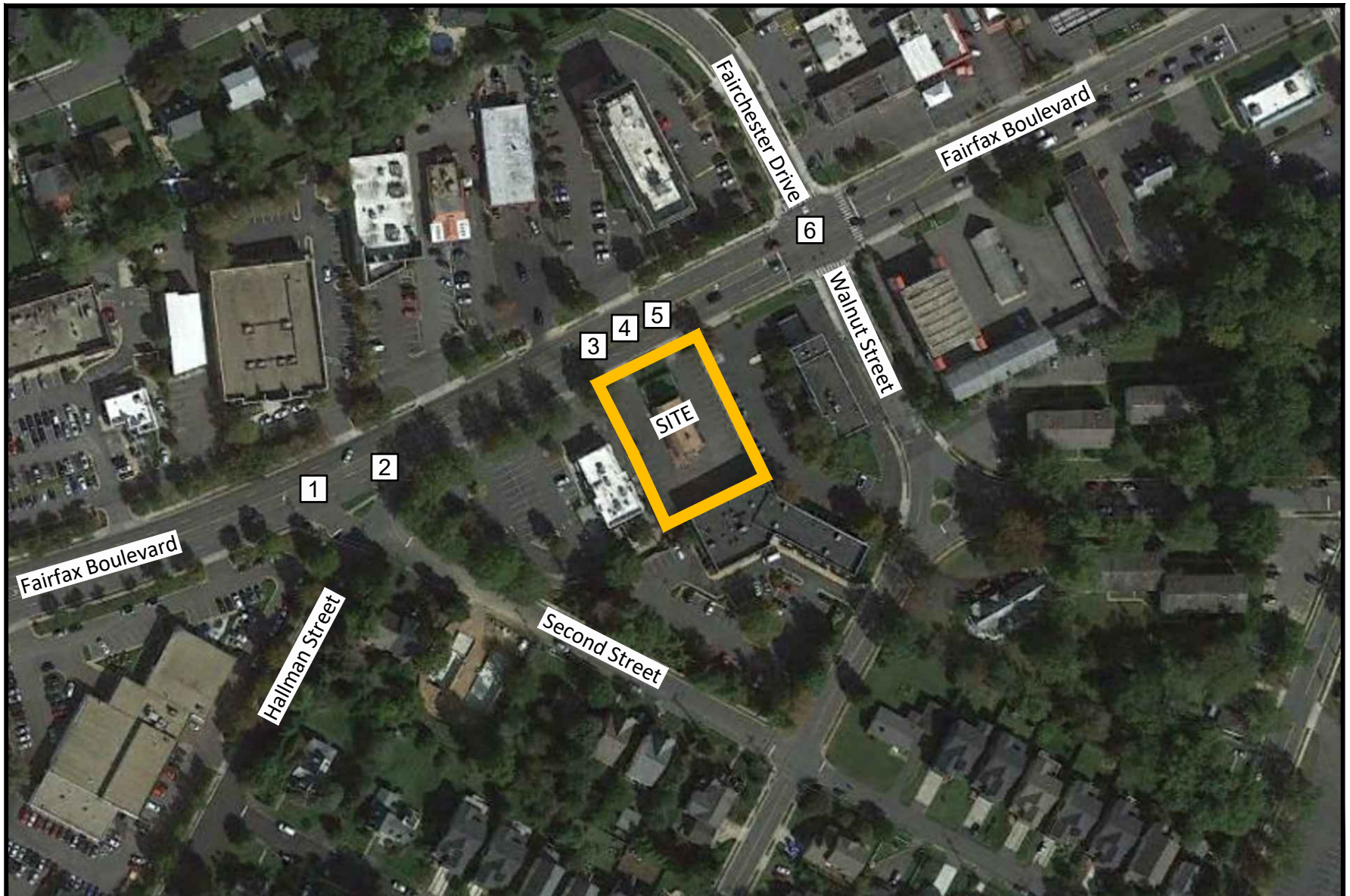


Figure 1-2
Study Intersections



Study Intersection



NORTH

10869 Fairfax Boulevard
City of Fairfax, Virginia

Section 2 BACKGROUND INFORMATION

LOCATION AND SURROUNDING USES

The site is located within the City of Fairfax and is currently developed with a single restaurant use. Retail commercial and office uses are found adjacent to the site to the east, west and south.

COMPREHENSIVE PLAN LAND USE RECOMMENDATIONS

The City's Comprehensive Plan shows the subject parcel within the "Commercial Corridor" on the Future Land Use Map. The redevelopment of the subject site, as proposed, is consistent with the Comprehensive Plan, but would require an SUP for the drive-through component.

EXISTING TRANSPORTATION NETWORK

Existing Road Network. The following is a description of the roadways surrounding the proposed residential redevelopment. Figure 2-1 depicts existing lane use and traffic controls in the vicinity of the subject site:

Fairfax Boulevard. Fairfax Boulevard along the site's frontage is a four-lane, undivided roadway with a center two-way left turn lane (TWLTL). This segment of Fairfax Boulevard is classified by the City as an "Boulevard". According to the City's *Multimodal Transportation Plan*, Boulevards are roads that "carry moderate to high volumes of traffic but do so through a parkway like setting." This segment of Fairfax Boulevard operates with a posted speed limit of 25 miles per hour (mph). The VDOT 2019 Average Daily Traffic (ADT) report indicates Fairfax Boulevard carries 37,000 vehicles per day (vpd) between Main Street and Chain Bridge Road.

Public Transit Service. The subject site is served by Metrobus Route 1C with a bus stop located at the Fairfax Boulevard/Walnut Street intersection. Route 1C "Fair Oaks-Fairfax Boulevard" provides a connection the Dunn Loring Metro Station and West Ox Road. The subject site is not currently served directly by a City of Fairfax's City-University Energysaver (CUE) bus route without a route or bus stop along the site's Fairfax Boulevard frontage.

Pedestrian Facilities. Concrete sidewalks are generally provided along the roadways in the immediate area of the subject site. Sidewalks are located on both sides of Fairfax Boulevard. There are marked crosswalks at the Fairfax Boulevard/Walnut Street/Fairchester Drive intersection across the northbound, southbound, and westbound approaches.

Bicycle Facilities. On-street bike lanes are not currently provided along the site's Fairfax Boulevard frontage. Draft *Bike Fairfax City* recommendations do not include bicycle facilities along the site's Fairfax Boulevard frontage.

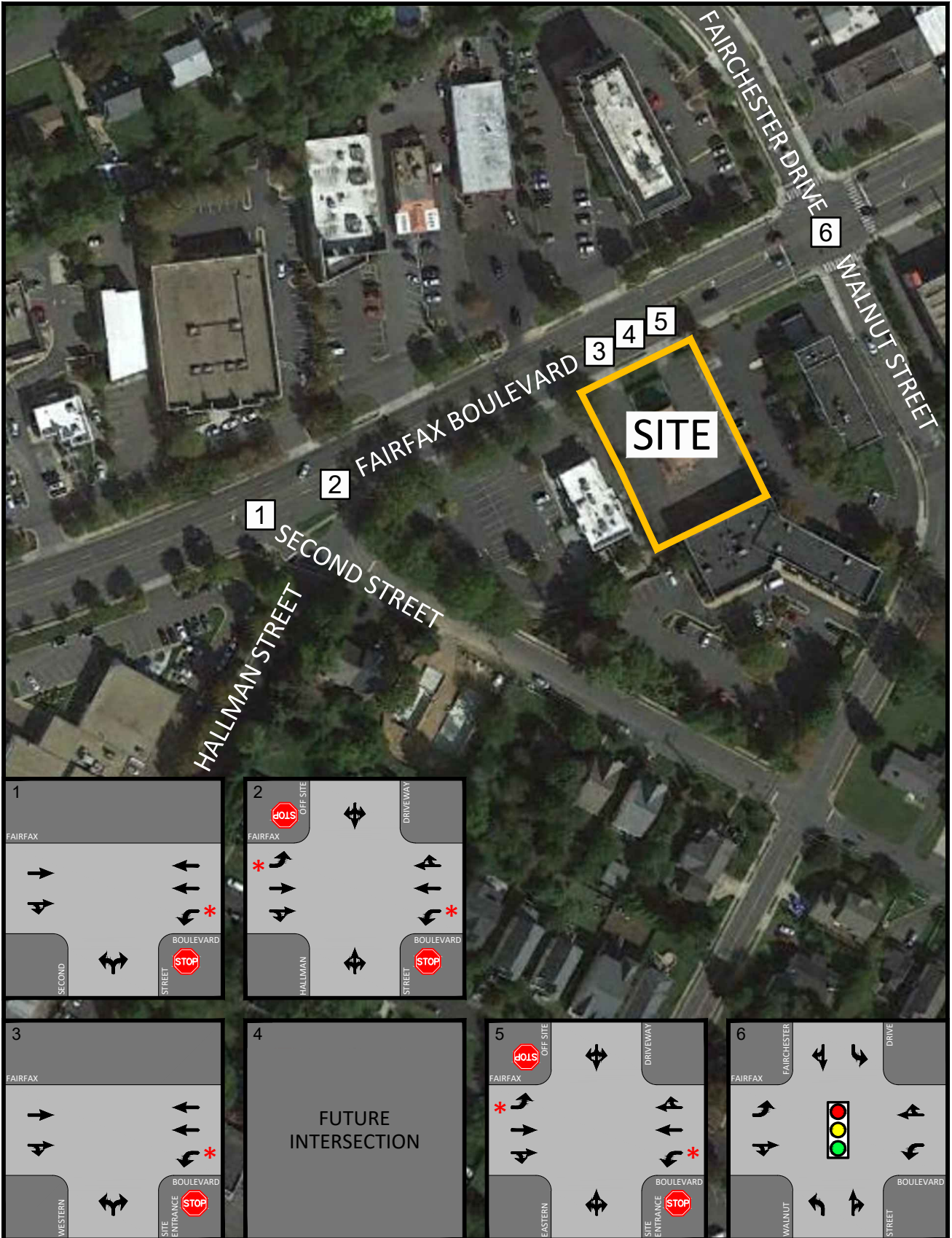


Figure 2-1
2021 Existing Lane Use
and Traffic Controls

- ← Represents One Travel Lane
- 🚦 Signalized Intersection
- 🛑 Stop Sign
- * Two-way Left Turn Lane



NORTH

10869 Fairfax Boulevard
City of Fairfax, Virginia



Section 3 ANALYSIS OF EXISTING CONDITIONS

TRAFFIC COUNTS

Vehicle turning movement and pedestrian counts were collected on Tuesday, February 9, 2021 between 6:00 AM to 9:00 AM and 4:00 PM to 7:00 PM at the following key study intersections:

- Fairfax Boulevard/Second Street
- Fairfax Boulevard/Hallman Street
- Fairfax Boulevard/Existing Western Site Entrance
- Fairfax Boulevard/Existing Eastern Site Entrance

In addition to these counts, traffic counts previously conducted by Wells + Associates at the #6, Fairfax Boulevard/Walnut Street & Fairchester Drive, intersection on Thursday, July 11, 2019 were also used in establishing baseline traffic counts. Also used were traffic counts previously conducted by Quality Counts at the #6, Fairfax Boulevard/Walnut Street & Fairchester Drive, intersection dated Tuesday, September 11, 2012, provided by the City. From the two sets of count data for intersection #6, a hybrid count using a combination of volumes from both counts was used to establish the baseline traffic volumes shown at intersection #6 for this analysis. The baseline peak hour vehicular traffic volumes used in this analysis are summarized on Figure 3-1. The traffic count data summary sheets are included for reference in Appendix C.

In order to account for the potential growth in traffic volumes between 2019 and 2021, a 1% annual growth factor was applied to the 2019 historical count through volumes along Fairfax Boulevard, shown on Figure 3-1. The growth is shown on Figure 3-2. The existing 2021 traffic volumes, grown from 2019, to be used in this analysis are shown on Figure 3-3.

EXISTING CONDITIONS ANALYSIS

Capacity/level of service (LOS) analyses were conducted at the study intersections based on the existing lane use and traffic controls shown on Figure 2-1 and existing baseline traffic counts shown on Figure 3-3.

Synchro software (version 10) was used to evaluate levels of service and the 95th percentile queues at the study intersections during the weekday AM and PM peak hours. Typical Synchro parameters to be utilized in the study were consistent with those values provided in the VDOT Traffic Operational and Safety Analysis Manual (TOSAM), Version 2.0. A TOSAM quality control checklist has been included as Appendix D.

Levels of Service. The levels of service reported for the signalized and unsignalized intersections were taken from the Highway Capacity Manual 2000 (HCM) reports generated by Synchro. Descriptions of level of service are included in Appendix B. Levels of service for the existing conditions are summarized in Table 3-1 and the Synchro worksheets are included in Appendix E.

As shown in Table 3-1, the signalized study intersection of Fairfax Boulevard/Walnut Street/Fairchester Boulevard currently operates at an overall LOS “B” in both weekday AM and PM peak hours. Certain side street approaches to Fairfax Boulevard at the unsignalized study intersections currently exceed LOS “D” conditions, notably at the following locations:

- Study Int. #1 (Fairfax Boulevard/Second Street)
 - Northbound Second Street approach: LOS “E” (PM peak hour)

Queues. The 95th percentile queues of existing conditions are used to establish a datum against which to compare future conditions. The 95th percentile queue is defined as the maximum back of queue with 95th percentile traffic volumes. The 95th percentile queue is not necessarily ever observed, it is simply based on statistical calculations. The results are summarized in Table 3-2 and the Synchro worksheets are included in Appendix E.

As shown in Table 3-2, existing turning movement queues do not currently exceed the existing available storage lengths at any of the study intersections during weekday AM and PM peak hours. Through movement 95th percentile queues along Fairfax Boulevard in the eastbound direction during the AM peak hour and in the westbound direction during the PM peak hour reflect peak hour commuter traffic experienced along the corridor.

EXISTING CRASH DATA

Available historic crash data from the most recent available three (3) years was obtained from VDOT for the study area. A copy of the detailed accident data summary is provided in Appendix F. Of the 33 crashes reported over the three-year period within the overall study area, none were directly related to turning movements at the existing site entrances. Three (3) collisions were reported within 100 feet of the existing entrances: one (1) eastbound rear end collision with traffic completely stopped for the Fairfax Boulevard/Fairchester Drive & Walnut Street signal, and two (2) angle collisions due to a driver attempting to merge into an occupied lane and a driver failing to yield to eastbound traffic while attempting a left turn from Fairfax Boulevard to an offsite driveway. The proposed development includes the consolidation of the existing site entrances from two to one (and will be located directly across from the existing offsite driveway serving Hampton Inn) which will serve to improve driver expectation and safety along Fairfax Boulevard at the site entrance.

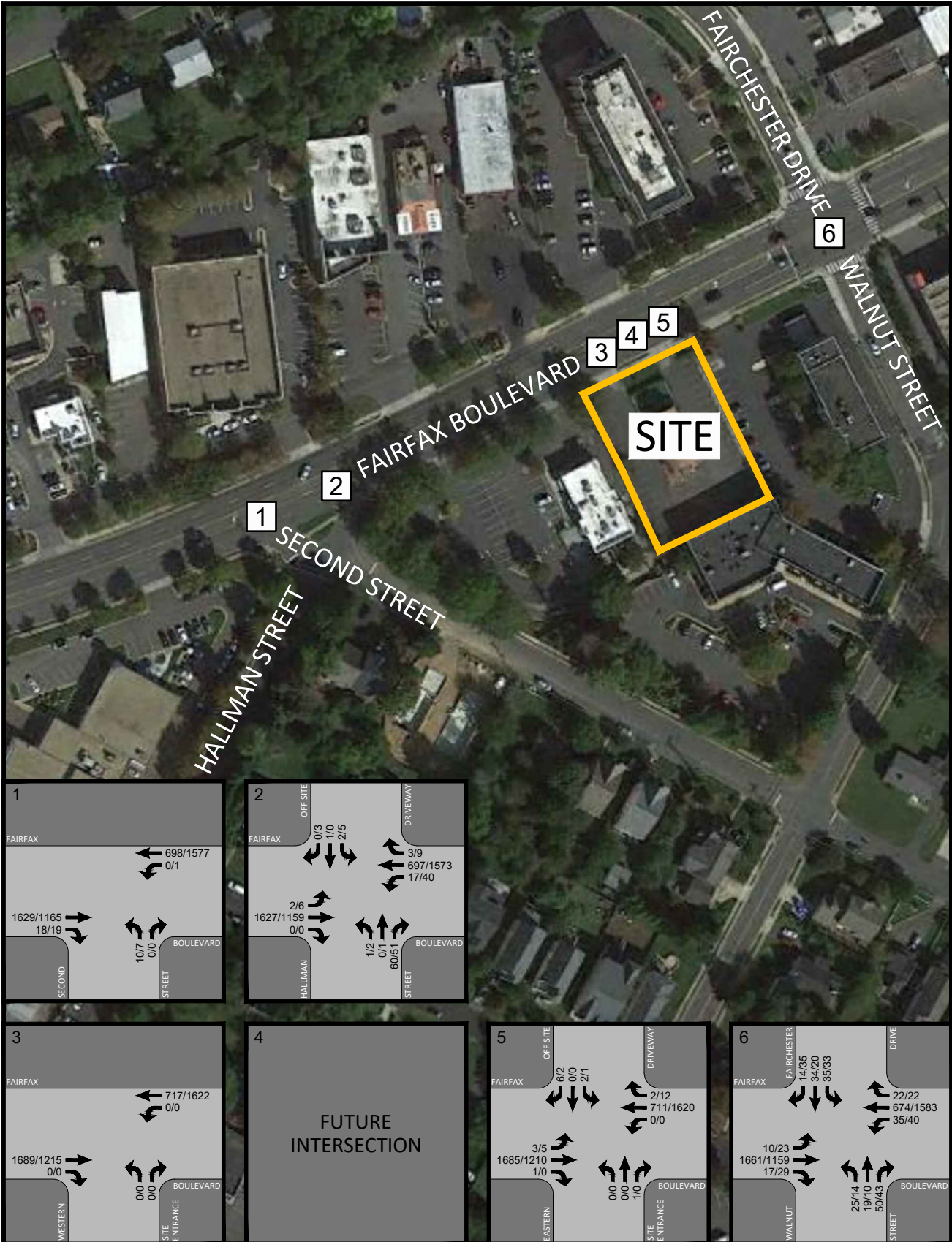


Figure 3-1
 Historical Hybridized Peak Hour
 Vehicular Traffic Volumes

AM PEAK HOUR
 PM PEAK HOUR
 000 / 000



10869 Fairfax Boulevard
 City of Fairfax, Virginia



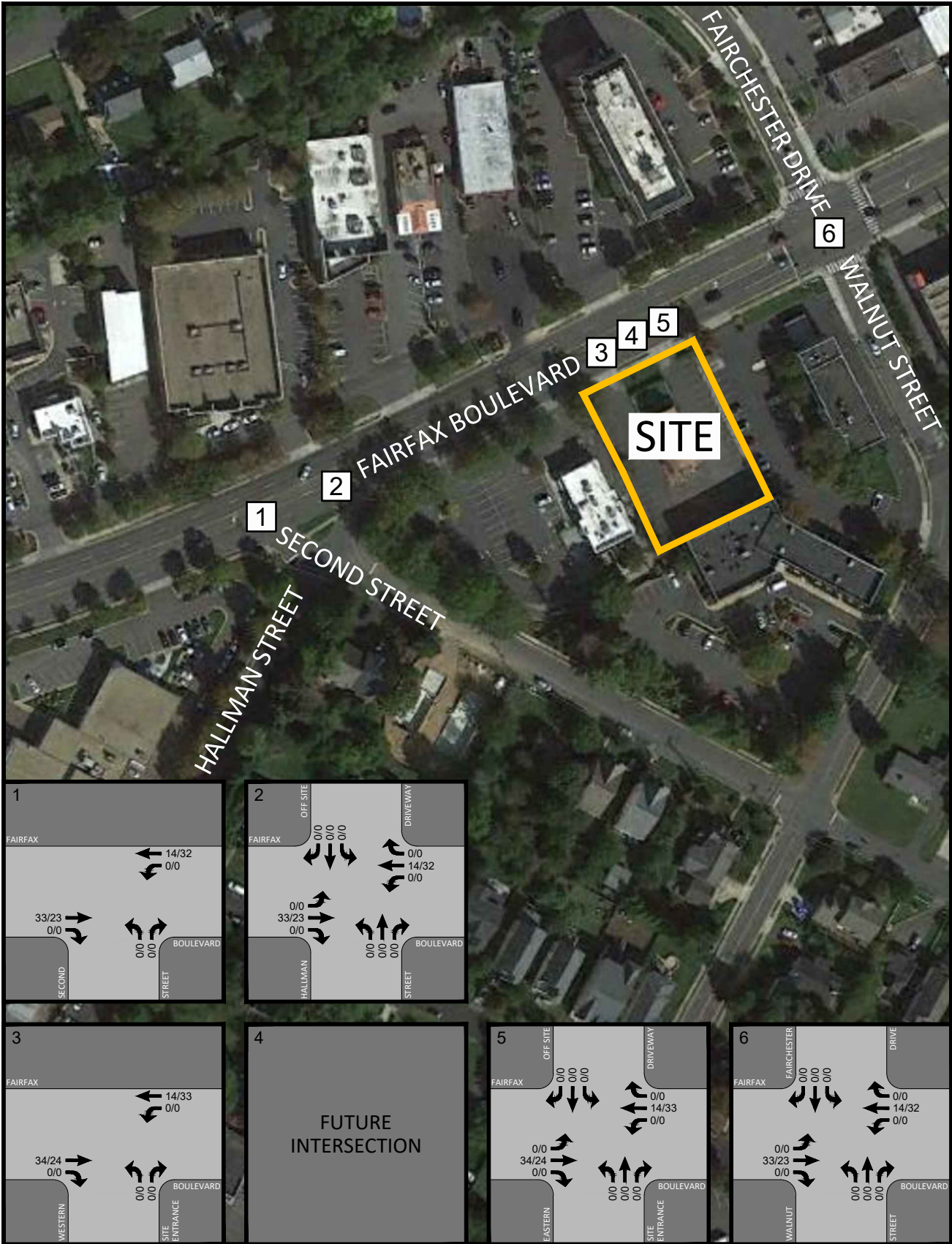


Figure 3-2
Regional Growth
(2019 to 2021)

AM PEAK HOUR
PM PEAK HOUR
000 / 000



10869 Fairfax Boulevard
City of Fairfax, Virginia



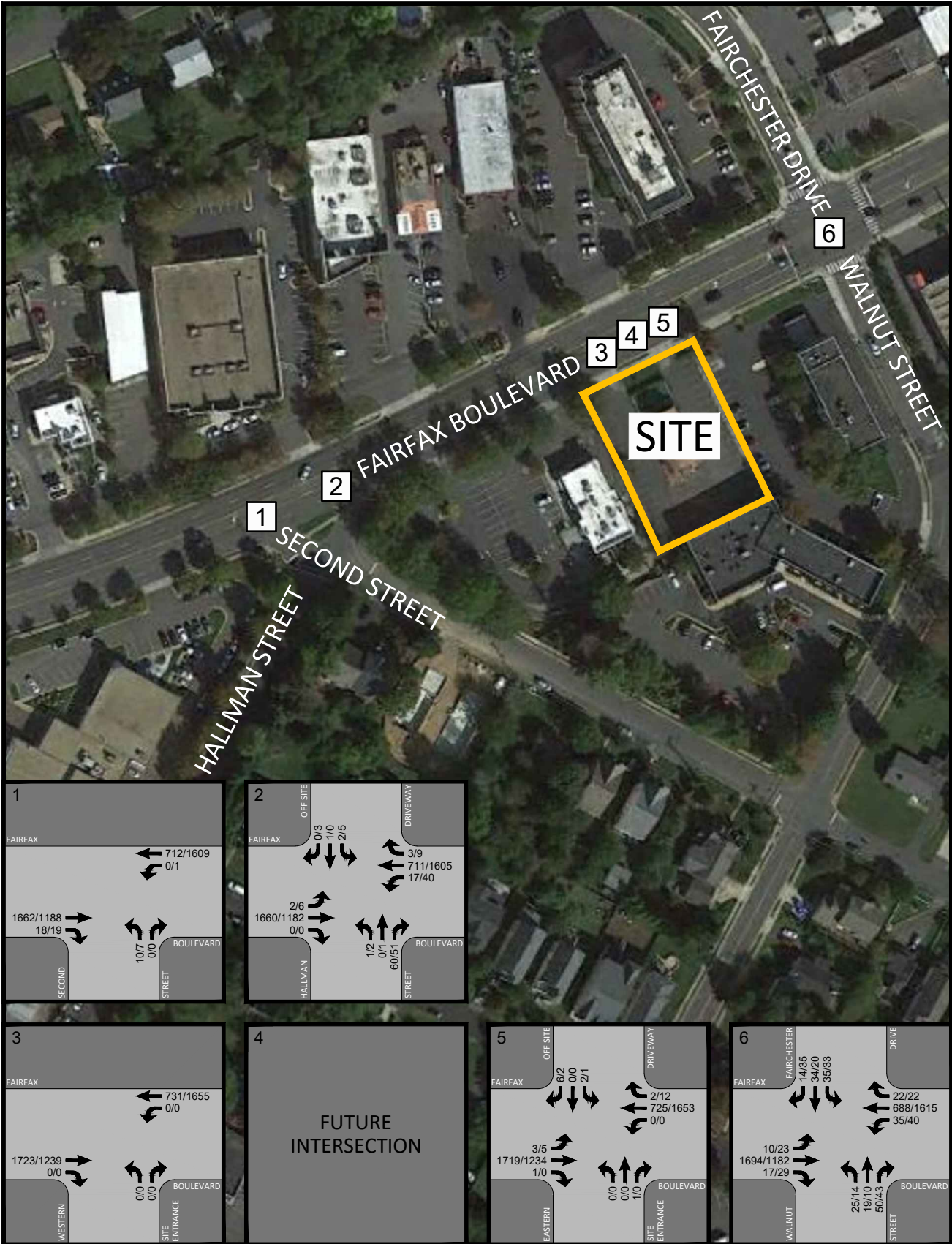


Figure 3-3
Established Existing Traffic Volumes

AM PEAK HOUR
PM PEAK HOUR
000 / 000



10869 Fairfax Boulevard
City of Fairfax, Virginia



Table 3-1
 10869 Fairfax Boulevard
 Levels of Service Summary (1) (2) (3) (4)

Intersection	Operating Condition	Approach Name	Approach/Movement	Existing 2021	
				AM	PM
1 Fairfax Boulevard & Second Street	STOP	Fairfax Blvd. Fairfax Blvd. Fairfax Blvd. Second St.	EBTR WBL WBT NBLR	A [0.0] A [0.0] A [0.0] E [45.6]	A [0.0] B [11.4] A [0.0] C [21.9]
2 Fairfax Boulevard & Hallman Street/La-Z-Boy Entrance	STOP	Fairfax Blvd. Fairfax Blvd. Fairfax Blvd. Fairfax Blvd. Hallman St. La-Z-Boy Ent.	EBL EBTR WBL WBTR NBLTR SBLTR	A [9.2] A [0.0] C [17.0] A [0.0] C [23.9] D [33.8]	B [13.9] A [0.0] B [11.7] A [0.0] C [15.5] D [32.2]
3 Fairfax Boulevard & Existing Western Site Entrance	STOP	Fairfax Blvd. Fairfax Blvd. Fairfax Blvd. Ex. W Site Ent.	EBTR WBL WBT NBLR	A [0.0] A [0.0] A [0.0] A [0.0]	A [0.0] A [0.0] A [0.0] A [0.0]
4 Fairfax Boulevard & Future Site Entrance/Hampton Inn Entrance	STOP	Fairfax Blvd. Fairfax Blvd. Fairfax Blvd. Fairfax Blvd. Future Site Ent. Hampton Inn Ent.	EBL EBTR WBL WBTR NBLTR SBLTR	FUTURE INTERSECTION	
5 Fairfax Boulevard & Existing Eastern Site Entrance/Hampton Inn Entrance	STOP	Fairfax Blvd. Fairfax Blvd. Fairfax Blvd. Fairfax Blvd. Ex. E Site Ent. Hampton Inn Ent.	EBL EBTR WBL WBTR NBLTR SBLTR	A [9.2] A [0.0] A [0.0] A [0.0] C [19.3] B [12.7]	B [14.4] A [0.0] A [0.0] A [0.0] A [0.0] C [20.6]
6 Fairfax Boulevard & Walnut Street/Fairchester Drive	Signalized	Fairfax Blvd. Fairfax Blvd. Fairfax Blvd. Fairfax Blvd. Walnut St. Walnut St. Fairchester Dr. Fairchester Dr.	EBL EBTR WBL WBTR NBL NBTR SBL <u>SBTR</u> Overall	A (4.7) B (13.8) B (13.9) A (6.5) E (75.8) E (75.0) F (93.2) <u>F (85.6)</u> B (16.4)	A (6.9) A (7.6) A (4.5) A (9.6) F (89.9) F (89.6) F (105.4) <u>F (99.9)</u> B (13.0)

Notes : (1) Roadway names in bold are considered north/south for purposes of this analysis
 (2) Numbers in parentheses () represent delay at signalized intersections in seconds per vehicle.
 (3) Numbers in brackets [] represent delay at unsignalized intersections in seconds per vehicle.
 (4) Asterisks * represent delays in excess of 999.9 seconds.

Table 3-2
 10869 Fairfax Boulevard
 Intersection Queue Summary (1) (2) (3) (4)

Intersection	Operating Condition	Approach Name	Approach/Movement	Available Storage (ft)	Existing 2021	
					AM	PM
1 Fairfax Boulevard & Second Street	STOP	Fairfax Blvd.	EBTR	N/A	0	0
		Fairfax Blvd.	WBL	N/A	0	0
		Fairfax Blvd.	WBT	N/A	0	0
		Second St.	NBLR	N/A	9	2
2 Fairfax Boulevard & Hallman Street/La-Z-Boy Entrance	STOP	Fairfax Blvd.	EBL	N/A	0	1
		Fairfax Blvd.	EBTR	N/A	0	0
		Fairfax Blvd.	WBL	N/A	5	6
		Fairfax Blvd.	WBTR	N/A	0	0
		Hallman St.	NBLTR	N/A	26	12
		La-Z-Boy Ent.	SBLTR	N/A	2	4
3 Fairfax Boulevard & Existing Western Site Entrance	STOP	Fairfax Blvd.	EBTR	N/A	0	0
		Fairfax Blvd.	WBL	N/A	0	0
		Fairfax Blvd.	WBT	N/A	0	0
		Ex. W Site Ent.	NBLR	N/A	0	0
4 Fairfax Boulevard & Future Site Entrance/Hampton Inn Entrance	STOP	Fairfax Blvd.	EBL	N/A	FUTURE INTERSECTION	
		Fairfax Blvd.	EBTR	N/A		
		Fairfax Blvd.	WBL	55		
		Fairfax Blvd.	WBTR	N/A		
		Future Site Ent.	NBLTR	N/A		
		Hampton Inn Ent.	SBLTR	N/A		
5 Fairfax Boulevard & Existing Eastern Site Entrance/Hampton Inn Entrance	STOP	Fairfax Blvd.	EBL	N/A	0	1
		Fairfax Blvd.	EBTR	N/A	0	0
		Fairfax Blvd.	WBL	25	0	0
		Fairfax Blvd.	WBTR	N/A	0	0
		Ex. E Site Ent.	NBLTR	N/A	0	0
		Hampton Inn Ent.	SBLTR	N/A	1	1
6 Fairfax Boulevard & Walnut Street/Fairchester Drive	Signalized	Fairfax Blvd.	EBL	100	11	18
		Fairfax Blvd.	EBTR	N/A	1113	483
		Fairfax Blvd.	WBL	100	28	26
		Fairfax Blvd.	WBTR	N/A	278	782
		Walnut St.	NBL	185	60	42
		Walnut St.	NBTR	N/A	70	58
		Fairchester Dr.	SBL	120	94	92
		Fairchester Dr.	SBTR	N/A	105	88

Notes : (1) Queue length is based on the 95th percentile queue in feet as reported by Synchro, Version 10.

(2) Roadway names in bold are considered north/south for purposes of this analysis.

(3) For available storage, "N/A" at the left and right-turn lanes indicate the turn-lane would extend back to the immediate upstream intersection.

(4) For available storage, "N/A" at the through movements indicate storage available up to the immediate upstream intersection.

Section 4

ANALYSIS OF BACKGROUND FUTURE CONDITIONS WITHOUT PROJECT (2022)

METHODOLOGY

Traffic forecasts without the proposed Project in the year 2022 were derived based on a composite of existing traffic counts, increases in traffic associated with regional growth, and projected traffic volumes anticipated to be generated by other nearby/approved but unbuilt development projects (“pipeline” projects). This methodology was discussed with City staff as reflected in the signed scoping agreement in Appendix A.

REGIONAL GROWTH

As agreed in the scoping documentation, increases in existing traffic associated with regional growth were estimated at 1.0% per year compounded. The resulting increases in peak hour traffic at the study intersections are reflected on Figure 4-1.

PIPELINE DEVELOPMENTS

As discussed with City staff, traffic generated by unbuilt entitlements associated with three nearby City of Fairfax developments was included in the estimation of future traffic forecasts for year 2022. The traffic volumes generated by these pipeline developments was based on the volumes shown in the Breezeway Property TIS conducted by Wells + Associates revised October 26, 2020. The developments included the Breezeway Property, the Novus Fairfax Gateway residential development, and the redevelopment of the former Paul VI High School site. The locations of these developments are shown on Figure 4-2. The vehicular traffic volumes generated by the Novus Fairfax Gateway, Paul VI Redevelopment, and Breezeway Property developments are shown on Figures 4-3, 4-4, and 4-5, respectively. The combined total vehicular traffic volumes of the pipeline developments are shown in Figure 4-6. Excerpts from the Breezeway Property TIS are included as Appendix G.

BACKGROUND FUTURE TRAFFIC FORECASTS

The resultant peak hour traffic forecasts for 2022 conditions without the Project are shown on Figure 4-7. These volumes are a composite of the existing baseline peak hour traffic volumes shown in Figure 3-3, the regional growth shown on Figure 4-1, and the combined total pipeline development trips assignments shown on Figure 4-6.

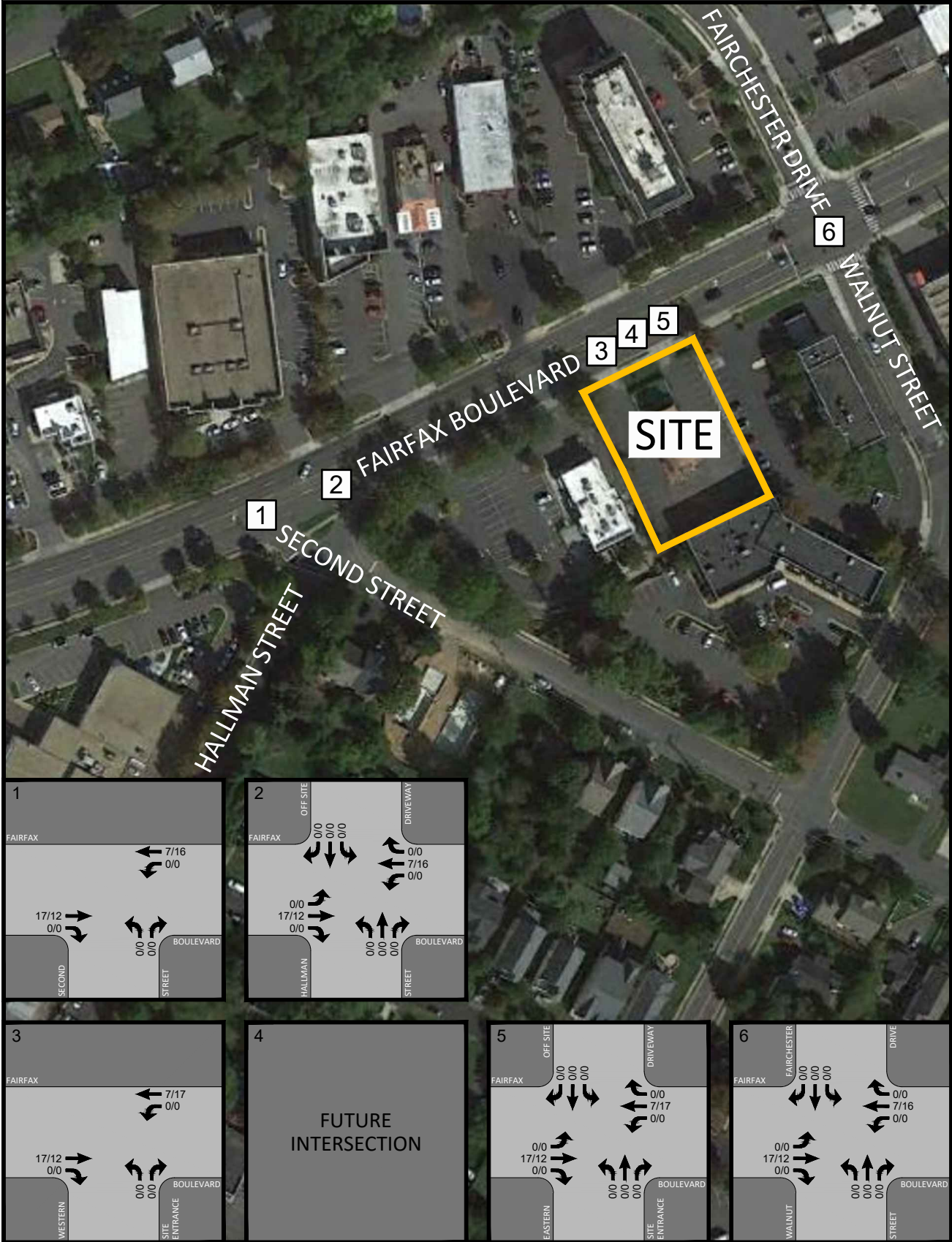


Figure 4-1
Regional Growth
(2021 to 2022)

AM PEAK HOUR
PM PEAK HOUR
000 / 000



10869 Fairfax Boulevard
City of Fairfax, Virginia



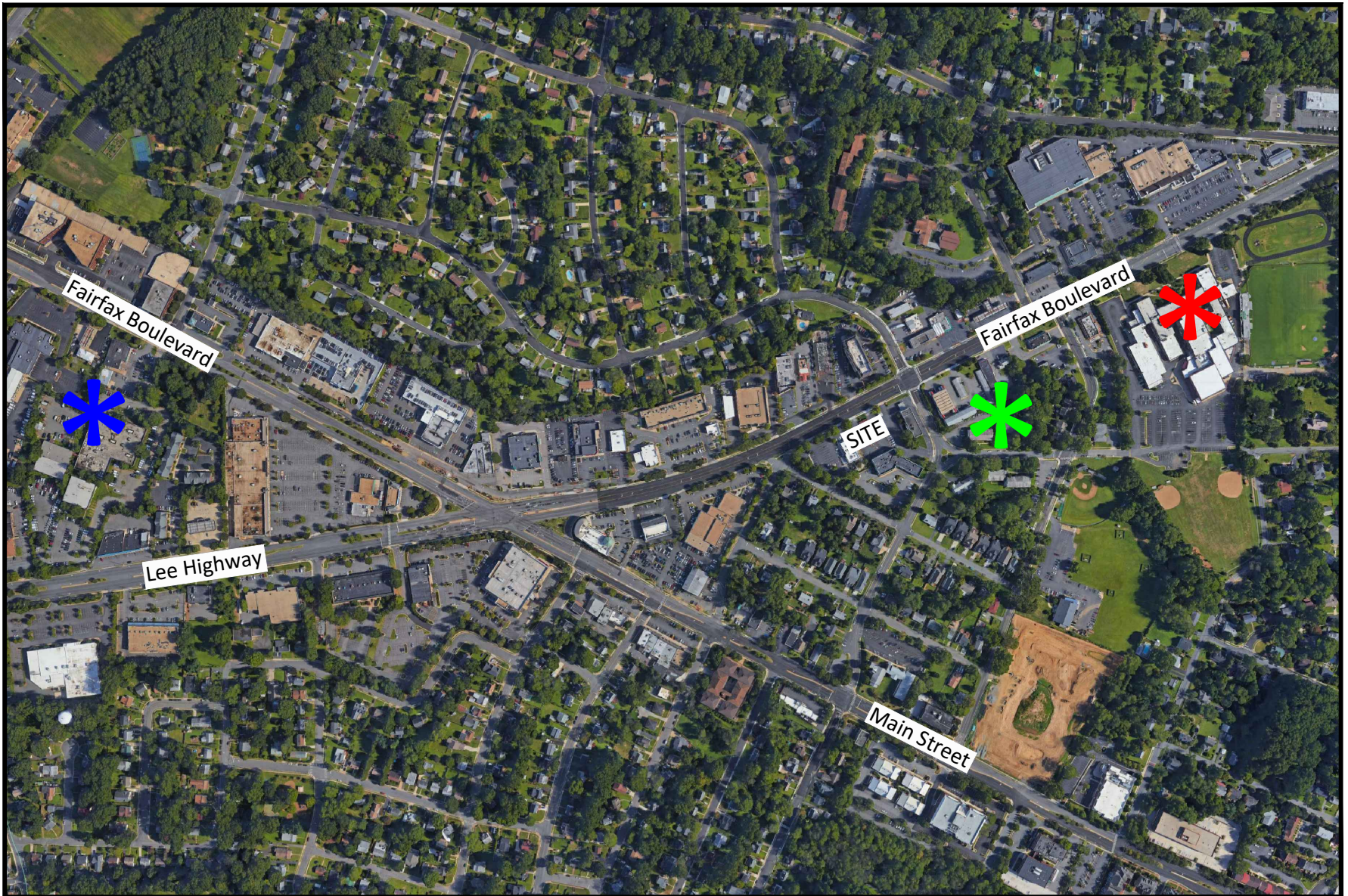


Figure 4-2
Pipeline Development Locations

- * Paul VI Redevelopment
- * Novus Fairfax Gateway
- * Breezeway Property



10869 Fairfax Boulevard
City of Fairfax, Virginia

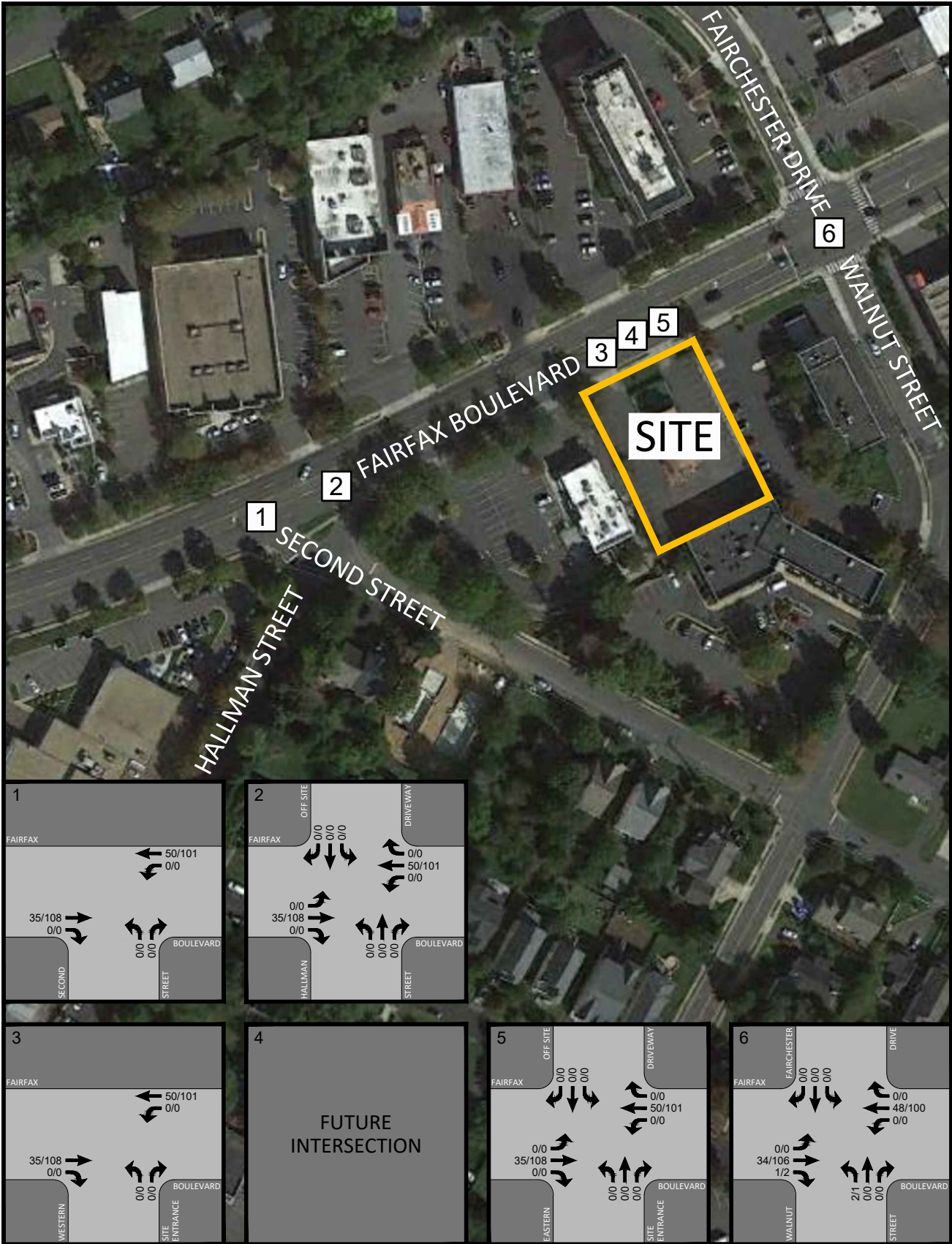


Figure 4-4
 Pipeline Development - Paul VI Redevelopment
 Trip Assignments

AM PEAK HOUR
 PM PEAK HOUR
 000 / 000



10869 Fairfax Boulevard
 City of Fairfax, Virginia



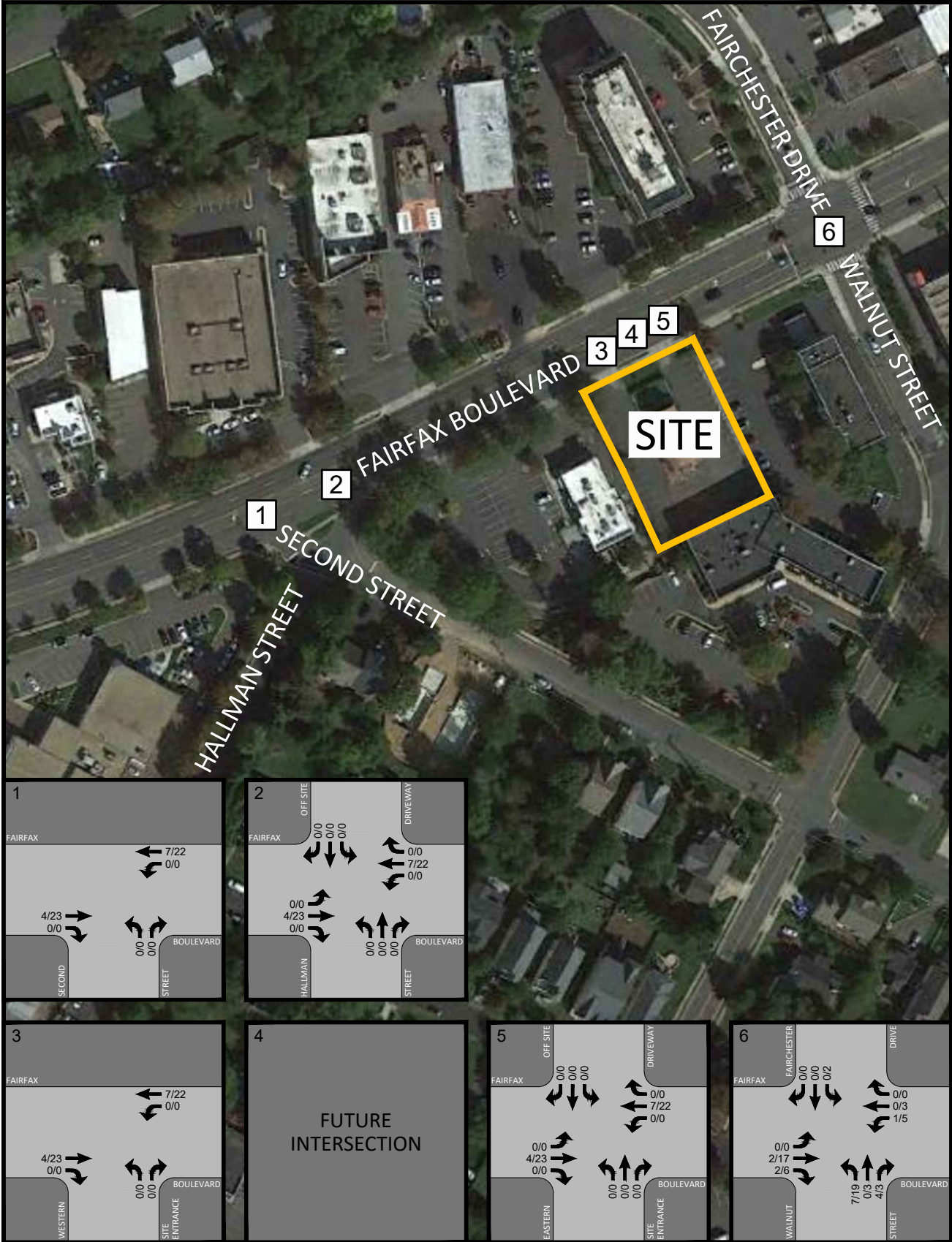


Figure 4-5
 Pipeline Development - Breezeway Property
 Trip Assignments

AM PEAK HOUR
 PM PEAK HOUR
 000 / 000



10869 Fairfax Boulevard
 City of Fairfax, Virginia



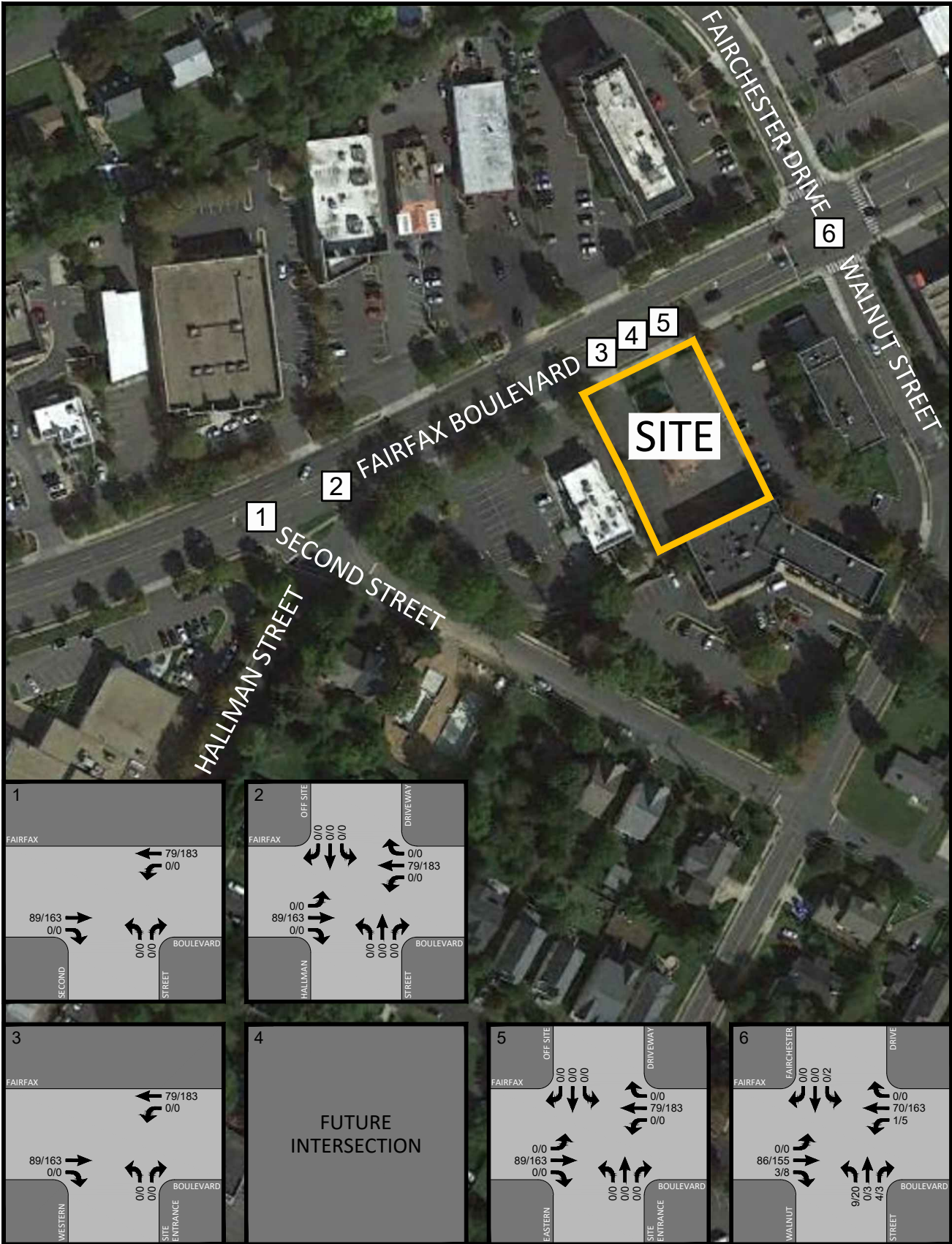


Figure 4-6
Total Pipeline Development Trip Assignments

AM PEAK HOUR
PM PEAK HOUR
000 / 000



10869 Fairfax Boulevard
City of Fairfax, Virginia



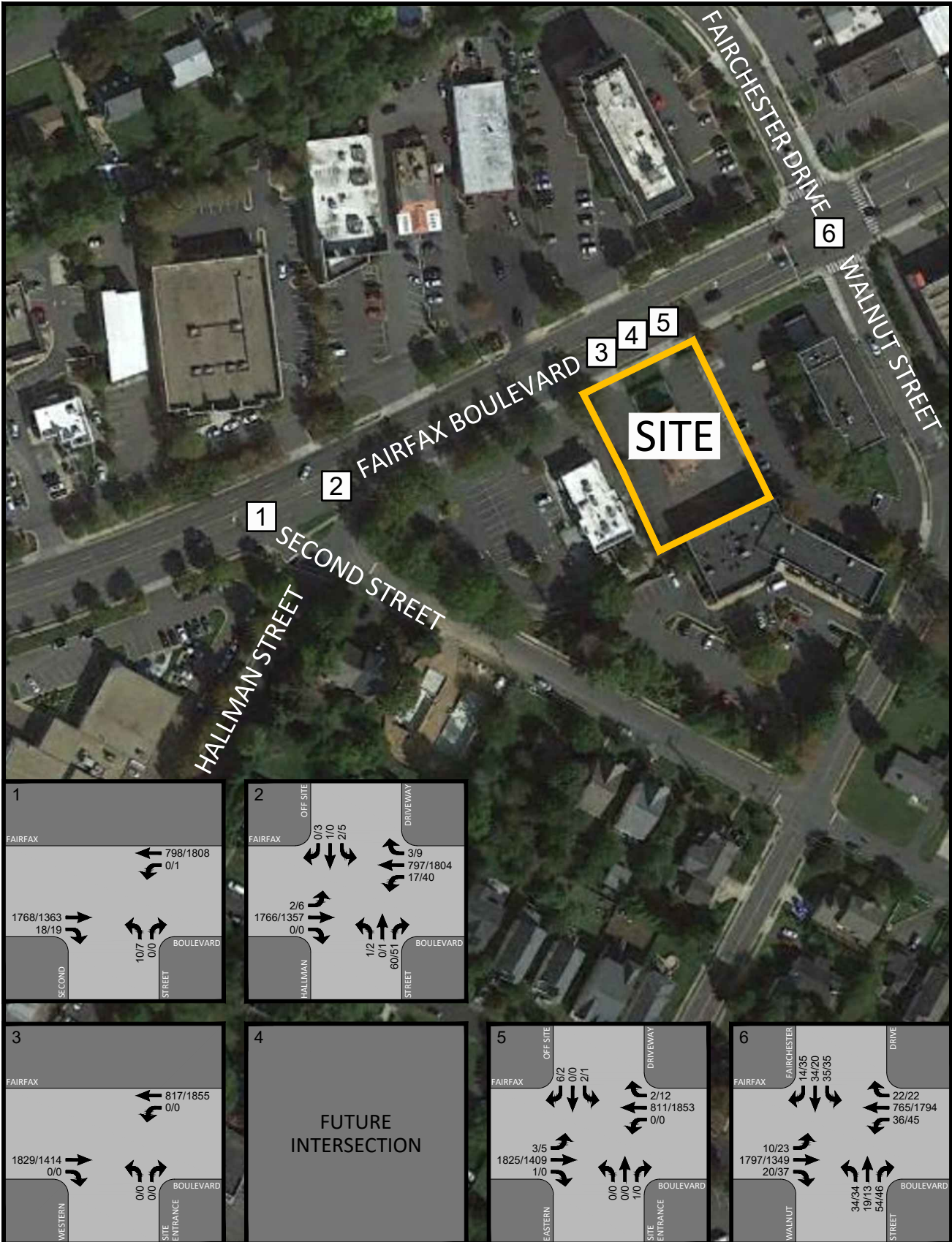


Figure 4-7
2022 Background Future Traffic Volumes

— AM PEAK HOUR
 — PM PEAK HOUR
 000 / 000



10869 Fairfax Boulevard
City of Fairfax, Virginia



BACKGROUND FUTURE CONDITIONS ANALYSIS

Capacity analyses of 2022 future conditions without the Project were performed for the study intersections using the lane use and traffic controls shown on Figure 2-1, as well as the future traffic forecasts without the Project shown on Figure 4-7. Levels of service are summarized in Table 4-1, and the 95th percentile queues are summarized in Table 4-2. The Synchro reports of the levels of service and the 95th percentile queues for 2022 conditions without the Project are presented in Appendix H.

Levels of Service. With the forecasted regional growth and new trips associated with the aforementioned pipeline developments, the study intersections would experience increases in intersection delay, however the levels of service in 2022 background future conditions remain generally consistent with the existing conditions.

As shown in Table 4-1, the signalized study intersection of Fairfax Boulevard/Walnut Street/Fairchester Boulevard would continue to operate at an overall LOS “B” in both weekday AM and PM peak hours. Certain side street approaches to Fairfax Boulevard at the unsignalized study intersections would continue to or begin to exceed LOS “D” conditions, notably at the following locations:

- Study Int. #1 (Fairfax Boulevard/Second Street)
 - Northbound Second Street approach: LOS “E” (PM peak hour)
- Study Int. #2 (Fairfax Boulevard/Hallman Street)
 - Southbound La-Z-Boy driveway approach: LOS “E” (AM & PM peak hour)

Queues. As shown in Table 4-2, the 2022 background future conditions 95th percentile queues at the study intersections remain generally consistent with the reported existing queues. As in existing conditions, none of the reported turning movement queues exceed the available storage.

Table 4-1
 10869 Fairfax Boulevard
 Levels of Service Summary (1) (2) (3) (4)

Intersection	Operating Condition	Approach Name	Approach/Movement	Existing 2021		Background 2022	
				AM	PM	AM	PM
1 Fairfax Boulevard & Second Street	STOP	Fairfax Blvd.	EBTR	A [0.0]	A [0.0]	A [0.0]	A [0.0]
		Fairfax Blvd.	WBL	A [0.0]	B [11.4]	A [0.0]	B [12.5]
		Fairfax Blvd.	WBT	A [0.0]	A [0.0]	A [0.0]	A [0.0]
		Second St.	NBLR	E [45.6]	C [21.9]	E [47.5]	D [25.9]
2 Fairfax Boulevard & Hallman Street/La-Z-Boy Entrance	STOP	Fairfax Blvd.	EBL	A [9.2]	B [13.9]	A [9.4]	C [15.9]
		Fairfax Blvd.	EBTR	A [0.0]	A [0.0]	A [0.0]	A [0.0]
		Fairfax Blvd.	WBL	C [17.0]	B [11.7]	C [17.6]	B [13.0]
		Fairfax Blvd.	WBTR	A [0.0]	A [0.0]	A [0.0]	A [0.0]
		Hallman St.	NBLTR	C [23.9]	C [15.5]	C [24.9]	C [17.5]
		La-Z-Boy Ent.	SBLTR	D [33.8]	D [32.2]	E [35.6]	E [41.7]
3 Fairfax Boulevard & Existing Western Site Entrance	STOP	Fairfax Blvd.	EBTR	A [0.0]	A [0.0]	A [0.0]	A [0.0]
		Fairfax Blvd.	WBL	A [0.0]	A [0.0]	A [0.0]	A [0.0]
		Fairfax Blvd.	WBT	A [0.0]	A [0.0]	A [0.0]	A [0.0]
		Ex. W Site Ent.	NBLR	A [0.0]	A [0.0]	A [0.0]	A [0.0]
4 Fairfax Boulevard & Future Site Entrance/Hampton Inn Entrance	STOP	Fairfax Blvd.	EBL	FUTURE INTERSECTION	FUTURE INTERSECTION	FUTURE INTERSECTION	FUTURE INTERSECTION
		Fairfax Blvd.	EBTR				
		Fairfax Blvd.	WBL				
		Fairfax Blvd.	WBTR				
		Future Site Ent.	NBLTR				
Hampton Inn Ent.	SBLTR						
5 Fairfax Boulevard & Existing Eastern Site Entrance/Hampton Inn Entrance	STOP	Fairfax Blvd.	EBL	A [9.2]	B [14.4]	A [9.4]	C [16.6]
		Fairfax Blvd.	EBTR	A [0.0]	A [0.0]	A [0.0]	A [0.0]
		Fairfax Blvd.	WBL	A [0.0]	A [0.0]	A [0.0]	A [0.0]
		Fairfax Blvd.	WBTR	A [0.0]	A [0.0]	A [0.0]	A [0.0]
		Ex. E Site Ent.	NBLTR	C [19.3]	A [0.0]	C [19.9]	A [0.0]
		Hampton Inn Ent.	SBLTR	B [12.7]	C [20.6]	B [13.0]	C [24.5]
6 Fairfax Boulevard & Walnut Street/Fairchester Drive	Signalized	Fairfax Blvd.	EBL	A (4.7)	A (6.9)	A (4.8)	A (9.3)
		Fairfax Blvd.	EBTR	B (13.8)	A (7.6)	B (14.6)	A (8.5)
		Fairfax Blvd.	WBL	B (13.9)	A (4.5)	B (16.2)	A (5.5)
		Fairfax Blvd.	WBTR	A (6.5)	A (9.6)	A (6.7)	B (11.0)
		Walnut St.	NBL	E (75.8)	F (89.9)	E (76.6)	F (91.5)
		Walnut St.	NBTR	E (75.0)	F (89.6)	E (75.0)	F (89.4)
		Fairchester Dr.	SBL	F (93.2)	F (105.4)	F (93.5)	F (107.1)
		Fairchester Dr.	<u>SBTR</u>	<u>F (85.6)</u>	<u>F (99.9)</u>	<u>F (85.3)</u>	<u>F (99.3)</u>
			Overall	B (16.4)	B (13.0)	B (16.9)	B (14.4)

Notes : (1) Roadway names in bold are considered north/south for purposes of this analysis
 (2) Numbers in parentheses () represent delay at signalized intersections in seconds per vehicle.
 (3) Numbers in brackets [] represent delay at unsignalized intersections in seconds per vehicle.
 (4) Asterisks * represent delays in excess of 999.9 seconds.

Table 4-2
 10869 Fairfax Boulevard
 Intersection Queue Summary (1) (2) (3) (4)

Intersection	Operating Condition	Approach Name	Approach/Movement	Available Storage (ft)	Existing 2021		Background 2022	
					AM	PM	AM	PM
1 Fairfax Boulevard & Second Street	STOP	Fairfax Blvd.	EBTR	N/A	0	0	0	0
		Fairfax Blvd.	WBL	N/A	0	0	0	0
		Fairfax Blvd.	WBT	N/A	0	0	0	0
		Second St.	NBLR	N/A	9	2	9	3
2 Fairfax Boulevard & Hallman Street/La-Z-Boy Entrance	STOP	Fairfax Blvd.	EBL	N/A	0	1	0	1
		Fairfax Blvd.	EBTR	N/A	0	0	0	0
		Fairfax Blvd.	WBL	N/A	5	6	5	7
		Fairfax Blvd.	WBTR	N/A	0	0	0	0
		Hallman St.	NBLTR	N/A	26	12	26	14
		La-Z-Boy Ent.	SBLTR	N/A	2	4	2	6
3 Fairfax Boulevard & Existing Western Site Entrance	STOP	Fairfax Blvd.	EBTR	N/A	0	0	0	0
		Fairfax Blvd.	WBL	N/A	0	0	0	0
		Fairfax Blvd.	WBT	N/A	0	0	0	0
		Ex. W Site Ent.	NBLR	N/A	0	0	0	0
4 Fairfax Boulevard & Future Site Entrance/Hampton Inn Entrance	STOP	Fairfax Blvd.	EBL	N/A	FUTURE INTERSECTION	FUTURE INTERSECTION	FUTURE INTERSECTION	FUTURE INTERSECTION
		Fairfax Blvd.	EBTR	N/A				
		Fairfax Blvd.	WBL	55				
		Fairfax Blvd.	WBTR	N/A				
		Future Site Ent.	NBLTR	N/A				
Hampton Inn Ent.	SBLTR	N/A						
5 Fairfax Boulevard & Existing Eastern Site Entrance/Hampton Inn Entrance	STOP	Fairfax Blvd.	EBL	N/A	0	1	0	1
		Fairfax Blvd.	EBTR	N/A	0	0	0	0
		Fairfax Blvd.	WBL	25	0	0	0	0
		Fairfax Blvd.	WBTR	N/A	0	0	0	0
		Ex. E Site Ent.	NBLTR	N/A	0	0	0	0
		Hampton Inn Ent.	SBLTR	N/A	1	1	1	1
6 Fairfax Boulevard & Walnut Street/Fairchester Drive	Signalized	Fairfax Blvd.	EBL	100	11	18	11	18
		Fairfax Blvd.	EBTR	N/A	1113	483	1209	604
		Fairfax Blvd.	WBL	100	28	26	28	30
		Fairfax Blvd.	WBTR	N/A	278	782	308	968
		Walnut St.	NBL	185	60	42	75	81
		Walnut St.	NBTR	N/A	70	58	72	64
		Fairchester Dr.	SBL	120	94	92	92	97
		Fairchester Dr.	SBTR	N/A	105	88	103	88

Notes : (1) Queue length is based on the 95th percentile queue in feet as reported by Synchro, Version 10.
 (2) Roadway names in bold are considered north/south for purposes of this analysis.
 (3) For available storage, "N/A" at the left and right-turn lanes indicate the turn-lane would extend back to the immediate upstream intersection.
 (4) For available storage, "N/A" at the through movements indicate storage available up to the immediate upstream intersection.

Section 5 SITE ANALYSIS

DESCRIPTION OF PROPOSED PROJECT

The Applicant, Tahoor Foods Inc., requests a Special Use Permit (SUP) to redevelop the site with a new ±2,275 gross square foot (GSF) fast-food restaurant with drive-through. The existing restaurant will be razed. Access to Fairfax Boulevard will consolidate the two (2) existing entrances into a single, centralized entrance. A reduction of the Applicant's development plan is provided as Figure 5-1, a full-size copy is included as Appendix I.

SITE TRIP GENERATION

Trip generation estimates for the weekday AM and PM peak hours, as well as the average weekday daily traffic (ADT), were derived from the standard Institute of Transportation Engineers (ITE) trip generation rates, as published in the 10th edition. The "Fast Food Restaurant with Drive-Through Window" (934) land use code was used for the analysis which is the appropriate land use category for the subject development. The trip generation analysis is presented in Table 5-1 details the proposed ±2,275 GSF fast-food restaurant with drive-through would generate:

- 91 weekday AM peak hour trips (46 inbound, 45 outbound)
- 74 weekday PM peak hour trips (38 inbound, 36 outbound)
- 1,071 weekday average daily trips

SITE TRIP DISTRIBUTION

The distribution of the anticipated trips generated by the completion of the proposed redevelopment was based on an examination of existing traffic counts and local knowledge. The 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 along Fairfax Boulevard: 40%
- To/from the east along Fairfax Boulevard: 40%
- To/from the south along Hallman Street: 5%
- To/from the north along Fairchester Drive: 10%
- To/from the south along Walnut Street: 5%

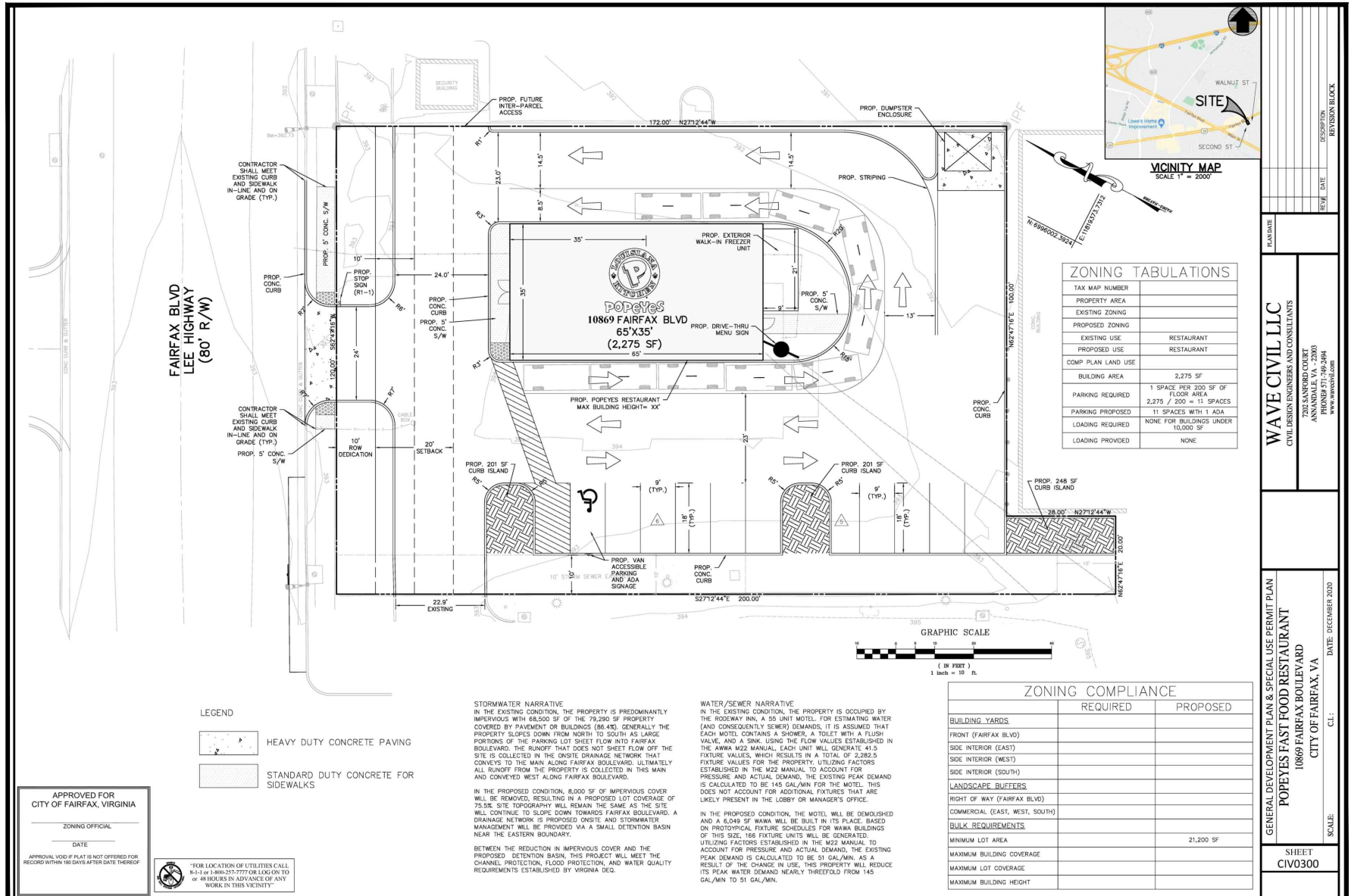


Figure 5-1
General Development Plan &
Special Use Permit Plan Reduction

NORTH
10869 Fairfax Boulevard
City of Fairfax, Virginia

Table 5-1
 10869 Fairfax Boulevard
 Site Trip Generation ⁽¹⁾ - Peak Hour of Adjacent Street Traffic

Scenario	Land Use Code	Amount	Units	AM Peak Hour			PM Peak Hour			Weekday Average Daily Trips
				In	Out	Total	In	Out	Total	
<i>Proposed Use</i>										
Fast-Food Restaurant with Drive-Through Window	934	2,275	GSF	46	45	91	38	36	74	1,071

Note(s):

(1) Trip generation based on the Institute of Transportation Engineers' Trip Generation Manual, 10th Edition.

SITE TRIP ASSIGNMENTS

The assignment of the new vehicle trips generated upon the future build-out of the redevelopment project was based on the above trip generation and distribution. These trip assignments are depicted on Figure 5-2.

EXISTING SITE TRIPS REMOVED

With the redevelopment project, existing site trips observed at the site entrances attributed to the current restaurant use were removed for future conditions with the new fast-food restaurant with drive-through. The existing site trips removed are depicted on Figure 5-3.

WEEKDAY MIDDAY TRIP GENERATION

Currently, Popeyes restaurants do not offer a breakfast menu and franchises in the region do not open for regular business before 10:00 AM, which is outside of a typical weekday AM peak period (6:00 to 9:00 AM). For comparison, trip generation estimates for the proposed development during the midday weekday peak hour are provided below.

Trip generation estimates for the weekday midday peak hour were derived from the diurnal rates for the aforementioned 934 land use code, as published in the ITE [Trip Generation Manual](#), 10th Edition. ITE's diurnal rates are applied to the average daily traffic estimates to develop 24-hour estimates by hour with the weekday midday peak hour occurring between 12:00 – 1:00 PM with 11.8% of the daily traffic. Based on the estimated 1,071 weekday average daily trips, the proposed development would generate 126 weekday midday peak hour trips.

It is noted, although the weekday midday site trip generation is larger than the weekday AM and PM peak hours, the weekday midday traffic along Fairfax Boulevard is considerably lower outside of the peak commuter traffic flow. Therefore, this study has analyzed the worst-case conditions in consideration of peak commuter traffic along Fairfax Boulevard and site trip generation.

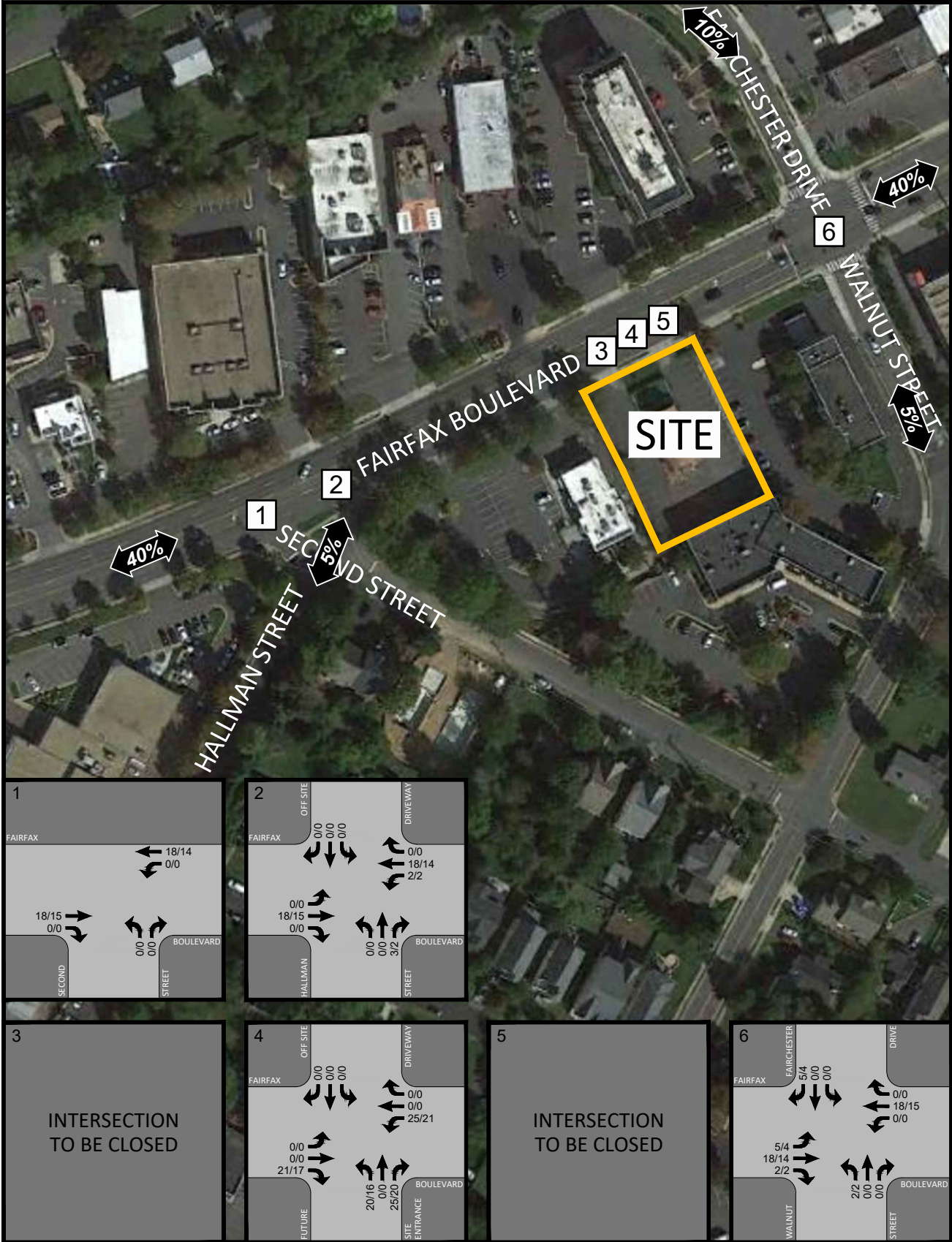


Figure 5-2
Site Trip Assignments

AM PEAK HOUR
PM PEAK HOUR
000 / 000



Site Trip Distribution



NORTH

10869 Fairfax Boulevard
City of Fairfax, Virginia

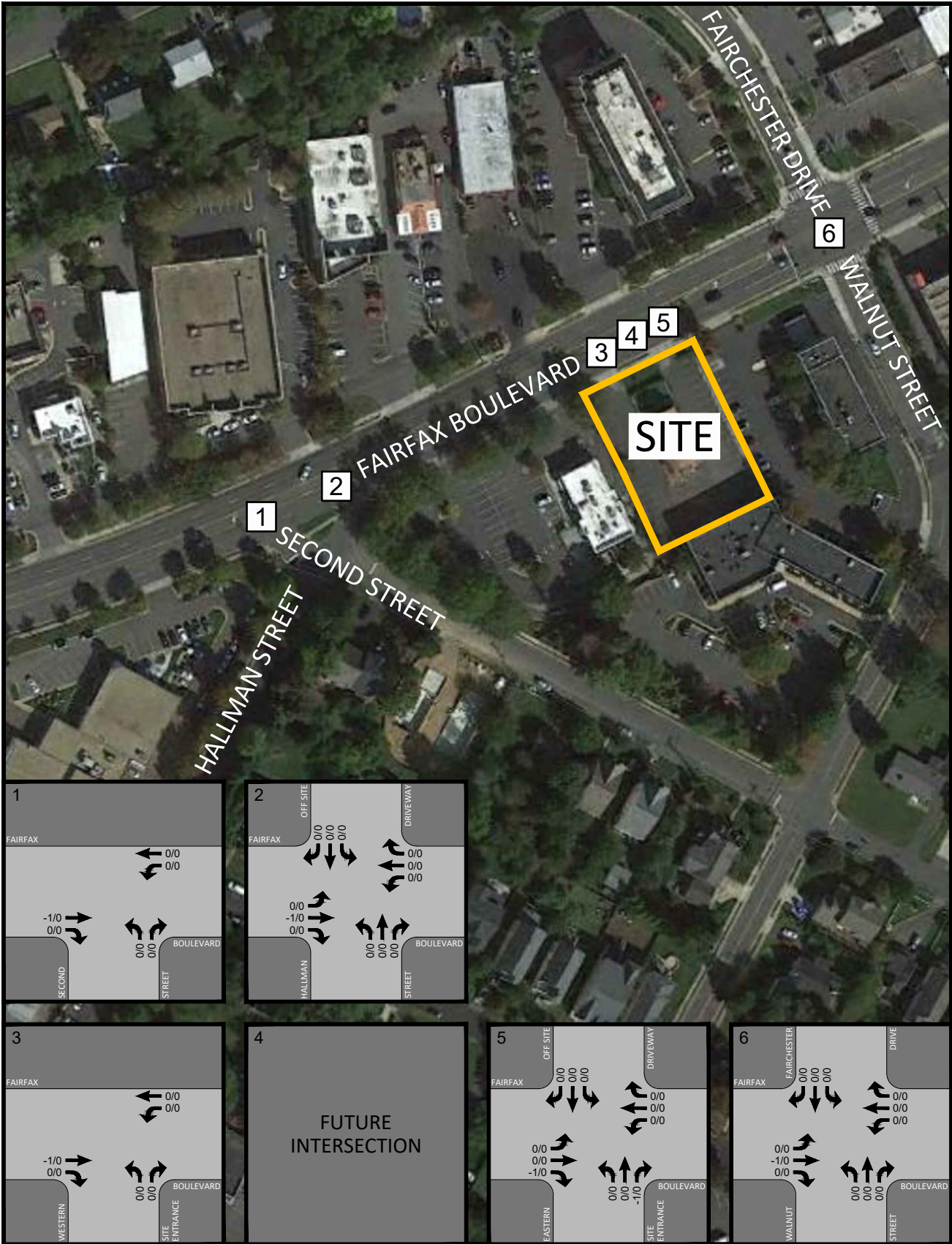


Figure 5-3
Existing Site Trips Removed

AM PEAK HOUR
PM PEAK HOUR
000 / 000



10869 Fairfax Boulevard
City of Fairfax, Virginia

Section 6

ANALYSIS OF TOTAL FUTURE CONDITIONS WITH PROJECT (2022)

TOTAL FUTURE LANE USE AND TRAFFIC CONTROLS

With the redevelopment, the two existing site entrances along Fairfax Boulevard will be consolidated into a single, centralized entrance. The total future lane use and traffic controls reflect the redevelopment's access as shown on Figure 6-1.

TOTAL FUTURE TRAFFIC FORECASTS

The 2022 total future traffic forecasts shown on Figure 6-2 were estimated by adding the site trip assignments (Figure 5-2) to the background future traffic forecasts (Figure 4-7) after discounting those trips generated by the existing site uses (Figure 5-3).

TOTAL FUTURE CONDITIONS ANALYSIS

Future levels of service with the proposed redevelopment plan were estimated at key study intersections based on the future lane use on Figure 6-1, the future traffic forecasts shown on Figure 6-2, the signal timings for the signalized intersections provided by the City of Fairfax and the 2000 HCM methodologies for signalized and unsignalized intersections. The results of these analyses are provided in Appendix J and presented in Table 6-1.

Levels of Service. With the new trips associated with the proposed redevelopment, the study intersections would experience minor increases in intersection delay, however the levels of service in 2022 future future conditions remain generally consistent with the 2022 background future conditions.

As shown in Table 6-1, the signalized study intersection of Fairfax Boulevard/Walnut Street/Fairchester Boulevard would continue to operate at an overall LOS "B" in both weekday AM and PM peak hours. Certain side street approaches to Fairfax Boulevard at the unsignalized study intersections would continue to or begin to exceed LOS "D" conditions consistent with 2022 background future conditions, notably at the following locations:

- Study Int. #1 (Fairfax Boulevard/Second Street)
 - Northbound Second Street approach: LOS "E" (PM peak hour)
- Study Int. #2 (Fairfax Boulevard/Hallman Street)
 - Southbound La-Z-Boy driveway approach: LOS "E" (AM & PM peak hour)
- Study Int. #4 (Fairfax Boulevard/Future Site Entrance)
 - Northbound site entrance approach: LOS "F" (AM peak hour)

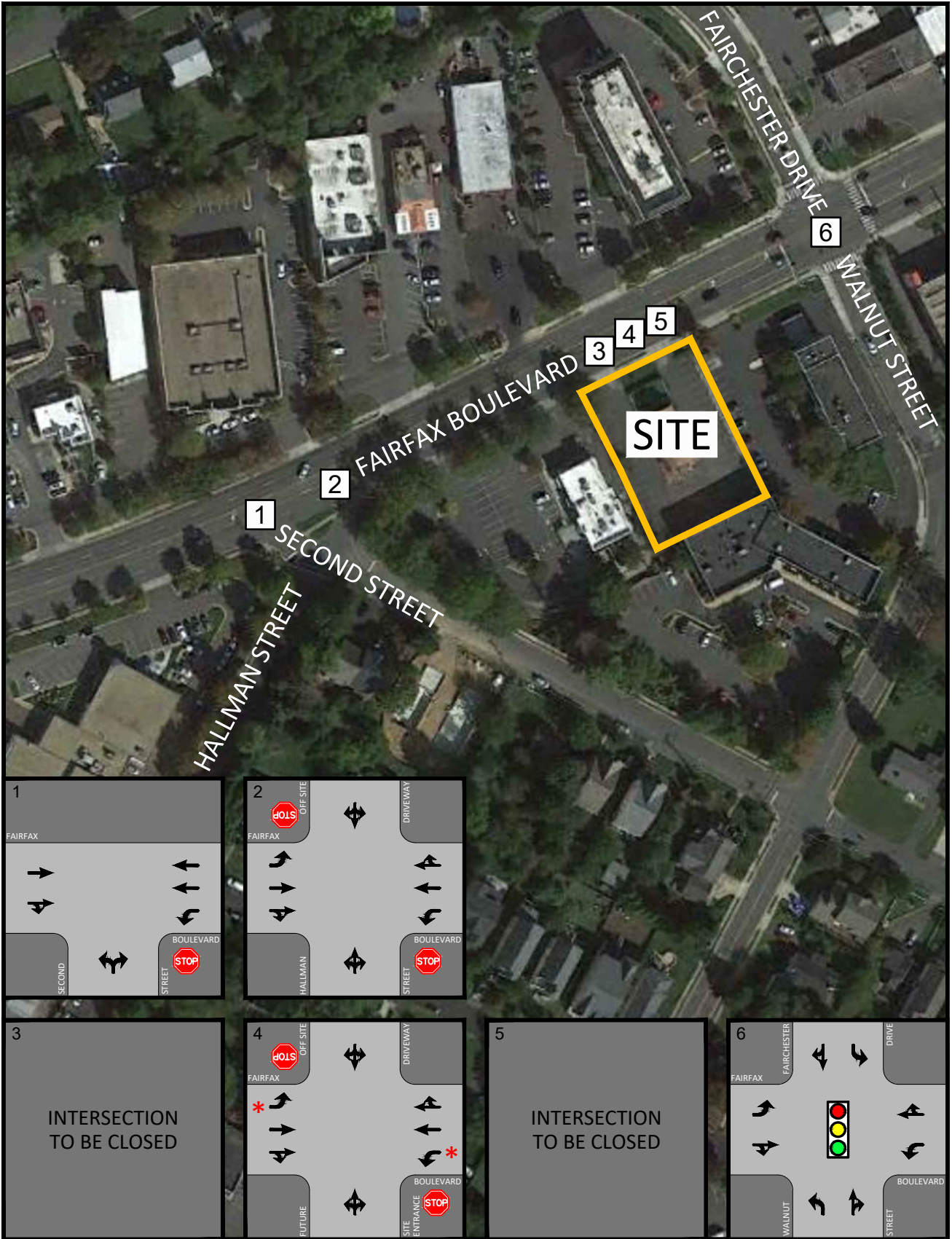


Figure 6-1
2022 Total Future Lane Use
and Traffic Controls

- ← Represents One Travel Lane
- 🚦 Signalized Intersection
- 🛑 Stop Sign
- * Two-way Left Turn Lane



NORTH

10869 Fairfax Boulevard
City of Fairfax, Virginia

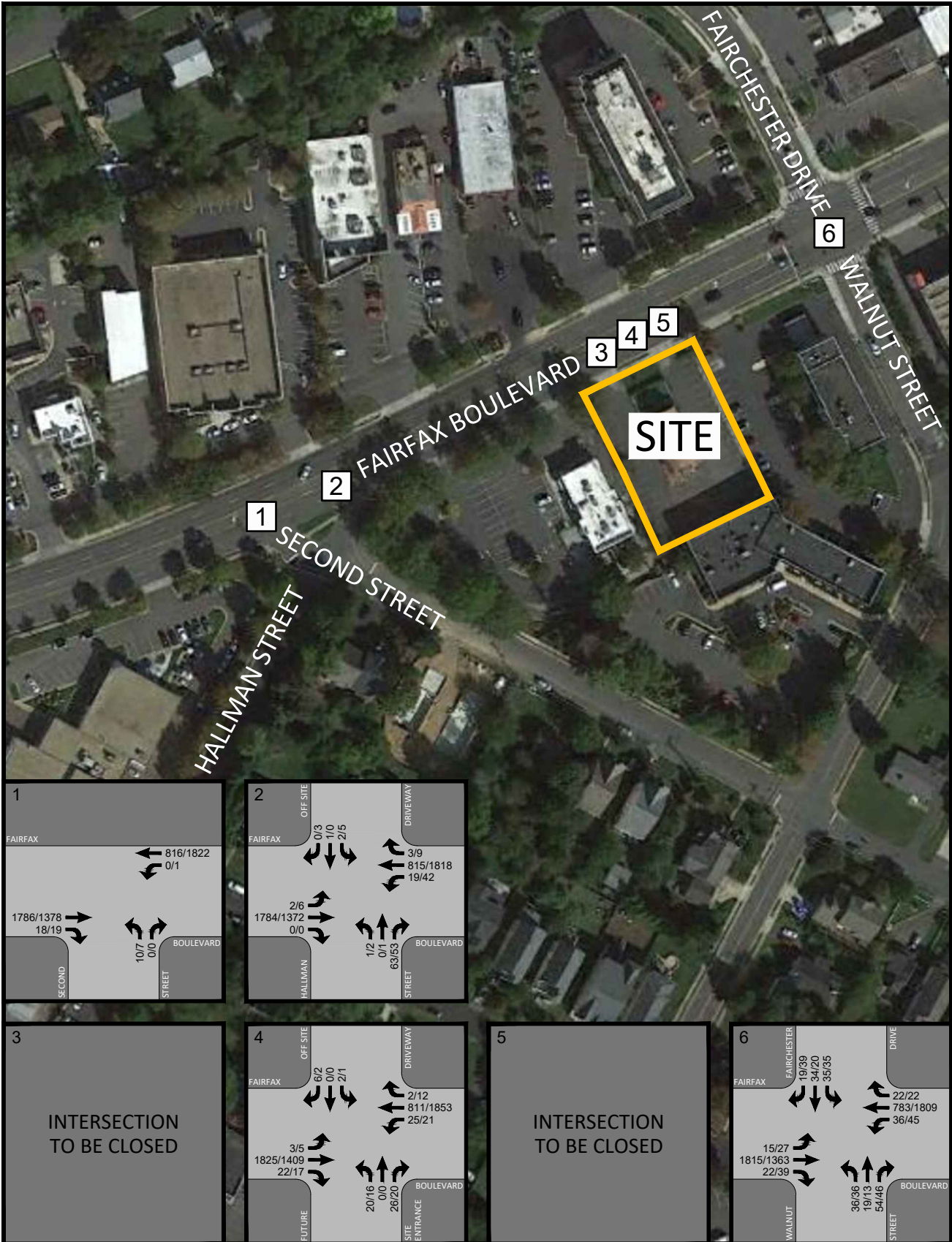


Figure 6-2
2022 Total Future Traffic Volumes

AM PEAK HOUR
PM PEAK HOUR
000 / 000



10869 Fairfax Boulevard
City of Fairfax, Virginia

Table 6-1
 10869 Fairfax Boulevard
 Levels of Service Summary (1) (2) (3) (4)

Intersection	Operating Condition	Approach Name	Approach/Movement	Background 2022		Total Future 2022	
				AM	PM	AM	PM
1 Fairfax Boulevard & Second Street	STOP	Fairfax Blvd.	EBTR	A [0.0]	A [0.0]	A [0.0]	A [0.0]
		Fairfax Blvd.	WBL	A [0.0]	B [12.5]	A [0.0]	B [12.6]
		Fairfax Blvd.	WBT	A [0.0]	A [0.0]	A [0.0]	A [0.0]
		Second St.	NBLR	E [47.5]	D [25.9]	E [48.7]	D [26.3]
2 Fairfax Boulevard & Hallman Street/La-Z-Boy Entrance	STOP	Fairfax Blvd.	EBL	A [9.4]	C [15.9]	A [9.5]	C [16.0]
		Fairfax Blvd.	EBTR	A [0.0]	A [0.0]	A [0.0]	A [0.0]
		Fairfax Blvd.	WBL	C [17.6]	B [13.0]	C [17.9]	B [13.2]
		Fairfax Blvd.	WBTR	A [0.0]	A [0.0]	A [0.0]	A [0.0]
		Hallman St.	NBLTR	C [24.9]	C [17.5]	D [25.6]	C [17.8]
		La-Z-Boy Ent.	SBLTR	E [35.6]	E [41.7]	E [37.5]	E [43.0]
3 Fairfax Boulevard & Existing Western Site Entrance	STOP	Fairfax Blvd.	EBTR	A [0.0]	A [0.0]	ENTRANCE CLOSED	
		Fairfax Blvd.	WBL	A [0.0]	A [0.0]		
		Fairfax Blvd.	WBT	A [0.0]	A [0.0]		
		Ex. W Site Ent.	NBLR	A [0.0]	A [0.0]		
4 Fairfax Boulevard & Future Site Entrance/Hampton Inn Entrance	STOP	Fairfax Blvd.	EBL	FUTURE INTERSECTION	FUTURE INTERSECTION	A [9.4]	C [16.6]
		Fairfax Blvd.	EBTR			A [0.0]	A [0.0]
		Fairfax Blvd.	WBL			C [19.3]	B [13.2]
		Fairfax Blvd.	WBTR			A [0.0]	A [0.0]
		Future Site Ent.	NBLTR			F [70.4]	D [27.4]
		Hampton Inn Ent.	SBLTR			B [14.1]	D [26.3]
5 Fairfax Boulevard & Existing Eastern Site Entrance/Hampton Inn Entrance	STOP	Fairfax Blvd.	EBL	A [9.4]	C [16.6]	ENTRANCE CLOSED	
		Fairfax Blvd.	EBTR	A [0.0]	A [0.0]		
		Fairfax Blvd.	WBL	A [0.0]	A [0.0]		
		Fairfax Blvd.	WBTR	A [0.0]	A [0.0]		
		Ex. E Site Ent.	NBLTR	C [19.9]	A [0.0]		
		Hampton Inn Ent.	SBLTR	B [13.0]	C [24.5]		
6 Fairfax Boulevard & Walnut Street/Fairchester Drive	Signalized	Fairfax Blvd.	EBL	A (4.8)	A (9.3)	A (4.6)	A (9.8)
		Fairfax Blvd.	EBTR	B (14.6)	A (8.5)	B (15.0)	A (8.5)
		Fairfax Blvd.	WBL	B (16.2)	A (5.5)	B (16.8)	A (5.6)
		Fairfax Blvd.	WBTR	A (6.7)	B (11.0)	A (7.2)	B (11.2)
		Walnut St.	NBL	E (76.6)	F (91.5)	E (76.9)	F (91.9)
		Walnut St.	NBTR	E (75.0)	F (89.4)	E (74.9)	F (89.4)
		Fairchester Dr.	SBL	F (93.5)	F (107.1)	F (92.6)	F (107.1)
		Fairchester Dr.	SBTR	<u>F (85.3)</u>	<u>F (99.3)</u>	<u>F (85.6)</u>	<u>F (99.3)</u>
			Overall	B (16.9)	B (14.4)	B (17.3)	B (14.6)

Notes : (1) Roadway names in bold are considered north/south for purposes of this analysis
 (2) Numbers in parentheses () represent delay at signalized intersections in seconds per vehicle.
 (3) Numbers in brackets [] represent delay at unsignalized intersections in seconds per vehicle.
 (4) Asterisks * represent delays in excess of 999.9 seconds.

Table 6-2
 10869 Fairfax Boulevard
 Intersection Queue Summary (1) (2) (3) (4)

Intersection	Operating Condition	Approach Name	Approach/Movement	Available Storage (ft)	Background 2022		Total Future 2022	
					AM	PM	AM	PM
1 Fairfax Boulevard & Second Street	STOP	Fairfax Blvd.	EBTR	N/A	0	0	0	0
		Fairfax Blvd.	WBL	N/A	0	0	0	0
		Fairfax Blvd.	WBT	N/A	0	0	0	0
		Second St.	NBLR	N/A	9	3	10	3
2 Fairfax Boulevard & Hallman Street/La-Z-Boy Entrance	STOP	Fairfax Blvd.	EBL	N/A	0	1	0	1
		Fairfax Blvd.	EBTR	N/A	0	0	0	0
		Fairfax Blvd.	WBL	N/A	5	7	6	7
		Fairfax Blvd.	WBTR	N/A	0	0	0	0
		Hallman St.	NBLTR	N/A	26	14	28	15
		La-Z-Boy Ent.	SBLTR	N/A	2	6	2	6
3 Fairfax Boulevard & Existing Western Site Entrance	STOP	Fairfax Blvd.	EBTR	N/A	0	0	ENTRANCE CLOSED	
		Fairfax Blvd.	WBL	N/A	0	0		
		Fairfax Blvd.	WBT	N/A	0	0		
		Ex. W Site Ent.	NBLR	N/A	0	0		
4 Fairfax Boulevard & Future Site Entrance/Hampton Inn Entrance	STOP	Fairfax Blvd.	EBL	N/A	FUTURE INTERSECTION	0	1	
		Fairfax Blvd.	EBTR	N/A		0	0	
		Fairfax Blvd.	WBL	55		8	4	
		Fairfax Blvd.	WBTR	N/A		0	0	
		Future Site Ent.	NBLTR	N/A		54	16	
		Hampton Inn Ent.	SBLTR	N/A		2	1	
5 Fairfax Boulevard & Existing Eastern Site Entrance/Hampton Inn Entrance	STOP	Fairfax Blvd.	EBL	N/A	0	1	ENTRANCE CLOSED	
		Fairfax Blvd.	EBTR	N/A	0	0		
		Fairfax Blvd.	WBL	25	0	0		
		Fairfax Blvd.	WBTR	N/A	0	0		
		Ex. E Site Ent.	NBLTR	N/A	0	0		
		Hampton Inn Ent.	SBLTR	N/A	1	1		
6 Fairfax Boulevard & Walnut Street/Fairchester Drive	Signalized	Fairfax Blvd.	EBL	100	11	18	15	20
		Fairfax Blvd.	EBTR	N/A	1209	604	1240	614
		Fairfax Blvd.	WBL	100	28	30	28	30
		Fairfax Blvd.	WBTR	N/A	308	968	317	987
		Walnut St.	NBL	185	75	81	78	84
		Walnut St.	NBTR	N/A	72	64	72	64
		Fairchester Dr.	SBL	120	92	97	92	97
		Fairchester Dr.	SBTR	N/A	103	88	109	89

Notes : (1) Queue length is based on the 95th percentile queue in feet as reported by Synchro, Version 10.
 (2) Roadway names in bold are considered north/south for purposes of this analysis.
 (3) For available storage, "N/A" at the left and right-turn lanes indicate the turn-lane would extend back to the immediate upstream intersection.
 (4) For available storage, "N/A" at the through movements indicate storage available up to the immediate upstream intersection.

Queues. As shown in Table 6-2, the 2022 total future conditions 95th percentile queues at the study intersections remain generally consistent with the reported 2022 background future conditions queues. As in background conditions, none of the reported turning movement queues exceed the available storage.

The egress queues at the future site entrance would approach 54 feet (approximately 2 vehicle lengths) in the AM peak hour and 16 feet (less than one vehicle length) during the PM peak hour under 95th percentile conditions.

RECOMMENDED MITIGATION

In comparison of 2022 future conditions with (total future) and without (background future) the proposed redevelopment, the impacts to the surrounding roadway network are minimal as a result of traffic generated by the proposed new fast-food restaurant with drive-through. No additional improvements beyond those depicted on the Applicants development plan are recommended to mitigate site-generated traffic.

Section 7 CONCLUSIONS

The principal findings of this traffic impact study are as follows:

1. The Applicant is proposing to raze an existing $\pm 1,740$ square foot sit-down restaurant to develop a new $\pm 2,275$ square foot fast-food restaurant with drive-through by way of a Special Use Permit (SUP) application.
2. Under existing conditions, the signalized study intersection of Fairfax Boulevard/Walnut Street/Fairchester Boulevard currently operates at an overall LOS "B" in both weekday AM and PM peak hours. Certain side street approaches to Fairfax Boulevard at the unsignalized study intersections currently exceed LOS "D" conditions. The 95th percentile turning movement queues do not exceed existing available turn lane storage.
3. Under 2022 background future traffic conditions (without the proposed redevelopment) with the addition of regional growth and traffic associated with approved nearby developments, the signalized study intersection of Fairfax Boulevard/Walnut Street/Fairchester Boulevard would continue to operate at an overall LOS "B" in both weekday AM and PM peak hours. Certain side street approaches to Fairfax Boulevard at the unsignalized study intersections would continue to or begin to exceed LOS "D" conditions. The 95th percentile turning movement queues do not exceed available turn lane storage, consistent with existing conditions.
4. The proposed redevelopment is estimated to generate the following new site trips:
 - 91 weekday AM peak hour trips (46 inbound, 45 outbound)
 - 74 weekday PM peak hour trips (38 inbound, 36 outbound)
 - 1,071 weekday average daily trips
5. Under 2022 total future conditions (with the proposed redevelopment), certain approaches to the study intersections would experience minor increases in delay but generally remain consistent with background future conditions. The 95th percentile turning movement queues do not exceed available turn lane storage, consistent with existing and background future conditions.
6. No additional improvements beyond those depicted on the Applicant's development plan are recommended to mitigate site-generated traffic.

APPENDIX A
SIGNED SCOPE OF WORK DOCUMENT



PRE-SCOPE OF WORK MEETING FORM

Information on the Project Traffic Impact Analysis Base Assumptions

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

Contact Information			
Consultant Name: Tele: E-mail:	Lester E. Adkins III, P.E. - Wells + Associates 703-365-9262 leadkins@wellsandassociates.com		
Developer/Owner Name: Tele: E-mail:	Mansoor Awan - MBA International, Inc. 703-989-6851 mansoornawan@gmail.com		
Project Information			
Project Name:	10869 Fairfax Boulevard	Locality/County:	City of Fairfax
Project Location: (Attach regional and site specific location map)	This subject site is oriented south of Fairfax Boulevard, east of Second Street and west of Walnut Street in the City of Fairfax, Virginia. See attached Figure 1.		
Submission Type	Comp Plan <input type="checkbox"/>	Rezoning <input type="checkbox"/>	Site Plan <input checked="" type="checkbox"/> Subd Plat <input type="checkbox"/>
Project Description: (Including details on the land use, acreage, phasing, access location, etc. Attach additional sheet if necessary)	10869 Fairfax Boulevard (the "Property") is currently developed with a restaurant use along with associated surface parking lots. The subject site is zoned CR (Commercial Retail). The Applicant seeks approval of a Special Use Permit (SUP) to redevelop the site with a 2,275 square-foot fast-food restaurant with drive-through. Access to the Property would be consolidated into one (1) entrance along Fairfax Boulevard.		
Proposed Use(s): (Check all that apply; attach additional pages as necessary)	Residential <input type="checkbox"/>	Commercial <input checked="" type="checkbox"/>	Mixed Use <input type="checkbox"/> Other <input type="checkbox"/>
	Residential Use(s) Number of Units: _____ ITE LU Code(s): _____ _____ Commercial Use(s) ITE LU Code(s): 934 (See Table 1) _____ Square Ft or Other Variable: _____	2,275 SF _____ Other Use(s) ITE LU Code(s): _____ _____ Independent Variable(s): _____ _____ _____	
Total Peak Hour Trip Projection:	Less than 100 <input type="checkbox"/>	100 – 499 <input checked="" type="checkbox"/>	500 – 999 <input type="checkbox"/> 1,000 or more <input type="checkbox"/>

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

Traffic Impact Analysis Assumptions

Study Period	Existing Year: 2021	Build-out Year: 2022	Design Year: n/a
Study Area Boundaries (Attach map)	North: Fairfax Boulevard	South: Walnut Street	
	East: Walnut Street	West: Second Street	
External Factors That Could Affect Project (Planned road improvements, other nearby developments)	No other planned roadway improvements in the vicinity of the subject site have been identified.		
Consistency With Comprehensive Plan (Land use, transportation plan)	The proposed fast-food restaurant with drive-through is consistent with the future land use plan.		
Available Traffic Data (Historical, forecasts)	<p>Baseline traffic data for the Fairfax Blvd/Walnut Dr intersection is presented as Attachment I and are based on the following traffic counts: Tuesday, September 11, 2012 - Source: City of Fairfax Thursday, July 11, 2019 - Source: Breezeway Property TIS, Wells + Associates</p> <p>New turning movement counts will be conducted at the following locations: Fairfax Boulevard/Existing Site Entrances Fairfax Boulevard/Second Street Fairfax Boulevard/Hallman Street</p> <p>Historic Data: Fairfax Boulevard (Route 50) - 37,000 vehicles per day</p>		
Trip Distribution (Attach sketch)	Road Name: To be determined based on existing traffic counts/travel patterns.	Road Name:	
	Road Name:	Road Name:	
Annual Vehicle Trip Growth Rate:	1%	Peak Period for Study (check all that apply)	<input checked="" type="checkbox"/> AM <input checked="" type="checkbox"/> PM <input type="checkbox"/> SAT
		Peak Hour of the Generator	Peak Hour of the Adjacent St
Study Intersections and/or Road Segments (Attach additional sheets as necessary)	1. Fairfax Boulevard/Second Street	6.	
	2. Fairfax Boulevard/Walnut Street	7.	
	3. Fairfax Boulevard/Site Entrance	8.	
	4. See Note 5 and Figure 1	9.	
	5.	10.	

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

Trip Adjustment Factors	Internal allowance: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Reduction: _____% trips	Pass-by allowance: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Reduction: % trips
Software Methodology	<input checked="" type="checkbox"/> Synchro <input type="checkbox"/> HCS (v.2000/+) <input type="checkbox"/> aaSIDRA <input type="checkbox"/> CORSIM <input type="checkbox"/> Other _____	
Traffic Signal Proposed or Affected (Analysis software to be used, progression speed, cycle length)	Fairfax Boulevard/Walnut Street/Fairchester Drive	
Improvement(s) Assumed or to be Considered	N/A	
Background Traffic Studies Considered	Breezeway Property TIS (Wells + Associates) - Breezeway Property Trip Assignments - Novus Fairfax Gateway Trip Assignments - Paul VI Redevelopment Trip Assignments	
Plan Submission	<input type="checkbox"/> Master Development Plan (MDP) <input checked="" type="checkbox"/> Generalized Development Plan (GDP) <input type="checkbox"/> Preliminary/Sketch Plan <input type="checkbox"/> Other Plan type (Final Site, Subd. Plan)	
Additional Issues to be Addressed	<input checked="" type="checkbox"/> Queuing analysis <input type="checkbox"/> Actuation/Coordination <input type="checkbox"/> Weaving analysis <input type="checkbox"/> Merge analysis <input checked="" type="checkbox"/> Bike/Ped Accommodations <input checked="" type="checkbox"/> Intersection(s) <input type="checkbox"/> TDM Measures <input type="checkbox"/> Other _____	

NOTES on ASSUMPTIONS:

1. Synchro 10.1 will be used to conduct the capacity analysis with a peak hour factor (PHF) measured in the field for existing conditions; in the event an existing PHF is less than 0.85, the minimum of 0.85 will be used for existing analysis and the higher of the existing PHF or 0.92 will be used for all future scenarios. Levels of service will be based on the HCM 2000 methodologies as reported by Synchro. Other Synchro parameters will be applied to the model consistent with the VDOT Traffic Operations and Safety Analysis Manual (TOSAM), Version 2.0.
2. Percent heavy vehicles (%HV) applied in the analysis will be based on current count data with a default 2% where data is not available.
3. Crash data for the most recent available three years will be provided and discussed in the report.
4. Base Synchro files will be provided by City of Fairfax.

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

5. Wells + Associates will conduct AM (6:00 am to 9:00 am) and PM (4:00 pm to 7:00 pm) peak hour traffic counts during a typical* weekday (non-holiday week, Tuesday - Thursday) at the following intersections:

- a. Fairfax Boulevard/Second Street
- b. Fairfax Boulevard/Hallman Street
- c. Fairfax Boulevard/Existing Site Driveways

*The traffic counts will be factored upwards, to account for the impacts of COVID-19, as may be appropriate.

6. Weekday Midday Peak Hour operations will be discussed in the report.

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

PRE-SCOPE OF WORK MEETING FORM
FAIRFAX BOULEVARD POPEYE'S TRAFFIC IMPACT STUDY

SIGNED:  DATE: 02/16/2021
Applicant or Consultant

PRINT NAME: Lester E. Adkins III, P.E.
Applicant or Consultant

SIGNED:  DATE: 2/18/21
Local Government Representative

PRINT NAME: BC McCullough
Local Government Representative

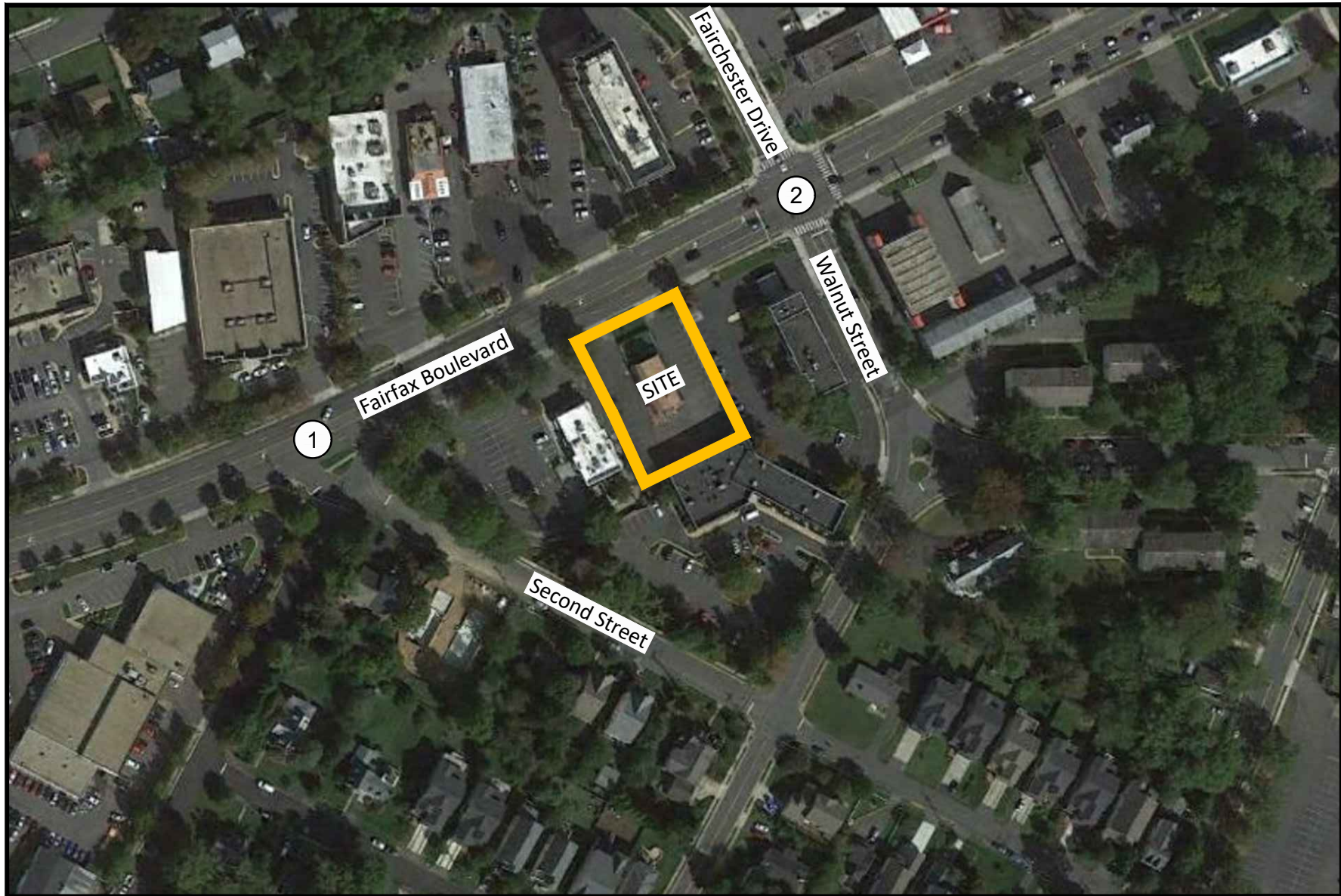


Figure 1
Site Location

(XX) Study Intersection



NORTH

10869 Fairfax Boulevard
City of Fairfax, Virginia

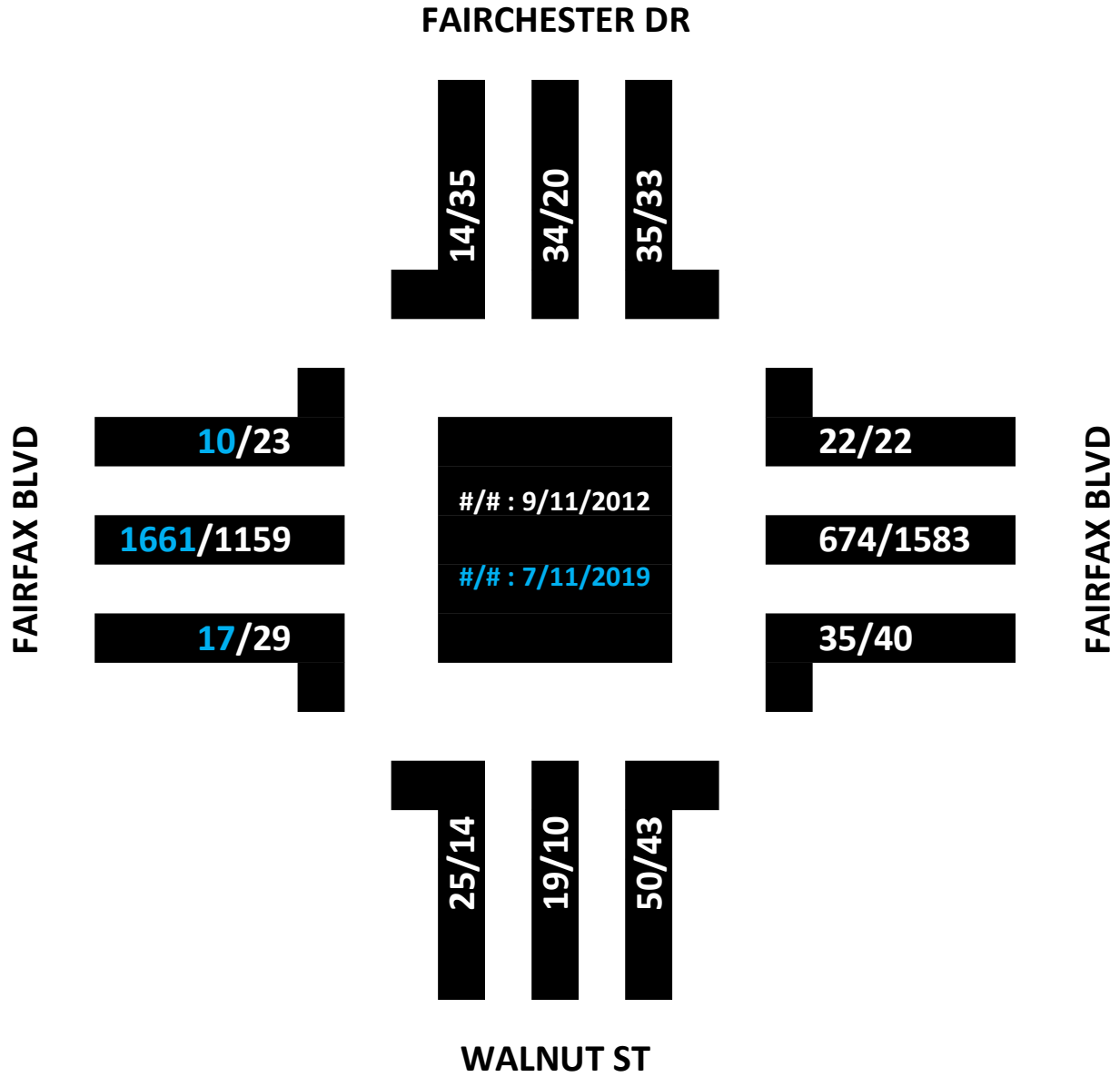
Table 1
 10869 Fairfax Boulevard
 Site Trip Generation ⁽¹⁾ - Peak Hour of Adjacent Street Traffic

Scenario	Land Use Code	Amount	Units	AM Peak Hour			PM Peak Hour			Weekday Average Daily Trips	SAT Peak Hour of the Generator			Saturday Average Daily Trips
				In	Out	Total	In	Out	Total		In	Out	Total	
<i>Existing Use</i>														
High-Turnover (Sit-Down) Restaurant	932	1,740	GSF	9	8	17	11	6	17	195	10	9	19	213
<i>Proposed Use</i>														
Fast-Food Restaurant with Drive-Through Window	934	2,275	GSF	<u>46</u>	<u>45</u>	<u>91</u>	<u>38</u>	<u>36</u>	<u>74</u>	<u>1,071</u>	<u>64</u>	<u>61</u>	<u>125</u>	<u>1,402</u>
DIFFERENCE (Proposed minus Existing)				37	37	74	27	30	57	876	54	52	106	1,189

Note(s):

(1) Trip generation based on the Institute of Transportation Engineers' [Trip Generation Manual](#), 10th Edition.

10869 Fairfax Boulevard TIS
Fairfax Boulevard / Walnut Street
Baseline Traffic Volumes

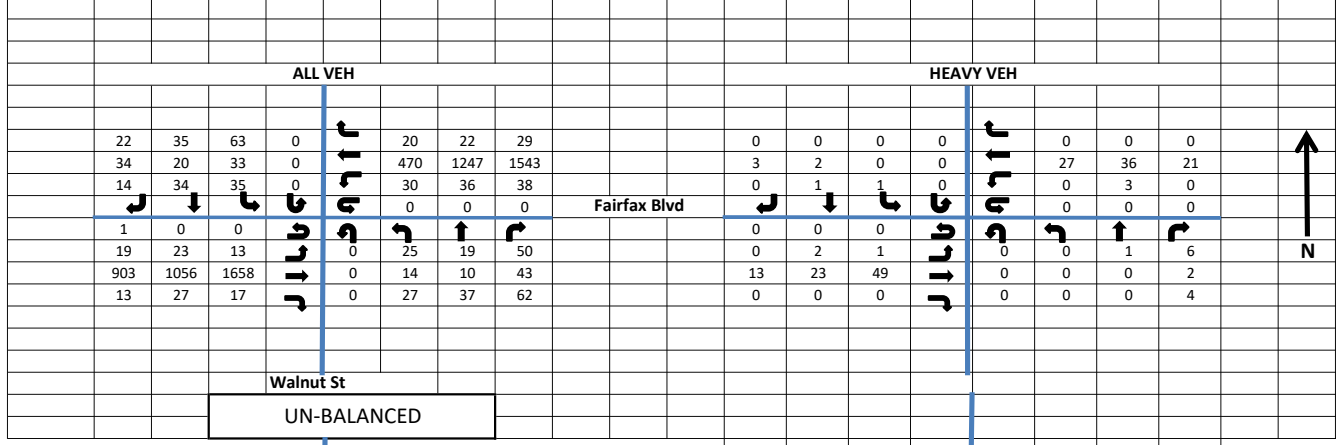


Tuesday, September 11, 2012

QUALITY COUNTS REPORT

Intersection: Walnut St at Fairfax Blvd

AM PEAK HOUR																						
Time Period	NB Left	NB Thru	NB Right	NB U-Turn	NB RTOR	SB Left	SB Thru	SB Right	SB U-Turn	SB RTOR	EB Left	EB Thru	EB Right	EB U-Turn	EB RTOR	WB Left	WB Thru	WB Right	WB U-Turn	WB RTOR	Total	
ALL-VEHICLE VOLUMES																						
6:30 AM	0	3	11	0	0	7	5	4	0	0	7	478	0	0	0	3	60	1	0	0	579	
6:45 AM	5	2	14	0	0	10	1	4	0	0	1	426	1	0	0	2	110	5	0	0	581	
7:00 AM	9	9	14	0	0	10	11	1	0	0	3	395	7	0	0	4	114	6	0	0	583	
7:15 AM	11	5	11	0	0	8	17	5	0	0	2	359	9	0	0	21	186	8	0	0	642	
Total	25	19	50	0	0	35	34	14	0	0	13	1658	17	0	0	30	470	20	0	0	2385	
HEAVY VEHICLES ONLY																						
6:30 AM	0	1	2			1	0	0			0	18	0			0	1	0			23	
6:45 AM	0	0	4			0	0	0			1	16	0			0	7	0			28	
7:00 AM	0	0	0			0	1	0			0	9	0			0	7	0			17	
7:15 AM	0	0	0			0	0	0			0	6	0			0	12	0			18	
Total	0	1	6	0	0	1	1	0	0	0	1	49	0	0	0	0	27	0	0	0	86	
% Total			7%					2%					3%					5%				4%
MIDDAY PEAK HOUR																						
Time Period	NB Left	NB Thru	NB Right	NB U-Turn	NB RTOR	SB Left	SB Thru	SB Right	SB U-Turn	SB RTOR	EB Left	EB Thru	EB Right	EB U-Turn	EB RTOR	WB Left	WB Thru	WB Right	WB U-Turn	WB RTOR	Total	
ALL-VEHICLE VOLUMES																						
12:00 PM	2	5	8	0	0	6	5	7	0	0	6	266	6	0	0	10	315	3	0	0	639	
12:15 PM	4	3	14	0	0	8	3	4	0	0	6	275	4	0	0	9	289	5	0	0	624	
12:30 PM	5	0	14	0	0	6	4	10	0	0	3	262	6	0	0	6	327	5	0	0	648	
12:45 PM	3	2	7	0	0	13	8	13	0	0	8	253	11	0	0	11	316	9	0	0	654	
Total	14	10	43	0	0	33	20	34	0	0	23	1056	27	0	0	36	1247	22	0	0	2565	
HEAVY VEHICLES ONLY																						
12:00 PM	0	0	1			0	0	1			0	8	0			0	9	0			19	
12:15 PM	0	0	0			0	1	2			0	6	0			1	10	0			20	
12:30 PM	0	0	1			0	0	0			0	3	0			0	6	0			10	
12:45 PM	0	0	0			0	1	0			2	6	0			2	11	0			22	
Total	0	0	2	0	0	0	2	3	0	0	2	23	0	0	0	3	36	0	0	0	71	
% Total			3%					6%					2%					3%				3%
PM PEAK HOUR																						
Time Period	NB Left	NB Thru	NB Right	NB U-Turn	NB RTOR	SB Left	SB Thru	SB Right	SB U-Turn	SB RTOR	EB Left	EB Thru	EB Right	EB U-Turn	EB RTOR	WB Left	WB Thru	WB Right	WB U-Turn	WB RTOR	Total	
ALL-VEHICLE VOLUMES																						
5:15 PM	4	9	10	0	0	11	11	3	0	0	3	233	4	0	0	11	399	10	0	0	708	
5:30 PM	11	14	18	0	0	15	11	4	0	0	1	207	3	1	0	11	410	6	0	0	712	
5:45 PM	6	8	20	0	0	17	9	5	0	0	13	240	2	0	0	5	383	3	0	0	711	
6:00 PM	6	6	14	0	0	20	4	10	0	0	2	223	4	0	0	11	351	10	0	0	661	
Total	27	37	62	0	0	63	35	22	0	0	19	903	13	1	0	38	1543	29	0	0	2792	
HEAVY VEHICLES ONLY																						
5:15 PM	0	0	1			0	0	0			0	3	0			0	9	0			13	
5:30 PM	0	0	1			0	0	0			0	4	0			0	5	0			10	
5:45 PM	0	0	1			0	0	0			0	3	0			0	6	0			10	
6:00 PM	0	0	1			0	0	0			0	3	0			0	1	0			5	
Total	0	0	4	0	0	0	0	0	0	0	0	13	0	0	0	0	21	0	0	0	38	
% Total			3%					0%					1%					1%				1%



28	35	63	0	22	22	30
35	20	33	0	674	1583	1976
14	34	35	0	35	40	40
1	0	0	0	0	0	0
1	0	0	0	25	19	50
976	1159	1927	0	14	10	43
13	29	17	0	30	37	68

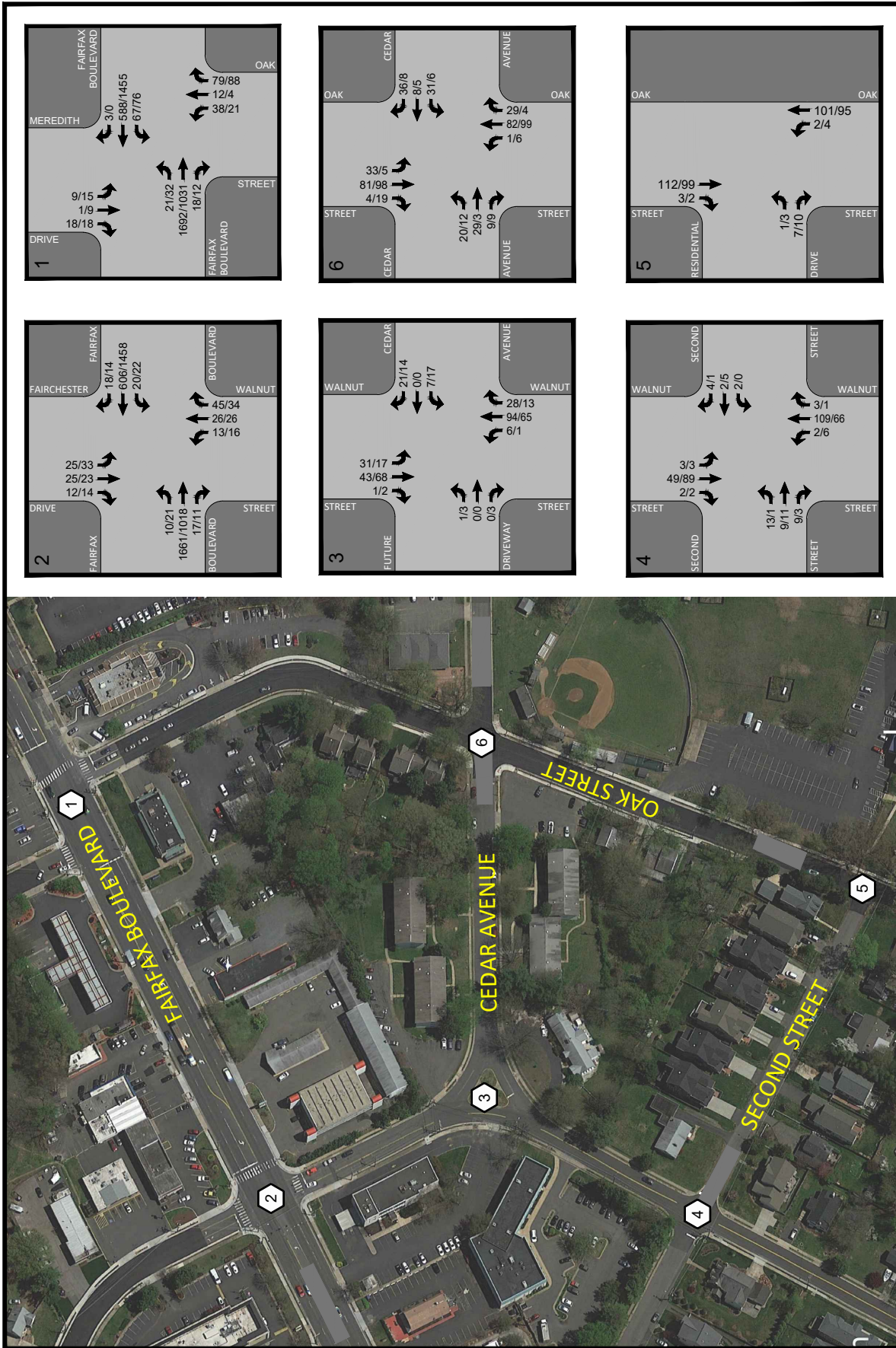
BALANCED

0%	0%	0%	#DIV/0!	0%	0%	0%
9%	10%	0%	#DIV/0!	6%	3%	1%
0%	3%	3%	#DIV/0!	0%	8%	0%
0%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
0%	9%	8%	#DIV/0!	0%	5%	12%
1%	2%	3%	#DIV/0!	0%	0%	5%
0%	0%	0%	#DIV/0!	0%	0%	6%

-6	0	0	0	-2	0	-1
-1	0	0	0	-204	-336	-433
0	0	0	0	-5	-4	-2
0	0	0	0	0	0	0
-2	0	0	0	0	0	0
-73	-103	-269	0	0	0	0
0	-2	0	0	-3	0	-6

UNBALANCED - BALANCED

L:\PROJECTS\7001 - 7500\7476 - BREEZEWAY - CITY OF FAIRFAX\GRAPHICS\7476 - REVISED TIA GRAPHICS UPDATE 10242020.DWG



NORTH
Pulte Group, Inc.
City of Fairfax, Virginia

AM PEAK HOUR
PM PEAK HOUR
000 / 000

Figure 3-1
Existing Peak Hour Traffic Volumes

APPENDIX B

LEVELS OF SERVICE DESCRIPTIONS

Level of Service for Signalized Intersections

Level of service for signalized intersections is defined in terms of delay, which is a measure of driver discomfort and frustration, fuel consumption, and lost travel time. Specifically, level-of-service (LOS) criteria are stated in terms of the average stopped delay per vehicle for a 15-min analysis period. The criteria are given in Exhibit 16-2. Delay may be measured in the field or estimated using procedures presented later in this chapter. Delay is a complex measure and is dependent on a number of variables, including the quality of progression, the cycle length, the green ratio, and the v/c ratio for the lane group in question.

LOS A describes operations with very low delay, up to 10 sec per vehicle. This level of service occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.

LOS B describes operations with delay greater than 10 and up to 20 sec per vehicle. This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of average delay.

Exhibit 16-2. Level-of-Service Criteria for Signalized Intersections

LEVEL OF SERVICE	STOPPED DELAY PER VEHICLE (SEC)
A	≤ 10.0
B	> 10.0 and ≤ 20.0
C	> 20.0 and ≤ 35.0
D	> 35.0 and ≤ 55.0
E	> 55.0 and ≤ 80.0
F	> 80.0

LOS C describes operations with delay greater than 20 and up to 35 sec per vehicle. These higher delays may result from fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.

LOS D describes operations with delay greater than 35 and up to 55 sec per vehicle. At level D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high v/c ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.

LOS E describes operations with delay greater than 55 and up to 80 sec per vehicle. This level is considered by many agencies to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent occurrences.

LOS F describes operations with delay in excess of 80 sec per vehicle. This level, considered to be unacceptable to most drivers, often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of the intersection. It may also occur at high v/c ratios below 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

Source: [Highway Capacity Manual, 2000](#). Transportation Research Board, National Research Council

Level of Service Criteria for Stop Sign Controlled Intersections

The level of service criteria are given in Table 17-2. As used here, control delay is defined as the total elapsed time from the time a vehicle stops at the end of the queue until the vehicle departs from the stop line; this time includes the time required for the vehicle to travel from the last-in-queue position to the first-in-queue position, including deceleration of vehicles from free-flow speed to the speed of vehicles in queue.

The average total delay for any particular minor movement is a function of the service rate or capacity of the approach and the degree of saturation. . . .

Table 17-2. Level of Service Criteria for TWSC Intersections

LEVEL OF SERVICE	AVERAGE CONTROL DELAY (sec/veh)
A	≤ 10
B	> 10 and ≤ 15
C	> 15 and ≤ 25
D	> 25 and ≤ 35
E	> 35 and ≤ 50
F	> 50

Average total delay less than 10 sec/veh is defined as Level of Service (LOS) A. Follow-up times of less than 5 sec have been measured when there is no conflicting traffic for a minor street movement, so control delays of less than 10 sec/veh are appropriate for low flow conditions. To remain consistent with the AWSC intersection analysis procedure described later in this chapter, a total delay of 50 sec/veh is assumed as the break point between LOS E and F.

The proposed level of service criteria for TWSC intersections are somewhat different from the criteria used in Chapter 16 for signalized intersections. The primary reason for this difference is that drivers expect different levels of performance from different kinds of transportation facilities. The expectation is that a signalized intersection is designed to carry higher traffic volumes than an unsignalized intersection. Additionally, several driver behavior considerations combine to make delays at signalized intersections less onerous than at unsignalized intersections. For example, drivers at signalized intersections are able to relax during the red interval, where drivers on the minor approaches to unsignalized intersections must remain attentive to the task of identifying acceptable gaps and vehicle conflicts. Also, there is often much more variability in the amount of delay experienced by individual drivers at unsignalized than signalized intersections. For these reasons, it is considered that the total delay threshold for any given level of service is less for an unsignalized intersection than for a signalized intersection. . . .

LOS F exists when there are insufficient gaps of suitable size to allow a side street demand to cross safely through a major street traffic stream. This level of service is generally evident from extremely long total delays experienced by side street traffic and by queueing on the minor approaches. The method, however, is based on a constant critical gap size - that is, the critical gap remains constant, no matter how long the side street motorist waits. LOS F may also appear in the form of side street vehicles' selecting smaller-than-usual gaps. In such cases, safety may be a problem and some disruption to the major traffic stream may result. It is important to note that LOS F may not always result in long queues but may result in adjustments to normal gap acceptance behavior. The latter is more difficult to observe on the field than queueing, which is more obvious.

Source: Highway Capacity Manual, 2000. Transportation Research Board, National Research Council

APPENDIX C

TRAFFIC COUNT DATA

Wells + Associates, Inc.

Tysons, Virginia

Turning Movement Count - Passenger Cars

PROJECT: Fairfax Boulevard Popeyes W+A JOB NO: 8398 INTERSECTION: Fairfax Blvd. & Second St. LOCATION: Fairfax County,VA	DATE: 2/9/2021 DAY: Tuesday WEATHER: clear COUNTED BY: Agan INPUTED BY: Agan	SOUTHBOUND ROAD: x NORTHBOUND ROAD: Second Street WESTBOUND ROAD: Fairfax Boulevard EASTBOUND ROAD: Fairfax Boulevard
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Time Period	Southbound x				Westbound Fairfax Boulevard				Northbound Second Street				Eastbound Fairfax Boulevard				North & South	East & West	Total				
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right				Thru	Left	U-Turn	Total
15 Minute Volumes																							
6:00 AM - 6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	1		
6:15 AM - 6:30 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	0	2		
6:30 AM - 6:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	1	1	1	1	2		
6:45 AM - 7:00 AM	0	0	0	0	0	1	0	0	1	0	0	1	1	1	0	0	1	1	1	2	3		
7:00 AM - 7:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	3	1	0	0	4	1	1	4	5		
7:15 AM - 7:30 AM	0	0	0	0	0	1	0	0	1	0	0	0	0	1	1	0	2	0	0	3	3		
7:30 AM - 7:45 AM	0	0	0	0	0	1	0	0	1	1	0	1	2	2	0	0	2	2	2	3	5		
7:45 AM - 8:00 AM	0	0	1	1	1	1	0	0	1	0	0	1	1	4	2	0	6	2	7	9	9		
8:00 AM - 8:15 AM	0	1	1	1	2	0	0	0	0	0	0	0	6	0	0	6	2	6	6	8	8		
8:15 AM - 8:30 AM	0	0	0	0	0	0	0	0	0	0	0	3	3	8	0	8	3	8	8	11	11		
8:30 AM - 8:45 AM	0	0	0	0	0	1	0	0	1	0	0	2	2	3	0	3	2	4	4	6	6		
8:45 AM - 9:00 AM	0	0	1	1	1	2	0	0	2	0	0	5	5	1	2	3	6	5	11	11	11		
4:00 PM - 4:15 PM	0	1	3	0	4	4	1	0	5	0	0	0	0	1	2	3	4	8	12	12	12		
4:15 PM - 4:30 PM	1	0	0	0	1	0	1	0	1	1	0	1	2	4	1	5	3	6	9	9	9		
4:30 PM - 4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	4	0	4	4	4	4		
4:45 PM - 5:00 PM	1	0	2	0	3	2	0	0	2	0	0	0	0	2	3	5	3	7	10	10	10		
5:00 PM - 5:15 PM	1	0	2	0	3	3	0	0	3	0	0	3	3	5	1	6	6	9	15	15	15		
5:15 PM - 5:30 PM	1	0	1	0	2	2	0	0	2	0	1	4	5	4	2	6	7	8	15	15	15		
5:30 PM - 5:45 PM	0	0	0	0	0	2	1	0	3	0	0	0	0	8	0	8	0	11	11	11	11		
5:45 PM - 6:00 PM	1	0	2	0	3	1	1	0	2	0	0	0	0	3	0	3	3	5	8	8	8		
6:00 PM - 6:15 PM	0	0	1	0	1	0	0	0	0	0	0	1	1	7	1	8	2	8	10	10	10		
6:15 PM - 6:30 PM	0	0	1	0	1	2	1	0	3	0	0	0	0	2	0	2	1	5	6	6	6		
6:30 PM - 6:45 PM	2	0	0	0	2	1	0	0	1	0	0	0	0	8	2	10	2	11	13	13	13		
6:45 PM - 7:00 PM	0	0	0	0	0	2	0	1	3	0	0	1	1	6	1	7	1	10	11	11	11		
Total	7	2	15	0	24	26	0	6	0	32	2	1	27	0	30	84	0	20	0	104	54	136	190
One Hour Volumes																							
6:00 AM - 7:00 AM	0	0	0	0	0	1	0	0	0	1	0	0	4	0	4	3	0	0	0	3	4	4	8
6:15 AM - 7:15 AM	0	0	0	0	0	1	0	0	0	1	0	0	5	0	5	5	0	1	0	6	5	7	12
6:30 AM - 7:30 AM	0	0	0	0	0	2	0	0	0	2	0	0	3	0	3	6	0	2	0	8	3	10	13
6:45 AM - 7:45 AM	0	0	0	0	0	3	0	0	0	3	1	0	3	0	4	7	0	2	0	9	4	12	16
7:00 AM - 8:00 AM	0	0	1	0	1	3	0	0	0	3	1	0	3	0	4	10	0	4	0	14	5	17	22
7:15 AM - 8:15 AM	0	1	2	0	3	3	0	0	0	3	1	0	2	0	3	13	0	3	0	16	6	19	25
7:30 AM - 8:30 AM	0	1	2	0	3	2	0	0	0	2	1	0	5	0	6	20	0	2	0	22	9	24	33
7:45 AM - 8:45 AM	0	1	2	0	3	2	0	0	0	2	0	0	6	0	6	21	0	2	0	23	9	25	34
8:00 AM - 9:00 AM	0	1	2	0	3	3	0	0	0	3	0	0	10	0	10	18	0	2	0	20	13	23	36
4:00 PM - 5:00 PM	2	1	5	0	8	6	0	2	0	8	1	0	1	0	2	10	0	7	0	17	10	25	35
4:15 PM - 5:15 PM	3	0	4	0	7	5	0	1	0	6	1	0	4	0	5	14	0	6	0	20	12	26	38
4:30 PM - 5:30 PM	3	0	5	0	8	7	0	0	0	7	0	1	7	0	8	14	0	7	0	21	16	28	44
4:45 PM - 5:45 PM	3	0	5	0	8	9	0	1	0	10	0	1	7	0	8	19	0	6	0	25	16	35	51
5:00 PM - 6:00 PM	3	0	5	0	8	8	0	2	0	10	0	1	7	0	8	20	0	3	0	23	16	33	49
5:15 PM - 6:15 PM	2	0	4	0	6	5	0	2	0	7	0	1	5	0	6	22	0	3	0	25	12	32	44
5:30 PM - 6:30 PM	1	0	4	0	5	5	0	3	0	8	0	0	1	0	1	20	0	1	0	21	6	29	35
5:45 PM - 6:45 PM	3	0	4	0	7	4	0	2	0	6	0	0	1	0	1	20	0	3	0	23	8	29	37
6:00 PM - 7:00 PM	2	0	2	0	4	5	0	2	0	7	0	0	2	0	2	23	0	4	0	27	6	34	40

Wells + Associates, Inc.

Tysons, Virginia

Pedestrian Volume Survey

PROJECT: Fairfax Boulevard Popeyes W + A JOB NO: 8398 INTERSECTION: Fairfax Blvd. & Second St. LOCATION: Fairfax County, VA DATE: 2/9/2021 DAY: Tuesday WEATHER: clear COUNTED BY: Agan INPUTED BY: Agan													
Time Period	Movement								1+2	3+4	5+6	7+8	Total
	1	2	3	4	5	6	7	8					
15 Minute Volumes													
6:00 AM - 6:15 AM	1								1	0	0	0	1
6:15 AM - 6:30 AM									0	0	0	0	0
6:30 AM - 6:45 AM		2							2	0	0	0	2
6:45 AM - 7:00 AM	1								1	0	0	0	1
7:00 AM - 7:15 AM									0	0	0	0	0
7:15 AM - 7:30 AM									0	0	0	0	0
7:30 AM - 7:45 AM									0	0	0	0	0
7:45 AM - 8:00 AM									0	0	0	0	0
8:00 AM - 8:15 AM									0	0	0	0	0
8:15 AM - 8:30 AM									0	0	0	0	0
8:30 AM - 8:45 AM		1							1	0	0	0	1
8:45 AM - 9:00 AM	1				2	1			1	0	3	0	4
4:00 PM - 4:15 PM					1				0	0	1	0	1
4:15 PM - 4:30 PM							1		0	0	1	0	1
4:30 PM - 4:45 PM				1	1	2			0	1	3	0	4
4:45 PM - 5:00 PM	1								1	0	0	0	1
5:00 PM - 5:15 PM	1								1	0	0	0	1
5:15 PM - 5:30 PM	1								1	0	0	0	1
5:30 PM - 5:45 PM		3		2					3	2	0	0	5
5:45 PM - 6:00 PM	1	1							2	0	0	0	2
6:00 PM - 6:15 PM									0	0	0	0	0
6:15 PM - 6:30 PM	1	2							3	0	0	0	3
6:30 PM - 6:45 PM									0	0	0	0	0
6:45 PM - 7:00 PM		2							2	0	0	0	2
Total	8	11	0	3	4	4	0	0	19	3	8	0	30
One Hour Volumes													
6:00 AM - 7:00 AM	2	2	0	0	0	0	0	0	4	0	0	0	4
6:15 AM - 7:15 AM	1	2	0	0	0	0	0	0	3	0	0	0	3
6:30 AM - 7:30 AM	1	2	0	0	0	0	0	0	3	0	0	0	3
6:45 AM - 7:45 AM	1	0	0	0	0	0	0	0	1	0	0	0	1
7:00 AM - 8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM - 8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM - 8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM - 8:45 AM	0	1	0	0	0	0	0	0	1	0	0	0	1
8:00 AM - 9:00 AM	1	1	0	0	2	1	0	0	2	0	3	0	5
4:00 PM - 5:00 PM	1	0	0	1	2	3	0	0	1	1	5	0	7
4:15 PM - 5:15 PM	2	0	0	1	1	3	0	0	2	1	4	0	7
4:30 PM - 5:30 PM	3	0	0	1	1	2	0	0	3	1	3	0	7
4:45 PM - 5:45 PM	3	3	0	2	0	0	0	0	6	2	0	0	8
5:00 PM - 6:00 PM	3	4	0	2	0	0	0	0	7	2	0	0	9
5:15 PM - 6:15 PM	2	4	0	2	0	0	0	0	6	2	0	0	8
5:30 PM - 6:30 PM	2	6	0	2	0	0	0	0	8	2	0	0	10
5:45 PM - 6:45 PM	2	3	0	0	0	0	0	0	5	0	0	0	5
6:00 PM - 7:00 PM	1	4	0	0	0	0	0	0	5	0	0	0	5

Wells + Associates, Inc.

Tysons, Virginia

Turning Movement Count - Passenger Cars

PROJECT: Fairfax Boulevard Popeyes W+A JOB NO: 8398 INTERSECTION: Fairfax Blvd. & Hallman St. LOCATION: Fairfax County, VA	DATE: 2/9/2021 DAY: Tuesday WEATHER: clear COUNTED BY: Agan INPUTED BY: Agan	SOUTHBOUND ROAD: x NORTHBOUND ROAD: Hallman Street WESTBOUND ROAD: Fairfax Boulevard EASTBOUND ROAD: Fairfax Boulevard
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Time Period	Southbound x				Westbound Fairfax Boulevard				Northbound Hallman Street				Eastbound Fairfax Boulevard				North & South	East & West	Total				
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total								
15 Minute Volumes																							
6:00 AM - 6:15 AM					0		1		1	6		0		6	0		0	6	1	7			
6:15 AM - 6:30 AM					0		4		4	4		0		4	0		0	4	4	8			
6:30 AM - 6:45 AM					0		1		1	3		0		3	0		0	3	1	4			
6:45 AM - 7:00 AM					0		2		2	3		1		4	0		0	4	2	6			
7:00 AM - 7:15 AM					0		4		4	11		0		11	0		0	11	4	15			
7:15 AM - 7:30 AM					0		6		6	10		0		10	0		0	10	6	16			
7:30 AM - 7:45 AM					0		3		3	11		0		11	0		0	11	3	14			
7:45 AM - 8:00 AM					0		5		5	15		0		15	0		0	15	5	20			
8:00 AM - 8:15 AM					0		2		2	24		1		25	0		0	25	2	27			
8:15 AM - 8:30 AM					0		7		7	10		0		10	0		0	10	7	17			
8:30 AM - 8:45 AM					0		1		1	13		0		13	0		0	13	1	14			
8:45 AM - 9:00 AM					0		3		3	11		2		13	0		0	13	3	16			
4:00 PM - 4:15 PM					0		11		11	10		2		12	0		0	12	11	23			
4:15 PM - 4:30 PM					0		4		4	9		0		9	0		0	9	4	13			
4:30 PM - 4:45 PM					0		8		8	13		0		13	0		0	13	8	21			
4:45 PM - 5:00 PM					0		8		8	10		0		10	0		0	10	8	18			
5:00 PM - 5:15 PM					0		13		13	4		0		4	0		0	4	13	17			
5:15 PM - 5:30 PM					0		7		7	10		0		10	0		0	10	7	17			
5:30 PM - 5:45 PM					0		10		10	10		0		10	0		0	10	10	20			
5:45 PM - 6:00 PM					0		15		15	11		0		11	0		0	11	15	26			
6:00 PM - 6:15 PM					0		9		9	17		0		17	0		0	17	9	26			
6:15 PM - 6:30 PM					0		7		7	5		2		7	0		0	7	7	14			
6:30 PM - 6:45 PM					0		9		9	18		0		18	0		0	18	9	27			
6:45 PM - 7:00 PM					0		8		8	12		1		13	0		0	13	8	21			
Total	0	0	0	0	0	0	0	148	0	148	250	0	9	0	259	0	0	0	0	0	259	148	407
One Hour Volumes																							
6:00 AM - 7:00 AM	0	0	0	0	0	0	0	8	0	8	16	0	1	0	17	0	0	0	0	17	8	25	
6:15 AM - 7:15 AM	0	0	0	0	0	0	0	11	0	11	21	0	1	0	22	0	0	0	0	22	11	33	
6:30 AM - 7:30 AM	0	0	0	0	0	0	0	13	0	13	27	0	1	0	28	0	0	0	0	28	13	41	
6:45 AM - 7:45 AM	0	0	0	0	0	0	0	15	0	15	35	0	1	0	36	0	0	0	0	36	15	51	
7:00 AM - 8:00 AM	0	0	0	0	0	0	0	18	0	18	47	0	0	0	47	0	0	0	0	47	18	65	
7:15 AM - 8:15 AM	0	0	0	0	0	0	0	16	0	16	60	0	1	0	61	0	0	0	0	61	16	77	
7:30 AM - 8:30 AM	0	0	0	0	0	0	0	17	0	17	60	0	1	0	61	0	0	0	0	61	17	78	
7:45 AM - 8:45 AM	0	0	0	0	0	0	0	15	0	15	62	0	1	0	63	0	0	0	0	63	15	78	
8:00 AM - 9:00 AM	0	0	0	0	0	0	0	13	0	13	58	0	3	0	61	0	0	0	0	61	13	74	
4:00 PM - 5:00 PM	0	0	0	0	0	0	0	31	0	31	42	0	2	0	44	0	0	0	0	44	31	75	
4:15 PM - 5:15 PM	0	0	0	0	0	0	0	33	0	33	36	0	0	0	36	0	0	0	0	36	33	69	
4:30 PM - 5:30 PM	0	0	0	0	0	0	0	36	0	36	37	0	0	0	37	0	0	0	0	37	36	73	
4:45 PM - 5:45 PM	0	0	0	0	0	0	0	38	0	38	34	0	0	0	34	0	0	0	0	34	38	72	
5:00 PM - 6:00 PM	0	0	0	0	0	0	0	45	0	45	35	0	0	0	35	0	0	0	0	35	45	80	
5:15 PM - 6:15 PM	0	0	0	0	0	0	0	41	0	41	48	0	0	0	48	0	0	0	0	48	41	89	
5:30 PM - 6:30 PM	0	0	0	0	0	0	0	41	0	41	43	0	2	0	45	0	0	0	0	45	41	86	
5:45 PM - 6:45 PM	0	0	0	0	0	0	0	40	0	40	51	0	2	0	53	0	0	0	0	53	40	93	
6:00 PM - 7:00 PM	0	0	0	0	0	0	0	33	0	33	52	0	3	0	55	0	0	0	0	55	33	88	

Wells + Associates, Inc.

Tysons, Virginia

Pedestrian Volume Survey

<p>PROJECT: Fairfax Boulevard Popeyes W + A JOB NO: 8398 INTERSECTION: Fairfax Blvd. & Hallman St. LOCATION: Fairfax County, VA DATE: 2/9/2021 DAY: Tuesday WEATHER: clear COUNTED BY: Agan INPUTED BY: Agan</p>	
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Time Period	Movement								1+2	3+4	5+6	7+8	Total
	1	2	3	4	5	6	7	8					
15 Minute Volumes													
6:00 AM - 6:15 AM	1								1	0	0	0	1
6:15 AM - 6:30 AM									0	0	0	0	0
6:30 AM - 6:45 AM		2							2	0	0	0	2
6:45 AM - 7:00 AM	1								1	0	0	0	1
7:00 AM - 7:15 AM									0	0	0	0	0
7:15 AM - 7:30 AM									0	0	0	0	0
7:30 AM - 7:45 AM									0	0	0	0	0
7:45 AM - 8:00 AM									0	0	0	0	0
8:00 AM - 8:15 AM	1								1	0	0	0	1
8:15 AM - 8:30 AM									0	0	0	0	0
8:30 AM - 8:45 AM		1							1	0	0	0	1
8:45 AM - 9:00 AM	1				2	1			1	0	3	0	4
4:00 PM - 4:15 PM					1				0	0	1	0	1
4:15 PM - 4:30 PM							1		0	0	1	0	1
4:30 PM - 4:45 PM				1	1	2			0	1	3	0	4
4:45 PM - 5:00 PM	1								1	0	0	0	1
5:00 PM - 5:15 PM	1								1	0	0	0	1
5:15 PM - 5:30 PM	1								1	0	0	0	1
5:30 PM - 5:45 PM		3		2					3	2	0	0	5
5:45 PM - 6:00 PM	1	1							2	0	0	0	2
6:00 PM - 6:15 PM									0	0	0	0	0
6:15 PM - 6:30 PM	1	2							3	0	0	0	3
6:30 PM - 6:45 PM									0	0	0	0	0
6:45 PM - 7:00 PM		2							2	0	0	0	2
Total	9	11	0	3	4	4	0	0	20	3	8	0	31
One Hour Volumes													
6:00 AM - 7:00 AM	2	2	0	0	0	0	0	0	4	0	0	0	4
6:15 AM - 7:15 AM	1	2	0	0	0	0	0	0	3	0	0	0	3
6:30 AM - 7:30 AM	1	2	0	0	0	0	0	0	3	0	0	0	3
6:45 AM - 7:45 AM	1	0	0	0	0	0	0	0	1	0	0	0	1
7:00 AM - 8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM - 8:15 AM	1	0	0	0	0	0	0	0	1	0	0	0	1
7:30 AM - 8:30 AM	1	0	0	0	0	0	0	0	1	0	0	0	1
7:45 AM - 8:45 AM	1	1	0	0	0	0	0	0	2	0	0	0	2
8:00 AM - 9:00 AM	2	1	0	0	2	1	0	0	3	0	3	0	6
4:00 PM - 5:00 PM	1	0	0	1	2	3	0	0	1	1	5	0	7
4:15 PM - 5:15 PM	2	0	0	1	1	3	0	0	2	1	4	0	7
4:30 PM - 5:30 PM	3	0	0	1	1	2	0	0	3	1	3	0	7
4:45 PM - 5:45 PM	3	3	0	2	0	0	0	0	6	2	0	0	8
5:00 PM - 6:00 PM	3	4	0	2	0	0	0	0	7	2	0	0	9
5:15 PM - 6:15 PM	2	4	0	2	0	0	0	0	6	2	0	0	8
5:30 PM - 6:30 PM	2	6	0	2	0	0	0	0	8	2	0	0	10
5:45 PM - 6:45 PM	2	3	0	0	0	0	0	0	5	0	0	0	5
6:00 PM - 7:00 PM	1	4	0	0	0	0	0	0	5	0	0	0	5

Wells + Associates, Inc.

Tysons, Virginia

Pedestrian Volume Survey

PROJECT: Fairfax Boulevard Popeyes W + A JOB NO: 8398 INTERSECTION: Fairfax Blvd. & Site Driveway - West LOCATION: Fairfax County, VA DATE: 2/9/2021 DAY: Tuesday WEATHER: clear COUNTED BY: Agan INPUTED BY: Agan													
Time Period	Movement												Total
	1	2	3	4	5	6	7	8	1+2	3+4	5+6	7+8	
15 Minute Volumes													
6:00 AM - 6:15 AM	1								1	0	0	0	1
6:15 AM - 6:30 AM									0	0	0	0	0
6:30 AM - 6:45 AM		2							2	0	0	0	2
6:45 AM - 7:00 AM	1								1	0	0	0	1
7:00 AM - 7:15 AM									0	0	0	0	0
7:15 AM - 7:30 AM									0	0	0	0	0
7:30 AM - 7:45 AM									0	0	0	0	0
7:45 AM - 8:00 AM									0	0	0	0	0
8:00 AM - 8:15 AM									0	0	0	0	0
8:15 AM - 8:30 AM									0	0	0	0	0
8:30 AM - 8:45 AM		1							1	0	0	0	1
8:45 AM - 9:00 AM	1				2		1		1	0	3	0	4
4:00 PM - 4:15 PM									0	0	0	0	0
4:15 PM - 4:30 PM		1							1	0	0	0	1
4:30 PM - 4:45 PM	1	1					1		2	0	1	0	3
4:45 PM - 5:00 PM									0	0	0	0	0
5:00 PM - 5:15 PM		2							2	0	0	0	2
5:15 PM - 5:30 PM		1							1	0	0	0	1
5:30 PM - 5:45 PM		2							2	0	0	0	2
5:45 PM - 6:00 PM	2						1		2	0	1	0	3
6:00 PM - 6:15 PM	1								1	0	0	0	1
6:15 PM - 6:30 PM								1	0	0	1	0	1
6:30 PM - 6:45 PM								1	0	0	1	0	1
6:45 PM - 7:00 PM		1							1	0	0	0	1
Total	7	11	0	0	2	5	0	0	18	0	7	0	25
One Hour Volumes													
6:00 AM - 7:00 AM	2	2	0	0	0	0	0	0	4	0	0	0	4
6:15 AM - 7:15 AM	1	2	0	0	0	0	0	0	3	0	0	0	3
6:30 AM - 7:30 AM	1	2	0	0	0	0	0	0	3	0	0	0	3
6:45 AM - 7:45 AM	1	0	0	0	0	0	0	0	1	0	0	0	1
7:00 AM - 8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM - 8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM - 8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM - 8:45 AM	0	1	0	0	0	0	0	0	1	0	0	0	1
8:00 AM - 9:00 AM	1	1	0	0	2	1	0	0	2	0	3	0	5
4:00 PM - 5:00 PM	1	2	0	0	0	1	0	0	3	0	1	0	4
4:15 PM - 5:15 PM	1	4	0	0	0	1	0	0	5	0	1	0	6
4:30 PM - 5:30 PM	1	4	0	0	0	1	0	0	5	0	1	0	6
4:45 PM - 5:45 PM	0	5	0	0	0	0	0	0	5	0	0	0	5
5:00 PM - 6:00 PM	2	5	0	0	0	1	0	0	7	0	1	0	8
5:15 PM - 6:15 PM	3	3	0	0	0	1	0	0	6	0	1	0	7
5:30 PM - 6:30 PM	3	2	0	0	0	2	0	0	5	0	2	0	7
5:45 PM - 6:45 PM	3	0	0	0	0	3	0	0	3	0	3	0	6
6:00 PM - 7:00 PM	1	1	0	0	0	2	0	0	2	0	2	0	4

Wells + Associates, Inc.

Tysons, Virginia

Turning Movement Count - Passenger Cars

PROJECT: Fairfax Boulevard Popeyes W+A JOB NO: 8398 INTERSECTION: Fairfax Blvd. & Site Driveway - East LOCATION: Fairfax County,VA	DATE: 2/9/2021 DAY: Tuesday WEATHER: clear COUNTED BY: Agan INPUTED BY: Agan	SOUTHBOUND ROAD: Hotel Driveway NORTHBOUND ROAD: Site Driveway - East WESTBOUND ROAD: Fairfax Boulevard EASTBOUND ROAD: Fairfax Boulevard
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Time Period	Southbound Hotel Driveway				Westbound Fairfax Boulevard				Northbound Site Driveway - East				Eastbound Fairfax Boulevard				North South	East West	Total				
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right				Thru	Left	U-Turn	Total
15 Minute Volumes																							
6:00 AM - 6:15 AM	0	0	0	0	0	3	41	0	0	44	0	0	0	0	0	0	86	1	0	87	0	131	131
6:15 AM - 6:30 AM	1	0	0	0	1	0	53	0	0	53	0	0	0	0	0	0	163	0	0	163	1	216	217
6:30 AM - 6:45 AM	1	0	0	0	1	1	64	0	0	65	0	0	0	0	0	0	186	0	0	186	1	251	252
6:45 AM - 7:00 AM	1	0	1	0	2	0	76	0	0	76	0	0	0	0	0	0	178	0	0	178	2	254	256
7:00 AM - 7:15 AM	0	0	1	0	1	1	76	0	0	77	0	0	0	0	0	0	184	0	0	184	1	261	262
7:15 AM - 7:30 AM	1	0	0	0	1	0	90	0	0	90	0	0	0	0	0	0	197	0	0	197	1	287	288
7:30 AM - 7:45 AM	0	0	0	0	0	0	108	0	0	108	0	0	0	0	0	0	299	1	0	300	0	408	408
7:45 AM - 8:00 AM	0	0	1	0	1	0	139	0	0	139	0	0	0	0	0	0	276	2	0	278	1	417	418
8:00 AM - 8:15 AM	3	0	2	0	5	2	146	0	0	148	0	0	0	0	0	0	207	1	0	208	5	356	361
8:15 AM - 8:30 AM	2	0	0	0	2	0	135	0	0	135	1	0	0	0	1	1	281	1	0	283	3	418	421
8:30 AM - 8:45 AM	0	0	0	0	0	0	138	0	0	138	0	0	0	0	0	0	272	0	0	272	0	410	410
8:45 AM - 9:00 AM	1	0	0	0	1	0	191	0	0	191	0	0	0	0	0	0	241	1	0	242	1	433	434
4:00 PM - 4:15 PM	1	0	0	0	1	1	319	0	0	320	0	0	0	0	0	0	207	1	0	208	1	528	529
4:15 PM - 4:30 PM	0	0	0	0	0	3	334	0	0	337	0	0	0	0	0	0	221	0	0	221	0	558	558
4:30 PM - 4:45 PM	3	0	1	0	4	1	362	0	0	363	0	0	0	0	0	0	228	1	0	229	4	592	596
4:45 PM - 5:00 PM	0	0	0	0	0	8	426	0	0	434	0	0	0	0	0	0	218	0	0	218	0	652	652
5:00 PM - 5:15 PM	0	0	0	0	0	1	371	0	0	372	0	0	0	0	0	0	226	3	0	229	0	601	601
5:15 PM - 5:30 PM	1	0	0	0	1	2	399	0	0	401	0	0	0	0	0	0	210	1	0	211	1	612	613
5:30 PM - 5:45 PM	1	0	1	0	2	1	393	0	0	394	0	0	0	0	0	0	217	1	0	218	2	612	614
5:45 PM - 6:00 PM	0	0	0	0	0	1	335	0	0	336	0	0	0	0	0	0	192	1	0	193	0	529	529
6:00 PM - 6:15 PM	2	2	2	0	6	3	336	0	0	339	0	0	0	0	0	0	249	0	0	249	6	588	594
6:15 PM - 6:30 PM	3	0	0	0	3	0	342	0	0	342	0	0	0	0	0	0	233	0	0	233	3	575	578
6:30 PM - 6:45 PM	0	0	0	0	0	1	305	0	0	306	0	0	0	0	0	0	186	1	0	187	0	493	493
6:45 PM - 7:00 PM	0	0	0	0	0	0	256	0	0	256	0	0	0	0	0	0	163	1	0	164	0	420	420
Total	21	2	9	0	32	29	5435	0	0	5464	1	0	0	0	1	1	5120	17	0	5138	33	10602	10635
One Hour Volumes																							
6:00 AM - 7:00 AM	3	0	1	0	4	4	234	0	0	238	0	0	0	0	0	0	613	1	0	614	4	852	856
6:15 AM - 7:15 AM	3	0	2	0	5	2	269	0	0	271	0	0	0	0	0	0	711	0	0	711	5	982	987
6:30 AM - 7:30 AM	3	0	2	0	5	2	306	0	0	308	0	0	0	0	0	0	745	0	0	745	5	1053	1058
6:45 AM - 7:45 AM	2	0	2	0	4	1	350	0	0	351	0	0	0	0	0	0	858	1	0	859	4	1210	1214
7:00 AM - 8:00 AM	1	0	2	0	3	1	413	0	0	414	0	0	0	0	0	0	956	3	0	959	3	1373	1376
7:15 AM - 8:15 AM	4	0	3	0	7	2	483	0	0	485	0	0	0	0	0	0	979	4	0	983	7	1468	1475
7:30 AM - 8:30 AM	5	0	3	0	8	2	528	0	0	530	1	0	0	0	1	1	1063	5	0	1069	9	1599	1608
7:45 AM - 8:45 AM	5	0	3	0	8	2	558	0	0	560	1	0	0	0	1	1	1036	4	0	1041	9	1601	1610
8:00 AM - 9:00 AM	6	0	2	0	8	2	610	0	0	612	1	0	0	0	1	1	1001	3	0	1005	9	1617	1626
4:00 PM - 5:00 PM	4	0	1	0	5	13	1441	0	0	1454	0	0	0	0	0	0	874	2	0	876	5	2330	2335
4:15 PM - 5:15 PM	3	0	1	0	4	13	1493	0	0	1506	0	0	0	0	0	0	893	4	0	897	4	2403	2407
4:30 PM - 5:30 PM	4	0	1	0	5	12	1558	0	0	1570	0	0	0	0	0	0	882	5	0	887	5	2457	2462
4:45 PM - 5:45 PM	2	0	1	0	3	12	1589	0	0	1601	0	0	0	0	0	0	871	5	0	876	3	2477	2480
5:00 PM - 6:00 PM	2	0	1	0	3	5	1498	0	0	1503	0	0	0	0	0	0	845	6	0	851	3	2354	2357
5:15 PM - 6:15 PM	4	2	3	0	9	7	1463	0	0	1470	0	0	0	0	0	0	868	3	0	871	9	2341	2350
5:30 PM - 6:30 PM	6	2	3	0	11	5	1406	0	0	1411	0	0	0	0	0	0	891	2	0	893	11	2304	2315
5:45 PM - 6:45 PM	5	2	2	0	9	5	1318	0	0	1323	0	0	0	0	0	0	860	2	0	862	9	2185	2194
6:00 PM - 7:00 PM	5	2	2	0	9	4	1239	0	0	1243	0	0	0	0	0	0	831	2	0	833	9	2076	2085

Wells + Associates, Inc.

Tysons, Virginia

Pedestrian Volume Survey

PROJECT: Fairfax Boulevard Popeyes W + A JOB NO: 8398 INTERSECTION: Fairfax Blvd. & Site Driveway - East LOCATION: Fairfax County, VA DATE: 2/9/2021 DAY: Tuesday WEATHER: clear COUNTED BY: Agan INPUTED BY: Agan													
Time Period	Movement								1+2	3+4	5+6	7+8	Total
	1	2	3	4	5	6	7	8					
15 Minute Volumes													
6:00 AM - 6:15 AM	1								1	0	0	0	1
6:15 AM - 6:30 AM									0	0	0	0	0
6:30 AM - 6:45 AM		2							2	0	0	0	2
6:45 AM - 7:00 AM	1								1	0	0	0	1
7:00 AM - 7:15 AM									0	0	0	0	0
7:15 AM - 7:30 AM									0	0	0	0	0
7:30 AM - 7:45 AM									0	0	0	0	0
7:45 AM - 8:00 AM									0	0	0	0	0
8:00 AM - 8:15 AM									0	0	0	0	0
8:15 AM - 8:30 AM									0	0	0	0	0
8:30 AM - 8:45 AM			1						1	0	0	0	1
8:45 AM - 9:00 AM	1				2		1		1	0	3	0	4
4:00 PM - 4:15 PM									0	0	0	0	0
4:15 PM - 4:30 PM			1						1	0	0	0	1
4:30 PM - 4:45 PM	1		1				1		2	0	1	0	3
4:45 PM - 5:00 PM									0	0	0	0	0
5:00 PM - 5:15 PM			2						2	0	0	0	2
5:15 PM - 5:30 PM			1						1	0	0	0	1
5:30 PM - 5:45 PM			2						2	0	0	0	2
5:45 PM - 6:00 PM	2						1		2	0	1	0	3
6:00 PM - 6:15 PM	1								1	0	0	0	1
6:15 PM - 6:30 PM								1	0	0	1	0	1
6:30 PM - 6:45 PM								1	0	0	1	0	1
6:45 PM - 7:00 PM			1						1	0	0	0	1
Total	7	11	0	0	2	5	0	0	18	0	7	0	25
One Hour Volumes													
6:00 AM - 7:00 AM	2	2	0	0	0	0	0	0	4	0	0	0	4
6:15 AM - 7:15 AM	1	2	0	0	0	0	0	0	3	0	0	0	3
6:30 AM - 7:30 AM	1	2	0	0	0	0	0	0	3	0	0	0	3
6:45 AM - 7:45 AM	1	0	0	0	0	0	0	0	1	0	0	0	1
7:00 AM - 8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM - 8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM - 8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM - 8:45 AM	0	1	0	0	0	0	0	0	1	0	0	0	1
8:00 AM - 9:00 AM	1	1	0	0	2	1	0	0	2	0	3	0	5
4:00 PM - 5:00 PM	1	2	0	0	0	1	0	0	3	0	1	0	4
4:15 PM - 5:15 PM	1	4	0	0	0	1	0	0	5	0	1	0	6
4:30 PM - 5:30 PM	1	4	0	0	0	1	0	0	5	0	1	0	6
4:45 PM - 5:45 PM	0	5	0	0	0	0	0	0	5	0	0	0	5
5:00 PM - 6:00 PM	2	5	0	0	0	1	0	0	7	0	1	0	8
5:15 PM - 6:15 PM	3	3	0	0	0	1	0	0	6	0	1	0	7
5:30 PM - 6:30 PM	3	2	0	0	0	2	0	0	5	0	2	0	7
5:45 PM - 6:45 PM	3	0	0	0	0	3	0	0	3	0	3	0	6
6:00 PM - 7:00 PM	1	1	0	0	0	2	0	0	2	0	2	0	4

Wells + Associates, Inc.

McLean, Virginia

Turning Movement Count - Passenger Cars

PROJECT: Pulte Homes Breezeway - City of Fairfax		DATE: 7/11/2019		SOUTHBOUND ROAD: Fairchester Drive	
W+A JOB NO: 7476		DAY: Thursday		NORTHBOUND ROAD: Walnut Street	
INTERSECTION: Fairfax Boulevard & Fairchester Drive/Walnut Street		WEATHER: clear		WESTBOUND ROAD: Fairfax Boulevard	
LOCATION: City of Fairfax, VA		COUNTED BY: James & Inita		EASTBOUND ROAD: Fairfax Boulevard	
		INPUTED BY: Dyron			

Time Period	Southbound Fairchester Drive				Westbound Fairfax Boulevard				Northbound Walnut Street				Eastbound Fairfax Boulevard				North & South	East & West	Total
	Right	Thru	Left	Total	Right	Thru	Left	Total	Right	Thru	Left	Total	Right	Thru	Left	Total			
AM 15 Minute Volumes																			
6:00 AM - 6:15 AM	3	0	4	7	4	41	0	45	7	0	0	7	1	219	1	221	14	266	280
6:15 AM - 6:30 AM	5	4	5	14	4	57	0	61	4	1	2	7	0	329	1	330	21	391	412
6:30 AM - 6:45 AM	6	0	5	11	4	56	1	61	9	1	2	12	1	390	3	394	23	455	478
6:45 AM - 7:00 AM	8	34	6	48	3	74	3	80	15	1	0	16	1	271	70	342	64	422	486
7:00 AM - 7:15 AM	11	3	6	20	3	76	3	82	10	2	2	14	2	384	2	388	34	470	504
7:15 AM - 7:30 AM	5	2	6	13	3	127	12	142	15	4	2	21	0	348	1	349	34	491	525
7:30 AM - 7:45 AM	2	8	6	16	3	119	3	125	13	0	1	14	0	414	2	416	30	541	571
7:45 AM - 8:00 AM	8	4	4	16	8	174	6	188	8	5	2	15	8	363	2	373	31	561	592
8:00 AM - 8:15 AM	0	3	3	6	3	142	5	150	10	8	5	23	1	452	0	453	29	603	632
8:15 AM - 8:30 AM	3	14	9	26	5	131	3	139	18	4	3	25	4	416	1	421	51	560	611
8:30 AM - 8:45 AM	1	4	9	14	2	159	6	167	9	9	3	21	4	430	7	441	35	608	643
8:45 AM - 9:00 AM	0	7	7	14	6	155	5	166	11	5	8	24	29	308	6	343	38	509	547
Total	52	83	70	205	48	1311	47	1406	129	40	30	199	51	4324	96	4471	404	5877	6281
AM One Hour Volumes																			
6:00 AM - 7:00 AM	22	38	20	80	15	228	4	247	35	3	4	42	3	1209	75	1287	122	1534	1656
6:15 AM - 7:15 AM	30	41	22	93	14	263	7	284	38	5	6	49	4	1374	76	1454	142	1738	1880
6:30 AM - 7:30 AM	30	39	23	92	13	333	19	365	49	8	6	63	4	1393	76	1473	155	1838	1993
6:45 AM - 7:45 AM	26	47	24	97	12	396	21	429	53	7	5	65	3	1417	75	1495	162	1924	2086
7:00 AM - 8:00 AM	26	17	22	65	17	496	24	537	46	11	7	64	10	1509	7	1526	129	2063	2192
7:15 AM - 8:15 AM	15	17	19	51	17	562	26	605	46	17	10	73	9	1577	5	1591	124	2196	2320
7:30 AM - 8:30 AM	13	29	22	64	19	566	17	602	49	17	11	77	13	1645	5	1663	141	2265	2406
7:45 AM - 8:45 AM	12	25	25	62	18	606	20	644	45	26	13	84	17	1661	10	1688	146	2332	2478
8:00 AM - 9:00 AM	4	28	28	60	16	587	19	622	48	26	19	93	38	1606	14	1658	153	2280	2433
PM 15 Minute Volumes																			
4:00 PM - 4:15 PM	3	4	13	20	2	382	6	390	9	8	3	20	1	272	7	280	40	670	710
4:15 PM - 4:30 PM	4	4	1	9	4	344	5	353	8	4	4	16	3	218	10	231	25	584	609
4:30 PM - 4:45 PM	2	9	14	25	3	347	4	354	8	7	6	21	2	163	3	168	46	522	568
4:45 PM - 5:00 PM	5	6	5	16	5	385	7	397	9	7	3	19	5	171	1	177	35	574	609
5:00 PM - 5:15 PM	3	7	6	16	4	355	11	370	12	4	4	20	6	164	7	177	36	547	583
5:15 PM - 5:30 PM	7	7	4	18	6	327	6	339	7	16	0	23	2	185	12	199	41	538	579
5:30 PM - 5:45 PM	6	8	5	19	6	318	3	327	5	5	4	14	22	153	2	177	33	504	537
5:45 PM - 6:00 PM	3	4	9	16	6	337	5	348	3	5	7	15	0	151	5	156	31	504	535
6:00 PM - 6:15 PM	11	11	9	31	5	335	3	343	12	4	5	21	2	140	5	147	52	490	542
6:15 PM - 6:30 PM	11	6	8	25	4	337	11	352	6	6	1	13	4	193	1	198	38	550	588
6:30 PM - 6:45 PM	4	0	3	7	4	341	5	350	9	9	1	19	3	175	7	185	26	535	561
6:45 PM - 7:00 PM	4	6	14	24	7	330	7	344	6	3	3	12	1	142	3	146	36	490	526
Total	63	72	91	226	56	4138	73	4267	94	78	41	213	51	2127	63	2241	439	6508	6947
PM One Hour Volumes																			
4:00 PM - 5:00 PM	14	23	33	70	14	1458	22	1494	34	26	16	76	11	824	21	856	146	2350	2496
4:15 PM - 5:15 PM	14	26	26	66	16	1431	27	1474	37	22	17	76	16	716	21	753	142	2227	2369
4:30 PM - 5:30 PM	17	29	29	75	18	1414	28	1460	36	34	13	83	15	683	23	721	158	2181	2339
4:45 PM - 5:45 PM	21	28	20	69	21	1385	27	1433	33	32	11	76	35	673	22	730	145	2163	2308
5:00 PM - 6:00 PM	19	26	24	69	22	1337	25	1384	27	30	15	72	30	653	26	709	141	2093	2234
5:15 PM - 6:15 PM	27	30	27	84	23	1317	17	1357	27	30	16	73	26	629	24	679	157	2036	2193
5:30 PM - 6:30 PM	31	29	31	91	21	1327	22	1370	26	20	17	63	28	637	13	678	154	2048	2202
5:45 PM - 6:45 PM	29	21	29	79	19	1350	24	1393	30	24	14	68	9	659	18	686	147	2079	2226
6:00 PM - 7:00 PM	30	23	34	87	20	1343	26	1389	33	22	10	65	10	650	16	676	152	2065	2217

Wells + Associates, Inc.

McLean, Virginia

Turning Movement Count - Bicycles

PROJECT: Pulte Homes Breezeway - City of Fairfax	DATE: 7/11/2019	SOUTHBOUND ROAD: Fairchester Drive
W+A JOB NO: 7476	DAY: Thursday	NORTHBOUND ROAD: Walnut Street
INTERSECTION: Fairfax Boulevard & Fairchester Drive/Walnut Street	WEATHER: clear	WESTBOUND ROAD: Fairfax Boulevard
LOCATION: City of Fairfax, VA	COUNTED BY: Inita	EASTBOUND ROAD: Fairfax Boulevard
	INPUTED BY: Dylon	

Time Period	Southbound Fairchester Drive				Westbound Fairfax Boulevard				Northbound Walnut Street				Eastbound Fairfax Boulevard				North & South	East & West	Total
	Right	Thru	Left	Total	Right	Thru	Left	Total	Right	Thru	Left	Total	Right	Thru	Left	Total			
AM 15 Minute Volumes																			
6:00 AM - 6:15 AM				0				0				0				0	0	0	0
6:15 AM - 6:30 AM				0				0				0				0	0	0	0
6:30 AM - 6:45 AM				0				0				0				0	0	0	0
6:45 AM - 7:00 AM				0				0				0				0	0	1	1
7:00 AM - 7:15 AM				0				0				0				0	0	0	0
7:15 AM - 7:30 AM				0				0				0				0	0	0	0
7:30 AM - 7:45 AM				0				0				0				0	0	0	0
7:45 AM - 8:00 AM				0				0				0				0	0	0	0
8:00 AM - 8:15 AM				0				0				0				0	0	0	0
8:15 AM - 8:30 AM				0				0				0				0	0	0	0
8:30 AM - 8:45 AM				0				0				0				0	0	0	0
8:45 AM - 9:00 AM				0				0				0				0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	1
AM One Hour Volumes																			
6:00 AM - 7:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1	1	1
6:15 AM - 7:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1	1	1
6:30 AM - 7:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1	1	1
6:45 AM - 7:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1	1	1
7:00 AM - 8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM - 8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM - 8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM - 8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM - 9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM 15 Minute Volumes																			
4:00 PM - 4:15 PM				0				0				0				0	0	0	0
4:15 PM - 4:30 PM				0				0				0				0	0	0	0
4:30 PM - 4:45 PM				0				0				0				0	0	0	0
4:45 PM - 5:00 PM				0				0				0				0	0	0	0
5:00 PM - 5:15 PM				1				0				0				0	1	0	1
5:15 PM - 5:30 PM				0				0				0				0	0	0	0
5:30 PM - 5:45 PM				0				0				0				0	0	0	0
5:45 PM - 6:00 PM				0				0				0				0	0	0	0
6:00 PM - 6:15 PM				0				0				0				0	0	0	0
6:15 PM - 6:30 PM				0				0				0				0	0	0	0
6:30 PM - 6:45 PM				0				0				1			1	1	1	2	2
6:45 PM - 7:00 PM				0				0				0			0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	1	0	1	0	1	2	1	3	3	3
PM One Hour Volumes																			
4:00 PM - 5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM - 5:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
4:30 PM - 5:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
4:45 PM - 5:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
5:00 PM - 6:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
5:15 PM - 6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM - 6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM - 6:45 PM	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	1	1	2	2
6:00 PM - 7:00 PM	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	1	1	2	2

Wells + Associates, Inc.

McLean, Virginia

Pedestrian Volume Survey

PROJECT: Pulte Homes Breezeway - City of Fairfax
W+A JOB NO: 7476
INTERSECTION: Fairfax Boulevard & Fairchester Drive/Walnut
LOCATION: City of Fairfax, VA
DATE: 7/11/2019
DAY: Thursday
WEATHER: clear
COUNTED BY: James
INPUTED BY: Dyron

Time Period	Movement								1 + 2	3 + 4	5 + 6	7 + 8	Total	
	1	2	3	4	5	6	7	8						
AM 15 Minute Volumes														
6:00 AM - 6:15 AM	1	1												
6:15 AM - 6:30 AM														
6:30 AM - 6:45 AM		1	2	1				1						
6:45 AM - 7:00 AM	1		3											
7:00 AM - 7:15 AM	1				2									
7:15 AM - 7:30 AM		2	1	4	1		2							
7:30 AM - 7:45 AM	1	2	3	2	1		1							
7:45 AM - 8:00 AM														
8:00 AM - 8:15 AM		2	2	1										
8:15 AM - 8:30 AM	1				2		2							
8:30 AM - 8:45 AM														
8:45 AM - 9:00 AM														
Total	5	8	11	8	6	5	1	0						
AM One Hour Volumes														
6:00 AM - 7:00 AM	2	2	5	1	0	0	1	0	4	6	0	1	11	
6:15 AM - 7:15 AM	2	1	5	1	2	0	1	0	3	6	2	1	12	
6:30 AM - 7:30 AM	2	3	6	5	3	2	1	0	5	11	5	1	22	
6:45 AM - 7:45 AM	3	4	7	6	4	3	0	0	7	13	7	0	27	
7:00 AM - 8:00 AM	2	4	4	6	4	3	0	0	6	10	7	0	23	
7:15 AM - 8:15 AM	1	6	6	7	2	3	0	0	7	13	5	0	25	
7:30 AM - 8:30 AM	2	4	5	3	3	3	0	0	6	8	6	0	20	
7:45 AM - 8:45 AM	1	2	2	1	2	2	0	0	3	3	4	0	10	
8:00 AM - 9:00 AM	1	2	2	1	2	2	0	0	3	3	4	0	10	
PM 15 Minute Volumes														
4:00 PM - 4:15 PM														
4:15 PM - 4:30 PM				2										
4:30 PM - 4:45 PM		1		1			1							
4:45 PM - 5:00 PM			2											
5:00 PM - 5:15 PM		2	2		1									
5:15 PM - 5:30 PM		1	2	1			1							
5:30 PM - 5:45 PM														
5:45 PM - 6:00 PM														
6:00 PM - 6:15 PM	2			1	2	2								
6:15 PM - 6:30 PM													1	
6:30 PM - 6:45 PM							2							
6:45 PM - 7:00 PM	3			1	1			1						
Total	5	4	6	6	4	6	0	2						
PM One Hour Volumes														
4:00 PM - 5:00 PM	0	1	2	3	0	1	0	0	1	5	1	0	7	
4:15 PM - 5:15 PM	0	3	4	3	1	1	0	0	3	7	2	0	12	
4:30 PM - 5:30 PM	0	4	6	2	1	2	0	0	4	8	3	0	15	
4:45 PM - 5:45 PM	0	3	6	1	1	1	0	0	3	7	2	0	12	
5:00 PM - 6:00 PM	0	3	4	1	1	1	0	0	3	5	2	0	10	
5:15 PM - 6:15 PM	2	1	2	2	2	3	0	0	3	4	5	0	12	
5:30 PM - 6:30 PM	2	0	0	1	2	2	0	1	2	1	4	1	8	
5:45 PM - 6:45 PM	2	0	0	1	2	4	0	1	2	1	6	1	10	
6:00 PM - 7:00 PM	5	0	0	2	3	4	0	2	5	2	7	2	16	

QUALITY COUNTS REPORT

Intersection: Walnut St Fairfax Blvd

ALL-VEHICLE VOLUMES

Time Period	NB Left	NB Thru	NB Right	NB U-Turn	NB RTOR	SB Left	SB Thru	SB Right	SB U-Turn	SB RTOR	EB Left	EB Thru	EB Right	EB U-Turn	EB RTOR	WB Left	WB Thru	WB Right	WB U-Turn	WB RTOR	Total	Hourly Totals
6:00 AM	0	0	2	0	0	2	1	4	0	0	2	275	2	0	0	1	32	3	0	0	324	
6:15 AM	1	1	3	0	0	7	1	2	0	0	3	425	2	0	0	3	55	5	0	0	508	
6:30 AM	0	3	11	0	0	7	5	4	0	0	7	478	0	0	0	3	60	1	0	0	579	
6:45 AM	5	2	14	0	0	10	1	4	0	0	1	426	1	0	0	2	110	5	0	0	581	1992 6:00 AM
7:00 AM	9	9	14	0	0	10	11	1	0	0	3	395	7	0	0	4	114	6	0	0	583	2251 6:15 AM
7:15 AM	11	5	11	0	0	8	17	5	0	0	2	359	9	0	0	21	186	8	0	0	642	2385 6:30 AM
7:30 AM	30	5	11	0	0	6	6	11	0	0	5	405	2	0	0	11	196	7	0	0	695	2501 6:45 AM
7:45 AM	6	11	14	0	0	8	10	8	0	0	7	374	4	0	0	2	156	6	0	0	606	2526 7:00 AM
8:00 AM	4	3	16	0	0	4	5	7	0	0	6	386	5	0	0	5	144	4	0	0	589	2532 7:15 AM
8:15 AM	4	4	9	0	0	6	8	5	0	0	5	377	8	0	0	6	166	5	0	0	603	2493 7:30 AM
8:30 AM	9	1	11	0	0	4	4	2	0	0	7	395	4	0	0	8	190	4	0	0	639	2437 7:45 AM
8:45 AM	3	3	11	0	0	11	6	3	0	0	3	337	6	0	0	9	172	1	1	0	566	2397 8:00 AM
9:00 AM	7	2	18	0	0	9	7	4	0	0	1	332	4	1	0	7	177	6	0	0	575	2383 8:15 AM
9:15 AM	1	1	12	0	0	6	3	5	0	0	1	332	6	0	0	7	234	3	0	0	611	2391 8:30 AM
9:30 AM	1	0	8	0	0	7	3	2	0	0	1	356	2	0	0	1	206	5	1	0	593	2345 8:45 AM
9:45 AM	6	1	15	0	0	8	7	5	0	0	3	298	4	0	0	7	230	5	0	0	589	2368 9:00 AM
10:00 AM	3	1	9	0	0	5	5	9	0	0	10	293	3	0	0	7	208	2	0	0	555	2348 9:15 AM
10:15 AM	5	5	12	0	0	9	7	9	0	0	6	249	4	0	0	3	221	6	0	0	536	2273 9:30 AM
10:30 AM	2	2	7	0	0	5	2	4	0	0	4	207	4	1	0	8	239	3	0	0	488	2168 9:45 AM
10:45 AM	2	4	14	0	0	4	2	3	0	0	3	239	6	0	0	7	238	3	0	0	525	2104 10:00 AM
11:00 AM	2	2	11	0	0	7	1	6	0	0	4	215	2	0	0	7	239	5	0	0	501	2050 10:15 AM
11:15 AM	1	2	13	0	0	12	3	5	0	0	7	229	7	0	0	5	242	4	0	0	530	2044 10:30 AM
11:30 AM	3	4	13	0	0	5	1	9	0	0	4	246	2	0	0	10	234	4	0	0	535	2091 10:45 AM
11:45 AM	6	4	5	0	0	11	4	6	0	0	6	239	6	0	0	6	289	1	0	0	583	2149 11:00 AM
12:00 PM	2	5	8	0	0	6	5	7	0	0	6	266	6	0	0	10	315	3	0	0	639	2287 11:15 AM
12:15 PM	4	3	14	0	0	8	3	4	0	0	6	275	4	0	0	9	289	5	0	0	624	2381 11:30 AM
12:30 PM	5	0	14	0	0	6	4	10	0	0	3	262	6	0	0	6	327	5	0	0	648	2494 11:45 AM
12:45 PM	3	2	7	0	0	13	8	13	0	0	8	253	11	0	0	11	316	9	0	0	654	2565 12:00 PM
1:00 PM	8	2	14	0	0	17	3	7	0	0	7	224	6	1	0	11	289	7	0	0	596	2522 12:15 PM
1:15 PM	3	2	15	0	0	13	5	2	0	0	2	277	7	0	0	15	312	3	0	0	656	2554 12:30 PM
1:30 PM	6	3	7	0	0	11	7	2	0	0	4	228	7	0	0	9	275	0	0	0	559	2465 12:45 PM
1:45 PM	8	3	13	0	0	7	3	7	0	0	2	248	9	1	0	17	304	6	0	0	628	2439 1:00 PM
2:00 PM	3	2	6	0	0	5	3	4	0	0	6	253	5	0	0	9	273	5	0	0	574	2417 1:15 PM
2:15 PM	6	4	12	0	0	15	5	2	0	0	3	246	5	0	0	23	304	2	1	0	628	2389 1:30 PM
2:30 PM	5	7	14	0	0	12	9	4	0	0	2	211	8	0	0	12	308	11	0	0	603	2433 1:45 PM
2:45 PM	5	4	13	0	0	8	3	3	0	0	5	228	8	0	0	13	324	2	0	0	616	2421 2:00 PM
3:00 PM	24	9	12	0	0	5	14	2	0	0	5	239	6	0	0	11	360	9	0	0	696	2543 2:15 PM
3:15 PM	17	11	12	0	0	14	14	7	0	0	5	211	9	0	0	7	375	6	0	0	688	2603 2:30 PM
3:30 PM	13	8	9	0	0	9	6	5	0	0	6	223	0	0	0	9	342	5	0	0	635	2635 2:45 PM
3:45 PM	14	7	10	0	0	14	5	6	0	0	2	189	5	0	0	16	385	7	1	0	661	2680 3:00 PM
4:00 PM	6	12	17	0	0	7	8	6	0	0	6	197	5	1	0	14	391	10	0	0	680	2664 3:15 PM
4:15 PM	4	7	9	0	0	9	8	7	0	0	8	213	0	0	0	10	360	3	0	0	638	2614 3:30 PM
4:30 PM	4	11	10	0	0	16	12	8	0	0	6	192	2	0	0	9	375	3	0	0	648	2627 3:45 PM
4:45 PM	4	5	14	0	0	10	9	9	0	0	6	226	5	0	0	14	380	9	0	0	691	2657 4:00 PM
5:00 PM	3	3	15	0	0	14	12	9	0	0	5	208	2	0	0	14	389	4	0	0	678	2655 4:15 PM
5:15 PM	4	9	10	0	0	11	11	3	0	0	3	233	4	0	0	11	399	10	0	0	708	2725 4:30 PM
5:30 PM	11	14	18	0	0	15	11	4	0	0	1	207	3	1	0	11	410	6	0	0	712	2789 4:45 PM
5:45 PM	6	8	20	0	0	17	9	5	0	0	13	240	2	0	0	5	383	3	0	0	711	2809 5:00 PM
6:00 PM	6	6	14	0	0	20	4	10	0	0	2	223	4	0	0	11	351	10	0	0	661	2792 5:15 PM
6:15 PM	8	11	8	0	0	16	14	3	0	0	5	229	8	0	0	10	351	10	0	0	673	2757 5:30 PM
6:30 PM	8	4	9	0	0	12	7	5	0	0	5	216	4	0	0	11	350	6	1	0	638	2683 5:45 PM
6:45 PM	3	7	8	0	0	16	6	9	0	0	6	193	7	0	0	11	379	6	0	0	651	2623 6:00 PM
7:00 PM	3	4	11	0	0	7	7	8	0	0	6	206	1	0	0	7	323	4	0	0	587	2549 6:15 PM
7:15 PM	5	5	12	0	0	12	10	6	0	0	9	149	4	0	0	15	325	3	0	0	555	2431 6:30 PM
7:30 PM	8	4	7	0	0	11	6	7	0	0	3	167	4	0	0	5	329	10	0	0	561	2354 6:45 PM
7:45 PM	3	7	6	0	0	13	6	2	0	0	10	149	5	0	0	12	284	8	1	0	506	2209 7:00 PM
8:00 PM	6	6	8	0	0	7	1	8	0	0	6	163	1	0	0	10	212	7	0	0	435	2057 7:15 PM
8:15 PM	5	0	8	0	0	7	3	2	0	0	2	144	4	0	0	5	227	6	0	0	413	1915 7:30 PM
8:30 PM	13	2	1	0	0	2	2	3	0	0	3	134	1	0	0	10	204	5	0	0	380	1734 7:45 PM
8:45 PM	7	9	0	0	0	3	5	6	0	0	1	144	1	0	0	9	188	8	0	0	381	1609 8:00 PM
9:00 PM	1	1	6	0	0	3	0	2	0	0	4	128	5	0	0	5	149	6	0	0	310	1484 8:15 PM
9:15 PM	1	1	1	0	0	7	2	2	0	0	3	100	1	0	0	6	129	3	0	0	256	1327 8:30 PM
9:30 PM	0	0	1	0	0	3	1	2	0	0	3	112	1	0	0	9	154	3	0	0	289	1236 8:45 PM
9:45 PM	0	0	3	0	0	2	2	3	0	0	1	94	0	0	0	6	152	3	0	0	266	1121 9:00 PM

QUALITY COUNTS REPORT

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Intersection: Walnut St Fairfax Blvd
 City/State: Fairfax VA
 QCJobNo: 10796040
 ClientID:
 Date: #####
 Comments:

Lane Configuration:

SIGNAL	SBLane1	SBLane2	SBLane3	SBLane4	SBLane5	SBLane6	SBLane7		SIGNAL
	TR	L							
EBLane7								TR	WBLane1
EBLane6								T	WBLane2
EBLane5								L	WBLane3
EBLane4									WBLane4
EBLane3	L								WBLane5
EBLane2	T								WBLane6
EBLane1	TR								WBLane7
SIGNAL						L	TR		
	NBLane7	NBLane6	NBLane5	NBLane4	NBLane3	NBLane2	NBLane1	SIGNAL	

HEAVY-VEHICLE VOLUMES

Time Period	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right	Total	Hourly Total	
6:00 AM	0	0	0	0	0	0	0	0	5	0	0	3	0	8	
6:15 AM	0	1	0	0	0	0	0	1	7	0	0	3	0	12	
6:30 AM	0	1	2	1	0	0	0	0	18	0	0	1	0	23	
6:45 AM	0	0	4	0	0	0	0	1	16	0	0	7	0	28	71
7:00 AM	0	0	0	0	0	1	0	0	9	0	0	7	0	17	80
7:15 AM	0	0	0	0	0	0	0	0	6	0	0	12	0	18	86
7:30 AM	0	2	1	0	0	0	0	0	16	0	1	11	0	31	94
7:45 AM	3	2	0	0	0	0	0	1	7	0	0	6	0	19	85
8:00 AM	0	0	0	1	0	0	0	0	12	0	0	3	0	16	84
8:15 AM	1	0	0	0	0	1	0	0	12	0	0	8	1	23	89
8:30 AM	0	0	0	0	0	0	0	0	10	0	1	5	0	16	74
8:45 AM	0	0	1	0	0	0	0	0	13	0	0	2	0	16	71
9:00 AM	0	0	0	1	0	0	0	0	5	0	0	10	0	16	71
9:15 AM	0	0	1	0	0	0	0	0	15	0	0	7	0	23	71
9:30 AM	0	0	0	0	0	0	0	0	10	0	0	10	1	21	76
9:45 AM	0	0	1	1	0	0	0	0	12	0	0	7	0	21	81
10:00 AM	0	0	0	0	0	0	0	0	4	0	0	10	0	14	79
10:15 AM	1	0	0	0	0	0	0	0	13	0	1	4	0	19	75
10:30 AM	0	0	0	0	0	0	0	0	5	0	0	10	0	15	69
10:45 AM	0	0	0	0	0	1	0	1	7	1	0	6	0	16	64
11:00 AM	0	0	1	0	0	0	0	0	7	0	0	7	0	15	65
11:15 AM	0	0	0	0	0	0	0	0	8	1	0	11	0	20	66
11:30 AM	0	0	0	0	0	0	0	0	5	0	0	7	0	12	63
11:45 AM	0	0	0	1	0	0	0	0	6	0	0	3	0	10	57
12:00 PM	0	0	1	0	0	1	0	0	8	0	0	9	0	19	61
12:15 PM	0	0	0	0	0	1	2	0	6	0	1	10	0	20	61
12:30 PM	0	0	1	0	0	0	0	0	3	0	0	6	0	10	59
12:45 PM	0	0	0	0	0	1	0	2	6	0	2	11	0	22	71
1:00 PM	1	0	0	1	0	0	1	0	9	0	0	15	0	27	79
1:15 PM	0	0	2	0	0	0	0	0	7	0	0	8	0	17	76
1:30 PM	0	0	0	0	0	0	0	0	11	0	0	6	0	17	83
1:45 PM	1	0	1	0	0	0	0	0	12	0	1	10	0	25	86
2:00 PM	0	0	0	0	0	0	0	0	6	0	1	10	0	17	76
2:15 PM	0	0	0	1	0	0	0	0	5	0	1	22	0	29	88
2:30 PM	0	2	0	0	0	1	0	0	4	0	0	14	1	22	93
2:45 PM	0	0	0	0	0	0	0	0	6	0	0	8	0	14	82
3:00 PM	0	1	0	0	0	1	0	0	9	0	0	7	0	18	83
3:15 PM	0	0	1	0	0	2	0	0	7	0	1	8	0	19	73
3:30 PM	1	0	0	0	0	0	0	0	2	0	0	5	0	8	59
3:45 PM	0	1	1	0	0	0	0	0	4	0	0	8	0	14	59
4:00 PM	0	2	1	0	0	0	1	0	6	0	0	9	0	19	60
4:15 PM	0	0	0	0	0	1	0	0	4	0	0	3	0	8	49
4:30 PM	0	0	0	1	0	0	0	0	1	0	1	7	0	10	51
4:45 PM	0	0	0	0	0	0	0	0	3	0	1	9	1	14	51
5:00 PM	0	0	1	0	0	0	1	0	2	0	1	11	0	16	48
5:15 PM	0	0	1	0	0	0	0	0	3	0	0	9	0	13	53
5:30 PM	0	0	1	0	0	0	0	0	4	0	0	5	0	10	53
5:45 PM	0	0	1	0	0	0	0	0	3	0	0	6	0	10	49
6:00 PM	0	0	1	0	0	0	0	0	3	0	0	1	0	5	38
6:15 PM	0	1	1	0	0	0	0	0	1	0	1	5	0	9	34
6:30 PM	0	0	0	0	0	0	0	0	2	0	0	10	0	12	36
6:45 PM	0	0	0	0	0	0	0	0	3	0	1	4	0	8	34
7:00 PM	0	0	0	0	0	0	0	0	2	0	0	4	0	6	35
7:15 PM	0	0	0	0	0	0	0	0	1	0	0	3	0	4	30
7:30 PM	0	0	0	0	0	0	0	0	1	0	0	6	0	7	25
7:45 PM	0	0	0	0	0	1	0	0	3	0	0	2	1	7	24
8:00 PM	0	0	0	0	0	0	0	0	1	0	0	2	0	3	21
8:15 PM	0	0	0	0	0	0	0	0	3	0	0	7	0	10	27
8:30 PM	0	0	0	0	0	0	0	0	2	0	0	0	0	2	22
8:45 PM	0	0	0	1	0	0	1	0	1	0	0	2	0	5	20
9:00 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	2	19
9:15 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	2	11
9:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	1	10
9:45 PM	0	0	0	0	0	0	0	0	2	0	0	3	0	5	10

QUALITY COUNTS REPORT

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Intersectio Walnut St Fairfax Blvd
 City/State: Fairfax VA
 QCJobNo: 10796040
 ClientID:
 Date: 9/11/2012
 Comments:

Lane Configuration:

SIGNAL	SBLane1	SBLane2	SBLane3	SBLane4	SBLane5	SBLane6	SBLane7		SIGNAL
	TR	L							
EBLane7								TR	WBLane1
EBLane6								T	WBLane2
EBLane5								L	WBLane3
EBLane4									WBLane4
EBLane3 L									WBLane5
EBLane2 T									WBLane6
EBLane1 TR									WBLane7
SIGNAL						L	TR		
	NBLane7	NBLane6	NBLane5	NBLane4	NBLane3	NBLane2	NBLane1	SIGNAL	

PEDESTRIAN VOLUMES

Time Perio	North	South	East	West	Total
6:00 AM	1	0	0	0	1
6:15 AM	0	0	1	0	1
6:30 AM	1	1	2	0	4
6:45 AM	0	0	1	0	1
7:00 AM	0	0	0	0	0
7:15 AM	1	1	0	0	2
7:30 AM	1	0	0	0	1
7:45 AM	0	0	0	0	0
8:00 AM	1	0	2	0	3
8:15 AM	0	1	1	0	2
8:30 AM	0	0	0	0	0
8:45 AM	1	3	0	0	4
9:00 AM	0	1	1	0	2
9:15 AM	0	1	0	0	1
9:30 AM	1	2	3	0	6
9:45 AM	1	1	4	0	6
10:00 AM	0	0	1	0	1
10:15 AM	1	3	1	0	5
10:30 AM	0	0	1	0	1
10:45 AM	0	1	0	0	1
11:00 AM	0	3	2	0	5
11:15 AM	1	0	2	0	3
11:30 AM	2	0	3	0	5
11:45 AM	3	2	0	0	5
12:00 PM	1	1	3	0	5
12:15 PM	1	1	4	0	6
12:30 PM	0	2	3	0	5
12:45 PM	0	2	2	0	4
1:00 PM	0	0	1	0	1
1:15 PM	3	1	0	1	5
1:30 PM	0	1	0	0	1
1:45 PM	1	1	1	1	4
2:00 PM	2	1	2	0	5
2:15 PM	1	1	2	0	4
2:30 PM	0	2	1	0	3
2:45 PM	1	0	1	1	3
3:00 PM	2	0	2	0	4
3:15 PM	1	2	4	0	7
3:30 PM	1	4	4	0	9
3:45 PM	0	2	3	0	5
4:00 PM	1	0	0	0	1
4:15 PM	0	4	1	1	6
4:30 PM	4	1	0	0	5
4:45 PM	0	0	4	0	4
5:00 PM	2	1	0	0	3
5:15 PM	2	4	2	0	8
5:30 PM	3	3	3	0	9
5:45 PM	2	0	2	0	4
6:00 PM	2	1	1	0	4
6:15 PM	3	0	1	0	4
6:30 PM	4	2	3	0	9
6:45 PM	0	2	3	0	5
7:00 PM	4	2	0	0	6
7:15 PM	0	0	1	0	1
7:30 PM	2	0	0	0	2
7:45 PM	5	0	1	0	6
8:00 PM	0	2	5	0	7
8:15 PM	0	3	1	0	4
8:30 PM	0	3	0	0	3
8:45 PM	1	1	0	1	3
9:00 PM	7	1	2	0	10
9:15 PM	1	2	0	0	3
9:30 PM	2	1	0	0	3
9:45 PM	0	2	2	0	4

QUALITY COUNTS REPORT

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Intersectio Walnut St Fairfax Blvd
 City/State: Fairfax VA
 QCJobNo: 10796040
 ClientID:
 Date: 9/11/2012
 Comments:

Lane Configuration:

SIGNAL	SBLane1	SBLane2	SBLane3	SBLane4	SBLane5	SBLane6	SBLane7		SIGNAL
	TR	L							
EBLane7									TR
EBLane6									T
EBLane5									L
EBLane4									
EBLane3	L								
EBLane2	T								
EBLane1	TR								
SIGNAL						L	TR		
	NBLane7	NBLane6	NBLane5	NBLane4	NBLane3	NBLane2	NBLane1		SIGNAL

BICYCLE VOLUMES

Time Period	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right	Total
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
9:30 AM	0	0	0	0	0	2	0	0	0	0	0	0	2
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	1	0	0	0	0	0	1	0	0	0	0	2
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	1	0	0	1	0	0	1	0	0	0	0	3
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	2	0	2
2:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
3:00 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
3:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
3:30 PM	0	0	0	1	0	0	0	1	0	0	0	0	2
3:45 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
4:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	1	0	0	0	0	0	1	0	0	3	0	5
5:30 PM	0	0	0	0	0	0	2	0	0	0	0	0	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 PM	0	0	0	0	0	2	0	0	0	0	0	0	2
7:30 PM	0	0	0	0	0	0	0	0	0	0	2	0	2
7:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
8:00 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
8:15 PM	0	0	1	0	0	0	0	0	0	0	0	0	1
8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
9:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1

APPENDIX D

TOSAM SYNCHRO PARAMETERS CHECKLIST

Wells + Associates Quality Control (QC) Supplemental Checklist

For Synchro Analysis Models - VDOT Review Jurisdictions
from *Traffic Operations and Safety Analysis Manual (TOSAM)*, v 2.0

Project #: 8398 Scenario: _____

Project Name: 10869 Fairfax Boulevard Popeyes

Base Model Source: VDOT (X): _____ Other: City of Fairfax New Build (X): _____

Analyst: Ben McDowell

Project Manager: Les Adkins, P.E.

Synchro Standard Input Parameters (TOSAM Table 16)

SYNHURO INPUT PARAMETER	TYPICAL VALUE, ACCEPTABLE RANGES, and/or SPECIAL NOTES		Analyst Initials	QC Initials	Notes
	Existing Conditions	Future Conditions			
Geometric/Analysis Input Parameters					
Analysis Method	* Select HCM 2010 methodology OR * Select HCM 2000 methodology for analyses where HCM 2010 methodology does not apply		BDM	RMB	HCM 2000
Heavy Vehicles	* Calculate using existing traffic count data	* Calculate using existing traffic count data if future vehicle mix is project to be similar to existing vehicle mix OR * Calculate based on projected future vehicle mix	BDM	RMB	Based on existing count data where available, default 2% where not available
Link Distance	* Obtain from existing field measurements	* Obtain from existing field measurements or design plans	BDM	RMB	
Link Speed	* Obtain from existing speed data OR * Posted speed limit (arterial only)		BDM	RMB	
Peak Hour Factor	* Calculate using existing traffic count data	* Calculate based on future land use, if known OR * Higher of 0.92 or existing PHF (Urban) OR * Higher of 0.88 or existing PHF (Rural)	BDM	RMB	
Right-Turn Channelized	* Select the type of control on the channelized movement (Free, Yield, Stop, or Signal) and enter the curb radius		BDM	RMB	
	* Use existing field measurements	* Based on existing field measurements or design plans			
Storage Length	* Use effective storage length from existing field measurements	* Use effective storage length from existing field measurements for No-Build scenarios * Use maximum back-of-queue length as a minimum for Build scenarios	BDM	RMB	
Taper Length	* Set the taper length equal to zero feet		BDM	RMB	

SYNHURO INPUT PARAMETER	TYPICAL VALUE, ACCEPTABLE RANGES, and/or SPECIAL NOTES		Analyst Initials	QC Initials	Notes
Signal Timing Input Parameters					
All-Red Time	* Obtain from existing timing plans or field measurements	* Based on guidance in the <i>Yellow Change Intervals and Red Clearance Intervals</i> TED Memorandum (TE-306.1)	BDM	RMB	
Control Type	* Obtain from existing timing plans or field measurements	* Based on existing timing plans unless otherwise directed by the VDOT project manager	BDM	RMB	
Cycle Length	* Obtain from existing timing plans or field measurements	* Should range from 60 to 240 seconds and be approved by the VDOT project manager	BDM	RMB	
Minimum Initial	* Obtain from existing timing plans or field measurements	* Obtain from existing timing plans or field measurements OR * Should be approved by the VDOT project manager	BDM	RMB	
Minimum Split	* Obtain from existing timing plans or field measurements	* Obtain from existing timing plans or field measurements OR * Should be approved by the VDOT project manager	BDM	RMB	
Offset	* Obtain from existing timing plans or field measurements	* Obtain from time-space diagrams * Should be approved by the VDOT project manager	BDM	RMB	
Optimize	* Methodology should be approved by the VDOT project manager		BDM	RMB	
Total Split	* Obtain from existing timing plans or field measurements	* Obtain from existing timing plans or field measurements OR * Should be approved by the VDOT project manager	BDM	RMB	
Turn Type	* Obtain from existing timing plans or field measurements	* Based on TED's <i>Guidance for Determination and Documentation of Left-Turn Phasing Mode</i>	BDM	RMB	
Yellow Time	* Obtain from existing timing plans or field measurements	* Based on guidance in the <i>Yellow Change Intervals and Red Clearance Intervals</i> TED Memorandum (TE-306.1)	BDM	RMB	
Pedestrian, Parking, and Bus Input Parameters					
Adjacent Parking Lane	* Only consider maneuvers that occur within 250 feet (upstream) of the stop bar on an approach		N/A	N/A	
	* Obtain from existing parking count data	* Obtain from existing parking count data if future parking conditions are expected to be similar to existing conditions OR * Calculate based on projected future parking conditions			

SYNHURO INPUT PARAMETER	TYPICAL VALUE, ACCEPTABLE RANGES, and/or SPECIAL NOTES		Analyst Initials	QC Initials	Notes
Bus Blockages	* Only consider movements that occur within 250 feet (upstream or downstream) of the stop bar on an approach		BDM	RMB	
	* Calculate from existing traffic count data	* Calculate from existing count data if future bus service is projected to be similar to existing service OR * Calculate from future bus service			
Flash Don't Walk	* Obtain from existing timing plans or field measurements	* Calculate based on latest guidance in the MUTCD and VDOT regional pedestrian policy	BDM	RMB	
Walk Time	* Obtain from existing timing plans or field measurements	* Calculate based on latest guidance in the MUTCD and VDOT regional pedestrian policy	BDM	RMB	

APPENDIX E
2021 EXISTING CONDITIONS SYNCHRO
REPORTS

HCM Unsignalized Intersection Capacity Analysis
 1: Second St & Fairfax Blvd

2021 EX AM
 02/25/2021



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑	↵	
Traffic Volume (veh/h)	1662	18	0	712	10	0
Future Volume (Veh/h)	1662	18	0	712	10	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	1889	20	0	809	11	0
Pedestrians						3
Lane Width (ft)						12.0
Walking Speed (ft/s)						4.0
Percent Blockage						0
Right turn flare (veh)						
Median type	TWLTL		TWLTL			
Median storage veh)	2		2			
Upstream signal (ft)	650					
pX, platoon unblocked					0.94	
vC, conflicting volume			1912	2306	958	
vC1, stage 1 conf vol					1902	
vC2, stage 2 conf vol					404	
vCu, unblocked vol			1912	2262	958	
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	89	100	
cM capacity (veh/h)			306	100	257	
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	1259	650	0	404	404	11
Volume Left	0	0	0	0	0	11
Volume Right	0	20	0	0	0	0
cSH	1700	1700	1700	1700	1700	100
Volume to Capacity	0.74	0.38	0.00	0.24	0.24	0.11
Queue Length 95th (ft)	0	0	0	0	0	9
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	45.6
Lane LOS						E
Approach Delay (s)	0.0		0.0			45.6
Approach LOS						E
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			56.5%	ICU Level of Service	B	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

2: Hallman St/Lazboy Driveway & Fairfax Blvd

2021 EX AM

02/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	2	1660	0	17	711	3	1	0	60	2	1	0	
Future Volume (Veh/h)	2	1660	0	17	711	3	1	0	60	2	1	0	
Sign Control	Free			Free			Stop			Stop			
Grade	0%			0%			0%			0%			
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	
Hourly flow rate (vph)	2	1865	0	19	799	3	1	0	67	2	1	0	
Pedestrians												1	
Lane Width (ft)												12.0	
Walking Speed (ft/s)												4.0	
Percent Blockage												0	
Right turn flare (veh)													
Median type	TWLTL				TWLTL								
Median storage (veh)	2				2								
Upstream signal (ft)					510								
pX, platoon unblocked	0.94						0.94	0.94			0.94	0.94	0.94
vC, conflicting volume	803	1865			2307			2710	932	1843	2708	402	
vC1, stage 1 conf vol							1869	1869			840	840	
vC2, stage 2 conf vol							438	841			1004	1869	
vCu, unblocked vol	657	1865			2261			2691	932	1766	2689	230	
tC, single (s)	4.1	4.1			7.5			6.5	6.9	7.5	6.5	6.9	
tC, 2 stage (s)							6.5	5.5			6.5	5.5	
tF (s)	2.2	2.2			3.5			4.0	3.3	3.5	4.0	3.3	
p0 queue free %	100	94			99			100	75	99	99	100	
cM capacity (veh/h)	868	320			72			112	268	155	95	724	
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1					
Volume Total	2	1243	622	19	533	269	68	3					
Volume Left	2	0	0	19	0	0	1	2					
Volume Right	0	0	0	0	0	3	67	0					
cSH	868	1700	1700	320	1700	1700	258	128					
Volume to Capacity	0.00	0.73	0.37	0.06	0.31	0.16	0.26	0.02					
Queue Length 95th (ft)	0	0	0	5	0	0	26	2					
Control Delay (s)	9.2	0.0	0.0	17.0	0.0	0.0	23.9	33.8					
Lane LOS	A			C			C		D				
Approach Delay (s)	0.0			0.4			23.9		33.8				
Approach LOS							C		D				
Intersection Summary													
Average Delay	0.7												
Intersection Capacity Utilization	56.3%			ICU Level of Service				B					
Analysis Period (min)	15												

HCM Unsignalized Intersection Capacity Analysis

3: Existing Western Site Entrance & Fairfax Blvd

2021 EX AM
02/25/2021



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↙	↑↑	↘	
Traffic Volume (veh/h)	1723	0	0	731	0	0
Future Volume (Veh/h)	1723	0	0	731	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	1936	0	0	821	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)			260			
pX, platoon unblocked					0.93	
vC, conflicting volume			1936	2346	968	
vC1, stage 1 conf vol					1936	
vC2, stage 2 conf vol					410	
vCu, unblocked vol			1936	2301	968	
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)			300	96	254	
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	1291	645	0	410	410	0
Volume Left	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0
cSH	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.76	0.38	0.00	0.24	0.24	0.00
Queue Length 95th (ft)	0	0	0	0	0	0
Control Delay (s)	0.0	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			51.0%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
 5: Existing Eastern Site Entrance/Hampton Inn Driveway & Fairfax Blvd

2021 EX AM
 02/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↗	↑↑		↖	↑↑			↕			↕		
Traffic Volume (veh/h)	3	1719	1	0	725	2	0	0	1	2	0	6	
Future Volume (Veh/h)	3	1719	1	0	725	2	0	0	1	2	0	6	
Sign Control	Free			Free			Stop			Stop			
Grade	0%			0%			0%			0%			
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	
Hourly flow rate (vph)	3	1931	1	0	815	2	0	0	1	2	0	7	
Pedestrians								3			2		
Lane Width (ft)								12.0			12.0		
Walking Speed (ft/s)								4.0			4.0		
Percent Blockage								0			0		
Right turn flare (veh)													
Median type	TWLTL				None								
Median storage (veh)	2												
Upstream signal (ft)					200								
pX, platoon unblocked	0.93						0.93	0.93			0.93	0.93	0.93
vC, conflicting volume	819			1935			2355	2760	969	1790	2759	410	
vC1, stage 1 conf vol							1940	1940			818	818	
vC2, stage 2 conf vol							414	819			972	1941	
vCu, unblocked vol	666			1935			2310	2743	969	1706	2742	229	
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9	
tC, 2 stage (s)							6.5	5.5			6.5	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3	
p0 queue free %	100			100			100	100	100	99	100	99	
cM capacity (veh/h)	858			299			65	104	253	220	104	722	

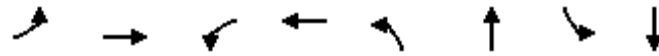
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1	
Volume Total	3	1287	645	0	543	274	1	9	
Volume Left	3	0	0	0	0	0	0	2	
Volume Right	0	0	1	0	0	2	1	7	
cSH	858	1700	1700	1700	1700	1700	253	479	
Volume to Capacity	0.00	0.76	0.38	0.00	0.32	0.16	0.00	0.02	
Queue Length 95th (ft)	0	0	0	0	0	0	0	1	
Control Delay (s)	9.2	0.0	0.0	0.0	0.0	0.0	19.3	12.7	
Lane LOS	A							C	B
Approach Delay (s)	0.0			0.0			19.3	12.7	
Approach LOS							C	B	

Intersection Summary

Average Delay	0.1	
Intersection Capacity Utilization	57.5%	ICU Level of Service
Analysis Period (min)	15	B

Queues
6: Walnut St/Fairchester Dr & Fairfax Blvd

2021 EX AM
02/25/2021



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	11	1901	39	788	28	77	39	54
v/c Ratio	0.02	0.69	0.21	0.28	0.24	0.37	0.53	0.39
Control Delay	5.1	14.5	7.0	6.5	77.6	28.9	109.7	76.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.1	14.5	7.0	6.5	77.6	28.9	109.7	76.8
Queue Length 50th (ft)	1	475	5	65	34	25	48	55
Queue Length 95th (ft)	11	1113	28	278	60	70	94	105
Internal Link Dist (ft)		120		557		220		212
Turn Bay Length (ft)	100		100		185		120	
Base Capacity (vph)	566	2753	217	2798	330	479	136	251
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.69	0.18	0.28	0.08	0.16	0.29	0.22

Intersection Summary

HCM Signalized Intersection Capacity Analysis

6: Walnut St/Fairchester Dr & Fairfax Blvd

2021 EX AM

02/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (vph)	10	1694	17	35	688	22	25	19	50	35	34	14
Future Volume (vph)	10	1694	17	35	688	22	25	19	50	35	34	14
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	
Frbp, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.98		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		0.99	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	0.89		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1638	3499		1752	3424		1612	1554		1729	1816	
Flt Permitted	0.34	1.00		0.07	1.00		0.69	1.00		0.55	1.00	
Satd. Flow (perm)	593	3499		133	3424		1174	1554		1009	1816	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	11	1882	19	39	764	24	28	21	56	39	38	16
RTOR Reduction (vph)	0	0	0	0	1	0	0	49	0	0	8	0
Lane Group Flow (vph)	11	1901	0	39	787	0	28	28	0	39	46	0
Confl. Peds. (#/hr)	3		4	4		3			4	4		
Heavy Vehicles (%)	10%	3%	0%	3%	5%	0%	12%	21%	2%	3%	0%	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)	146.0	143.2		152.4	146.4		21.1	21.1		11.7	11.7	
Effective Green, g (s)	148.0	144.2		154.4	147.4		23.1	23.1		13.7	13.7	
Actuated g/C Ratio	0.78	0.76		0.81	0.78		0.12	0.12		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)	482	2655		167	2656		142	188		72	130	
v/s Ratio Prot	0.00	c0.54		c0.01	c0.23			0.02			0.03	
v/s Ratio Perm	0.02			0.18			c0.02			c0.04		
v/c Ratio	0.02	0.72		0.23	0.30		0.20	0.15		0.54	0.35	
Uniform Delay, d1	4.7	12.1		13.1	6.2		75.1	74.6		85.1	83.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	1.7		0.7	0.3		0.7	0.4		8.1	1.6	
Delay (s)	4.7	13.8		13.9	6.5		75.8	75.0		93.2	85.6	
Level of Service	A	B		B	A		E	E		F	F	
Approach Delay (s)		13.7			6.8			75.2			88.8	
Approach LOS		B			A			E			F	

Intersection Summary

HCM 2000 Control Delay	16.4	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	64.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
 1: Second St & Fairfax Blvd

2021 EX PM
 02/25/2021



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↙	↑↑	↘	
Traffic Volume (veh/h)	1188	19	1	1609	7	0
Future Volume (Veh/h)	1188	19	1	1609	7	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	1212	19	1	1642	7	0
Pedestrians	2					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	0					
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage (veh)	2			2		
Upstream signal (ft)				650		
pX, platoon unblocked					0.81	
vC, conflicting volume			1231		2046 616	
vC1, stage 1 conf vol					1222	
vC2, stage 2 conf vol					825	
vCu, unblocked vol			1231		1825 616	
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		97 100	
cM capacity (veh/h)			562		220 434	
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	808	423	1	821	821	7
Volume Left	0	0	1	0	0	7
Volume Right	0	19	0	0	0	0
cSH	1700	1700	562	1700	1700	220
Volume to Capacity	0.48	0.25	0.00	0.48	0.48	0.03
Queue Length 95th (ft)	0	0	0	0	0	2
Control Delay (s)	0.0	0.0	11.4	0.0	0.0	21.9
Lane LOS	B			C		
Approach Delay (s)	0.0		0.0		21.9	
Approach LOS				C		
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			54.5%		ICU Level of Service A	
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis

2: Hallman St & Fairfax Blvd

2021 EX PM

02/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	1182	0	40	1605	9	2	1	51	5	0	3
Future Volume (Veh/h)	6	1182	0	40	1605	9	2	1	51	5	0	3
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	6	1206	0	41	1638	9	2	1	52	5	0	3
Pedestrians												5
Lane Width (ft)												12.0
Walking Speed (ft/s)												4.0
Percent Blockage												0
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage (veh)		2			2							
Upstream signal (ft)					510							
pX, platoon unblocked	0.81						0.81	0.81		0.81	0.81	0.81
vC, conflicting volume	1652			1206			2122	2952	603	2397	2948	828
vC1, stage 1 conf vol							1218	1218		1730	1730	
vC2, stage 2 conf vol							904	1734		668	1218	
vCu, unblocked vol	1340			1206			1919	2941	603	2258	2935	327
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)							6.5	5.5		6.5	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			93			99	99	88	95	100	99
cM capacity (veh/h)	413			574			169	117	442	97	115	541
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1				
Volume Total	6	804	402	41	1092	555	55	8				
Volume Left	6	0	0	41	0	0	2	5				
Volume Right	0	0	0	0	0	9	52	3				
cSH	413	1700	1700	574	1700	1700	398	140				
Volume to Capacity	0.01	0.47	0.24	0.07	0.64	0.33	0.14	0.06				
Queue Length 95th (ft)	1	0	0	6	0	0	12	4				
Control Delay (s)	13.9	0.0	0.0	11.7	0.0	0.0	15.5	32.2				
Lane LOS	B			B			C	D				
Approach Delay (s)	0.1			0.3			15.5	32.2				
Approach LOS							C	D				
Intersection Summary												
Average Delay			0.6									
Intersection Capacity Utilization			54.7%		ICU Level of Service			A				
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

3: Existing Western Site Entrance & Fairfax Blvd

2021 EX PM
02/25/2021



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↙	↑↑	↘	
Traffic Volume (veh/h)	1239	0	0	1655	0	0
Future Volume (Veh/h)	1239	0	0	1655	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	1264	0	0	1689	0	0
Pedestrians						1
Lane Width (ft)						12.0
Walking Speed (ft/s)						4.0
Percent Blockage						0
Right turn flare (veh)						
Median type	TWLTL		TWLTL			
Median storage (veh)	2		2			
Upstream signal (ft)	260					
pX, platoon unblocked					0.81	
vC, conflicting volume			1265	2110	633	
vC1, stage 1 conf vol					1265	
vC2, stage 2 conf vol					844	
vCu, unblocked vol			1265	1906	633	
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)			545	208	422	
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	843	421	0	844	844	0
Volume Left	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0
cSH	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.50	0.25	0.00	0.50	0.50	0.00
Queue Length 95th (ft)	0	0	0	0	0	0
Control Delay (s)	0.0	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			49.1%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
5: Existing Eastern Site Entrance & Fairfax Blvd

2021 EX PM
02/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	5	1234	0	0	1653	12	0	0	0	1	0	2	
Future Volume (Veh/h)	5	1234	0	0	1653	12	0	0	0	1	0	2	
Sign Control	Free			Free			Stop			Stop			
Grade	0%			0%			0%			0%			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	
Hourly flow rate (vph)	5	1259	0	0	1687	12	0	0	0	1	0	2	
Pedestrians												5	
Lane Width (ft)												12.0	
Walking Speed (ft/s)												4.0	
Percent Blockage												0	
Right turn flare (veh)													
Median type	TWLTL				None								
Median storage (veh)	2												
Upstream signal (ft)					200								
pX, platoon unblocked	0.81						0.81	0.81			0.81	0.81	0.81
vC, conflicting volume	1704			1259			2114	2973	630	2338	2967	854	
vC1, stage 1 conf vol							1269	1269			1698	1698	
vC2, stage 2 conf vol							846	1704			640	1269	
vCu, unblocked vol	1410			1259			1913	2967	630	2187	2960	367	
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9	
tC, 2 stage (s)							6.5	5.5			6.5	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3	
p0 queue free %	99			100			100	100	100	99	100	100	
cM capacity (veh/h)	389			548			163	126	425	112	129	511	
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1					
Volume Total	5	839	420	0	1125	574	0	3					
Volume Left	5	0	0	0	0	0	0	1					
Volume Right	0	0	0	0	0	12	0	2					
cSH	389	1700	1700	1700	1700	1700	1700	234					
Volume to Capacity	0.01	0.49	0.25	0.00	0.66	0.34	0.00	0.01					
Queue Length 95th (ft)	1	0	0	0	0	0	0	1					
Control Delay (s)	14.4	0.0	0.0	0.0	0.0	0.0	0.0	20.6					
Lane LOS	B							A	C				
Approach Delay (s)	0.1			0.0			0.0	20.6					
Approach LOS								A	C				
Intersection Summary													
Average Delay			0.0										
Intersection Capacity Utilization			56.1%		ICU Level of Service				B				
Analysis Period (min)			15										

Queues
6: Walnut St/Fairchester Dr & Fairfax Blvd

2021 EX PM
02/25/2021



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	23	1223	40	1653	14	53	33	55
v/c Ratio	0.09	0.42	0.11	0.57	0.13	0.32	0.47	0.42
Control Delay	4.5	7.7	4.1	9.7	88.7	30.7	120.2	55.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.5	7.7	4.1	9.7	88.7	30.7	120.2	55.4
Queue Length 50th (ft)	3	209	5	350	20	14	47	33
Queue Length 95th (ft)	18	483	26	782	42	58	92	88
Internal Link Dist (ft)		120		557		220		212
Turn Bay Length (ft)	100		100		185		120	
Base Capacity (vph)	258	2912	378	2893	297	393	130	216
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.42	0.11	0.57	0.05	0.13	0.25	0.25
Intersection Summary								

HCM Signalized Intersection Capacity Analysis
6: Walnut St/Fairchester Dr & Fairfax Blvd

2021 EX PM
02/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (vph)	23	1182	29	40	1615	22	14	10	43	33	20	35
Future Volume (vph)	23	1182	29	40	1615	22	14	10	43	33	20	35
Ideal Flow (vphp)	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	
Frbp, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.95		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		0.93	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	0.88		1.00	0.90	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	3559		1752	3531		1805	1476		1671	1686	
Flt Permitted	0.12	1.00		0.20	1.00		0.66	1.00		0.64	1.00	
Satd. Flow (perm)	223	3559		375	3531		1249	1476		1129	1686	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	23	1194	29	40	1631	22	14	10	43	33	20	35
RTOR Reduction (vph)	0	0	0	0	0	0	0	39	0	0	30	0
Lane Group Flow (vph)	23	1223	0	40	1653	0	14	14	0	33	25	0
Confl. Peds. (#/hr)	4		3	3		4			17	17		
Confl. Bikes (#/hr)			3			3			1			
Heavy Vehicles (%)	0%	1%	0%	3%	2%	0%	0%	0%	9%	0%	0%	3%
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)	179.4	173.8		179.8	174.0		20.7	20.7		11.3	11.3	
Effective Green, g (s)	181.4	174.8		181.8	175.0		22.7	22.7		13.3	13.3	
Actuated g/C Ratio	0.82	0.79		0.83	0.80		0.10	0.10		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)	231	2827		352	2808		128	152		68	101	
v/s Ratio Prot	0.00	0.34		c0.00	c0.47			0.01			0.01	
v/s Ratio Perm	0.08			0.09			c0.01			c0.03		
v/c Ratio	0.10	0.43		0.11	0.59		0.11	0.09		0.49	0.25	
Uniform Delay, d1	6.7	7.1		4.4	8.7		89.5	89.3		100.0	98.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	0.5		0.1	0.9		0.4	0.3		5.4	1.3	
Delay (s)	6.9	7.6		4.5	9.6		89.9	89.6		105.4	99.9	
Level of Service	A	A		A	A		F	F		F	F	
Approach Delay (s)		7.5			9.4			89.7			101.9	
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	0.56		
Actuated Cycle Length (s)	220.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	62.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

APPENDIX F
REPORTED CRASH DATA

Document Number	Crash Date	Crash Time	Day Of Week	Collision Type	Crash Description	First Harmful Event	First Harmful Event Location	KABCO Severity Code	Route Name	Route Number	Secondary Location	Latitude	Longitude	TREDS Jurisdiction	Route Or Street Name	Crash Severity	Pedestrian Fatality Count	Non Pedestrian Fatality Count	Pedestrian Injury Cnt	Non Pedestrian Injury Count	Work Zone Related	
170125237	1/4/2017	18:08	Wed	2. Angle	V1 was exiting a shopping center at 10930 Fairfax Blvd making a left to travel east bound on Fairfax Blvd. V2 was traveling in the right lane of east bound Fairfax Blvd. V1 turned into V2's lane and impacted V2, forcing V2 to then strike a curb.	1. On Roadway	20. Motor Vehicle In Transport	Possible Injury (C)	US-29N	29	Hallman St.	38.853260	-77.320710	City of Fairfax	10930 FAIRFAX BLVD	injury crash	0	0	0	1	2. No	
180325092	5/3/2017	7:57	Wed	1. Rear End	Vehicles one, two, three and four were traveling east on Fairfax Blvd in lane one. Vehicles two, three and four came to a stop with traffic just east of Fairchester Drive, adjacent to 10818 Fairfax Blvd. Vehicle one, failing to observe the stopped vehicles, struck the rear end of vehicle two pushing vehicle two into vehicle three and three into vehicle four. Driver of vehicle one stated that glare from the sun obstructed his vision and he did not see the stationary vehicles in front of him.	1. On Roadway	20. Motor Vehicle In Transport	Possible Injury (C)	US-29N	29	FAIRCHESTER DRIVE	38.854370	-77.317710	City of Fairfax	FAIRFAX BLVD	injury crash	0	0	0	2	2. No	
180305157	5/30/2017	15:15	Tue	2. Angle	The driver of Vehicle 2 stated that she was East bound Fairfax Blvd. in the left lane before Hallman Street. V2's driver stated that v1 pulled into the intersection. V2's driver stated that she was not able to stop in time before impacting the left rear of V1 with the left front of her car. V2 stated that she was not injured. The driver of Vehicle 1 stated that he was North bound on Hallman Street at Fairfax Blvd. V1's driver stated that he entered into the intersection of Fairfax Blvd. to make a left turn onto West bound Fairfax Blvd. V1's driver stated that he did not see any cars East bound when he entered into the intersection. V1's driver stated that he was struck by V2 in the left rear of his car. V1's driver stated that he was not injured.	1. On Roadway	20. Motor Vehicle In Transport	No Injury (O)	US-29N	29	FAIRFAX BLVD	38.853550	-77.319860	City of Fairfax	HALLMAN ST	property damage crash	0	0	0	0	2.	No
172365207	6/4/2017	11:07	Sun	2. Angle	172365207 Vehicle two was stopped west bound at the red light at the intersection of Fairfax Blvd and Walnut St. When the light turned green, vehicle one honked, accelerated, and passed vehicle two on the right side. Vehicle one then merged onto the left lane and collided with vehicle two. The driver of vehicle one did not stop to exchange information.	1. On Roadway	20. Motor Vehicle In Transport	No Injury (O)	US-29S	29	Walnut St.	38.854180	-77.318430	City of Fairfax	FAIRFAX	property damage crash	0	0	0	0	2.	No
172015258	6/25/2017	11:08	Sun	2. Angle	V2 was entering the roadway from the parking lot of 10875 Fairfax Boulevard. V2's driver advised the roadway for Fairfax Boulevard was clear. V2 entered the roadway. V1 was reported to be west bound in the left lane of Route 50. V1's driver advised that he was driving within the speed limit and that V2 entered the roadway from the parking lot and that he could not stop before striking V2 on the driver's side, rear passenger area. Witnesses advised that Fairfax Boulevard near the entrance/exit of 10875 Fairfax Boulevard was clear when V2 began to enter the roadway. It was advised that a loud acceleration was heard in the direction of V1 prior to the accident. Probable cause for a citation for the accident could not be determined.	1. On Roadway	20. Motor Vehicle In Transport	No Injury (O)	US-29S	29	Fairchester Dr.	38.853810	-77.319270	City of Fairfax	10874 FAIRFAX BLVD	property damage crash	0	0	0	0	2.	No
180305320	8/16/2017	9:48	Wed	2. Angle	VEHICLE 2 WAS TRAVELING NORTHBOUND ON WALNUT ST AT THE INTERSECTION OF FAIRFAX BLVD. VEHICLE 2 HAD THE GREEN TRAFFIC SIGNAL. VEHICLE 1 WAS GOING WESTBOUND ON FAIRFAX BLVD AT THE INTERSECTION OF WALNUT ST. VEHICLE 1 HAD A RED TRAFFIC SIGNAL AND PROCEEDED THROUGH THE INTERSECTION. VEHICLE 1 THEN STRUCK VEHICLE 2. AS A RESULT VEHICLE 2 LEFT THE ROADWAY AND ROLLEDOVER BEFORE COMING TO A STOP IN THE GRASS OF 10860 FAIRFAX BLVD	1. On Roadway	20. Motor Vehicle In Transport	Non-Incapacitating Injury (B)	US-29S	29	WALNUT ST	38.854240	-77.318220	City of Fairfax	FAIRFAX BLVD	injury crash	0	0	0	1	2.	No
173115299	8/18/2017	13:36	Fri	2. Angle	173115299 Vehicle one was exiting the parking lot of 10874 Fairfax Blvd. Bicyclist one was riding eastbound on the sidewalk on the westbound side of Fairfax Blvd. As vehicle one pulled up to check traffic on Fairfax Blvd, bicyclist one struck vehicle one.	4. Roadside	22. Bicycle	Possible Injury (C)	US-29S	29	Fairchester Dr.	38.853880	-77.319310	City of Fairfax	10874 FAIRFAX BLVD	injury crash	0	0	0	1	2.	No
173205394	8/28/2017	15:47	Mon	2. Angle	VEHICLE 1 WAS TRAVELING NORTHBOUND ON HALLMAN ST. VEHICLE 2 WAS TRAVELING IN THE RIGHT EASTBOUND LANE OF FAIRFAX BLVD. VEHICLE 1 FAILED TO YIELD THE RIGHT OF WAY AND STRUCK VEHICLE 2.	1. On Roadway	20. Motor Vehicle In Transport	No Injury (O)	US-29N	29	HALLMAN ST	38.853520	-77.319830	City of Fairfax	FAIRFAX BLVD	property damage crash	0	0	0	0	2.	No
172615162	9/9/2017	19:08	Sat	2. Angle	V1 and V2 were westbound on Fairfax Boulevard passing Walnut Street. V1 was in the right lane and V2 was in the left lane. V2 was preparing to turn left onto Hallman Street. V1 merged from the right lane to the left lane and side swiped V2 which was in the left lane. V1's driver's side impact V2's passenger side.	1. On Roadway	20. Motor Vehicle In Transport	No Injury (O)	US-29S	29		38.854050	-77.318760	City of Fairfax	FAIRFAX	property damage crash	0	0	0	0	2.	No
180225291	10/3/2017	9:51	Tue	2. Angle	VEHICLE 2 WAS IN THE MIDDLE TURN LANE OF EASTBOUND FAIRFAX BLVD AT HALLMAN ST. VEHICLE 1 WAS IN THE MOST LEFT STRAIGHT THROUGH LANE OF EASTBOUND FAIRFAX BLVD AT HALLMAN ST. VEHICLE 1 MADE AN UNSAFE LANE CHANGE AND STRUCK VEHICLE 2.	1. On Roadway	20. Motor Vehicle In Transport	No Injury (O)	US-29S	29	HALLMAN ST	38.853560	-77.319850	City of Fairfax	FAIRFAX BLVD	property damage crash	0	0	0	0	2.	No
180395217	1/10/2018	19:55	Wed	5. Sideswipe - Opposite Direction	Vehicle 2 was traveling east bound in the left through lane of Fairfax Blvd, prior to Hallman Street. Vehicle 1 was proceeding north on Hallman Street, prior to Fairfax Blvd. Vehicle 1 Failed to Yield the Right of Way While Turning Left onto Fairfax Blvd, striking Vehicle 2 on the passenger side (Point of Impact).	1. On Roadway	20. Motor Vehicle In Transport	No Injury (O)	US-50E	50	HALLMAN ST	38.853500	-77.319890	City of Fairfax	FAIRFAX BLVD	property damage crash	0	0	0	0	2.	No
180535129	2/14/2018	9:58	Wed	2. Angle	VEHICLE 2 WAS TRAVELING IN THE #2, EASTBOUND LANE OF FAIRFAX BLVD, WEST OF HALLMAN ST. VEHICLE 1 WAS ATTEMPTING TO CHANGE LANE FROM THE #1 LANE TO THE #2 LANE. VEHICLE 1 MADE AN UNSAFE LANE CHANGE AND STRUCK VEHICLE 2.	1. On Roadway	20. Motor Vehicle In Transport	No Injury (O)	US-29N	29	2ND ST	38.853220	-77.320720	City of Fairfax	FAIRFAX BV	property damage crash	0	0	0	0	2.	No
181595291	4/13/2018	17:25	Fri	1. Rear End	181595291 Vehicle 2 was slowing in the right west bound through lane of Fairfax Blvd, prior to Fairchester Drive, due to heavy stopped traffic. Vehicle 1 was proceeding westbound in the right through lane of Fairfax Blvd and struck vehicle 2 in the rear(Point of Impact).	1. On Roadway	20. Motor Vehicle In Transport	No Injury (O)	US-29S	29	FAIRCHESTER DR	38.854380	-77.317980	City of Fairfax	FAIRFAX BLVD	property damage crash	0	0	0	0	2.	No

Document Number	Crash Date	Crash Time	Day Of Week	Collision Type	Crash Description	First Harmful Event	First Harmful Event Location	KABCO Severity Code	Route Name	Route Number	Secondary Location	Latitude	Longitude	TREDS Jurisdiction	Route Or Street Name	Crash Severity	Pedestrian Fatality Count	Non Pedestrian Fatality Count	Pedestrian Injury Cnt	Non Pedestrian Injury Count	Work Zone Related
181635310	5/31/2018	14:51	Thu	2. Angle	V2 WAS TRAVELING WESTBOUND ON FAIRFAX BLVD IN THE FAR RIGHT LANE. V1 BEGAN TO CROSS FAIRFAX BLVD SOUTHBOUND FROM A SIDE STREET. V1 ADVISED THAT THEY DID NOT SEE V2, CAUSING THEM TO STRIKE AN ANGLE.	1. On Roadway	20. Motor Vehicle In Transport	No Injury (O)	US-29S	29		38.853710	-77.319680	City of Fairfax	10880 FAIRFAX BLVD	property damage crash	0	0	0	0	2. No
181695352	6/1/2018	23:38	Fri	1. Rear End	V2 was traveling eastbound in the right lane of Fairfax Blvd. approaching the intersection with Walnut St. V2 was in the process of slowing down for traffic. V1 was traveling at a high rate of speed behind V2, also in the right lane of Fairfax Blvd. The driver of V1 could not stop the vehicle in time and rear ended V2. Two passengers in V2 were transported to Fairfax Hospital. The driver of V1 was subsequently placed under arrest for DUI.	1. On Roadway	20. Motor Vehicle In Transport	Possible Injury (C)	US-29N	29	Walnut St.	38.853680	-77.319360	City of Fairfax	10874 FAIRFAX BLVD	injury crash	0	0	0	0	2. No
182815106	10/4/2018	11:55	Thu	1. Rear End	VEHICLE 2 WAS MAKING A RIGHT TURN INTO A PRIVATE LOT. VEHICLE 1 WAS TRAVELING IN THE RIGHT EASTBOUND LANE OF FAIRFAX BLVD. VEHICLE 1 DRIVER WAS ON HER CELL PHONE AND FAILED TO SEE VEHICLE 2 SLOWING TO MAKE THE TURN. VEHICLE 1 STRUCK VEHICLE 2 IN THE REAR.	1. On Roadway	20. Motor Vehicle In Transport	No Injury (O)	US-29N	29	HALLMAN ST	38.853710	-77.319290	City of Fairfax	FAIRFAX BLVD	property damage crash	0	0	0	0	2. No
190185320	1/15/2019	15:23	Tue	2. Angle	VEHICLE ONE MADE A LEFT TURN FROM THE RIGHT LANE IN ORDER TO MAKE A U TURN. VEHICLE THREE HAD TO STOP SUDDENLY WHICH CAUSED VEHICLE TWO TO CRASH INTO VEHICLE THREE.	1. On Roadway	20. Motor Vehicle In Transport	Non-Incapacitating Injury (B)	US-29N	29	HALLMAN ST	38.853530	-77.319780	City of Fairfax	FAIRFAX BLVD	injury crash	0	0	0	0	1. 2. No
190385278	2/2/2019	14:39	Sat	2. Angle	VEHICLE 1 WAS EXITING A PRIVATE ROAD AND PROCEEDING NORTH BOUND ONTO FAIRFAX BLVD. VEHICLE 2 WAS TRAVELING EAST BOUND ON FAIRFAX BLVD, PRIOR TO FAIRCHESTER DRIVE.VEHICLE 1 FAILED TO YIELD THE RIGHT OF WAY, WHILE ENTERING A PUBLIC HIGHWAY FROM A PRIVATE ROAD AND WAS STRUCK ON AN ANGLE BY VEHICLE 2 (POINT OF IMPACT).	1. On Roadway	20. Motor Vehicle In Transport	Non-Incapacitating Injury (B)	US-29N	29	10885 FAIRFAX BLVD	38.853660	-77.319620	City of Fairfax	FAIRFAX BLVD	injury crash	0	0	0	0	1. 2. No
190525306	2/21/2019	15:21	Thu	2. Angle	V1 WAS MAKING A LEFT ONTO WALNUT STREET FROM WESTBOUND FAIRFAX BLVD. V2 WAS TRAVELING EASTBOUND FAIRFAX BLVD. V2 STRUCK V1 AT AN ANGLE.	1. On Roadway	20. Motor Vehicle In Transport	No Injury (O)	US-29N	29	WALNUT ST	38.854140	-77.318220	City of Fairfax	FAIRFAX BLVD	property damage crash	0	0	0	0	2. No
191325255	5/12/2019	0:02	Sun	2. Angle	V1 MAKING LEFT TURN IN FRONT OF V2 STRIKING THE PASSANGER SIDE. V1 THEN SPUN AND STRUCK V3. V1 CHARGED AT SCENE V1 AND V2 WAS TOWED	1. On Roadway	20. Motor Vehicle In Transport	No Injury (O)	US-29N	29	10885 FAIRFAX BLVD	38.853770	-77.319220	City of Fairfax	10885 FAIRFAX BLVD	property damage crash	0	0	0	0	2. No
191575375	6/6/2019	19:16	Thu	2. Angle	V2 WAS TRAVELING WESTBOUND ON FAIRFAX BLVD. V1 DRIVER WAS PULLING THE VEHICLE OUT OF THE GARAGE AT 10834 FAIRFAX BLVD TO PARK IT IN THE PARKING LOT. AS THE V1 DRIVER WAS ATTEMPTING TO PARK, HIS SHOE CAUGHT ON THE ACCELERATOR, CAUSING V1 TO EXIT THE PARKING LOT INTO ONCOMING WESTBOUND TRAFFIC STRIKING V2.	1. On Roadway	20. Motor Vehicle In Transport	No Injury (O)	US-29S	29	FAIRCHESTER DR.	38.854440	-77.317830	City of Fairfax	FAIRFAX BLVD	property damage crash	0	0	0	0	2. No
192415199	8/29/2019	9:27	Thu	2. Angle	V1 EXITED THE PARKING LOT OF 10885 FAIRFAX BLVD. AND PROCEEDED TO CROSS THE EAST BOUND LANES OF FAIRFAX BLVD. EAST BOUND TRAFFIC ON FAIRFAX BLVD. WAS AT A STAND STILL. V1 CUT THROUGH THE STOPPED TRAFFIC AND MADE A LEFT TURN TO PROCEED WEST BOUND ON FAIRFAX BLVD. AT THIS TIME, V2 WAS TRAVELING EAST BOUND ON FAIRFAX BLVD IN THE CENTER TURN LANES AND COLLIDED WITH V1 AS IT MADE THE LEFT TURN. V1 DID NOT YIELD THE RIGHT OF WAY TO V2 AS V1 EXITED THE PARKING LOT.	1. On Roadway	20. Motor Vehicle In Transport	Non-Incapacitating Injury (B)	US-29N	29	HALLMAN ST	38.853520	-77.319870	City of Fairfax	10890 FAIRFAX BLVD	injury crash	0	0	0	0	2. 2. No
192755039	9/20/2019	20:43	Fri	2. Angle	V1 WAS TRAVELING IN THE LEFT TURN LANE WESTBOUND ON FAIRFAX BLVD SLOWING TO TURN INTO THE PROPERTY OF 10885 FAIRFAX BLVD. V2 WAS TRAVELING STRIAIGHT EASTBOUND ON FAIRFAX BLVD. V1 FAILED TO YIELD THE RIGHT OF WAY TO V2. V1 STRUCK V2 IN THE LEFT SIDE.	1. On Roadway	20. Motor Vehicle In Transport	Non-Incapacitating Injury (B)	US-29N	29	OAK ST	38.853740	-77.319230	City of Fairfax	10885 FAIRFAX BLVD	injury crash	0	0	0	0	1. 2. No
192785227	10/5/2019	12:32	Sat	9. Fixed Object - Off Road	VEHICLE 1 HAD BEEN TRAVELING WESTBOUND ON FAIRFAX BLVD. THE DRIVER OF VEHICLE 1 LOOKED AWAY FROM THE ROADWAY, AND STRUCK THE CURB ON THE RIGHT SIDE OF THE ROAD. THIS OCCURRED APPROXIMATELY 10 FT WEST OF FAIRCHESTER DR. NO OTHER VEHICLES WERE INVOLVED.	1. On Roadway	13. Curb	No Injury (O)	US-29S	29	FAIRCHESTER DR	38.854230	-77.318390	City of Fairfax	FAIRFAX BLVD	property damage crash	0	0	0	0	2. No
192955167	10/22/2019	7:50	Tue	1. Rear End	VEHICLE #2 AND #3 WERE AT A COMPLETE STOP FOR A RED TRAFFIC SIGNAL. VEHICLE #1 WAS TRAVELING EAST ON RT50 AND STRUCK VEHICLE #2 IN THE REAR BUMPER AND VEHICLE #2 STRUCK VEHICLE #3 IN THE REAR BUMPER. VEHICLE #2 SUSTAINED DAMAGE IN THE UNDER CARRIAGE OF THE VEHICLE AND ALL VEHICLES SUSTAINED DAMAGE IN THE BUMPERS.	1. On Roadway	20. Motor Vehicle In Transport	No Injury (O)	US-29N	29	WALNUT STREET	38.853820	-77.319090	City of Fairfax	FAIRFAX BLVD	property damage crash	0	0	0	0	2. No
192975389	10/24/2019	16:05	Thu	2. Angle	VEHICLE 1 (V1) WAS EXITING A PRIVATE PROPERTY PARKING LOT IN THE AREA OF 10925 FAIRFAX BLVD. AND WAS ATTEMPTING TO TURN LEFT OUT OF THE LOT AND TRAVEL EASTBOUND ON FAIRFAX BLVD. THE 2 WESTBOUND THRU LANES OF FAIRFAX BLVD. WERE STOPPED AS V1 WAS TURNING LEFT. VEHICLE 2 (V2) WAS TRAVELING WESTBOUND ON FAIRFAX BLVD. IN THE CENTER DOUBLE TURN LANE AT THE TIME IN ORDER TO MAKE A LEFT-HAND TURN INTO 10925 FAIRFAX BLVD. V1 AND V2 COLLIDED AS V1 ENTERED THE DOUBLE TURN LANE.	1. On Roadway	20. Motor Vehicle In Transport	No Injury (O)	US-29N	29	2ND ST	38.853200	-77.320970	City of Fairfax	FAIRFAX BLVD	property damage crash	0	0	0	0	2. No
193435207	12/6/2019	13:31	Fri	2. Angle	V2 WAS TRAVELING EASTBOUND ON FAIRFAX BLVD., IN THE RIGHT LANE, APPROACHING 2ND ST. V1 WAS TRAVELING EASTBOUND ON FAIRFAX BLVD., IN THE LEFT LANE, APPROACHING 2ND ST. V1 CHANGED LANES STRIKING V2. V1 EXCHANGED INFORMATION WITH V2, BUT LEFT PRIOR TO POLICE ARRIVAL. V1 WAS CALLED AND A VOICEMAIL WAS LEFT, BUT V1 NEVER RETURNED MY CALL.NO INJURIES REPORTED. NO VEHICLES TOWED.	1. On Roadway	20. Motor Vehicle In Transport	No Injury (O)	US-29N	29	2ND STREET	38.853340	-77.320320	City of Fairfax	FAIRFAX BLVD	property damage crash	0	0	0	0	2. No

Document Number	Crash Date	Crash Time	Day Of Week	Collision Type	Crash Description	First Harmful Event	First Harmful Event Location	KABCO Severity Code	Route Name	Route Number	Secondary Location	Latitude	Longitude	TREDS Jurisdiction	Route Or Street Name	Crash Severity	Pedestrian Fatality Count	Non Pedestrian Fatality Count	Pedestrian Injury Cnt	Non Pedestrian Injury Count	Work zone Related	
193545220	12/19/2019	16:41	Thu	2. Angle	V1 WAS LEAVING THE LOT OF EMBASSY CAR WASH ON TO FAIRFAX BLVD. ATTEMPTING TO MAKE A LEFT TURN ONTO EASTBOUND FAIRFAX BLVD. TRAFFIC WAS STOPPED AND LEFT A GAP FOR V1 TO EXIT. AS V1 ENTERED FAIRFAX BLVD. AND STARTED THE LEFT TURN ONTO FAIRFAX BLVD., V2 WAS IN THE CENTER LEFT TURN LANE TRAVELING WESBOUND.V2 ADVISED THAT HE WAS ATTEMPTING TO GO TO BURGER KING. V1 AND AND V2 COLLIDED IN THE LEFT TURN LANE.MEDICS WERE REFUSED ON SCENE. ACCORDING TO V2, THERE WERE TWO JUVENILES IN THE CAR BUT WERE PICKED UP AND TAKEN HOME BEFORE MY ARRIVAL.NO VEHICLES TOWED. V2 WAS OPERATING VEHICLE WITH NO OL.	1. On Roadway	20. Motor Vehicle In Transport	No Injury (O)	US-29S	29	HALLMAN ST	38.853640	-77.319720	City of Fairfax	FAIRFAX BLVD	property damage crash	0	0	0	0	0	2. No
193655015	12/30/2019	18:09	Mon	2. Angle	V2 WAS HEADED EASTBOUND ROUTE 50 AT 10885 FAIRFAX BLVD.V1 WAS HEADED WESTBOUND ROUTE 50 AND PROCEEDED TO MAKE A LEFT TURN, FAILING TO YIELD TO V2.V1 WAS STRUCK AT AN ANGLE BY V2.	1. On Roadway	20. Motor Vehicle In Transport	Non-Incapacitating Injury (B)	US-29S	29	HALLMAN ST	38.853640	-77.319730	City of Fairfax	FAIRFAX BOULEVARD	injury crash	0	0	0	0	1	2. No
200565109	2/25/2020	9:05	Tue	1. Rear End	VEHICLES ONE AND TWO WERE TRAVELING EASTBOUND ON FAIRFAX BLVD IN THE LEFT LANE. AFTER THE VEHICLES PASSED THROUGH THE INTERSECTION OF WALNUT ST, TRAFFIC WAS BACKED UP FROM THE NEXT INTERSECTION. VEHICLE TWO STOPPED FOR TRAFFIC AND VEHICLE ONE WAS FOLLOWING TOO CLOSE AND UNABLE TO STOP FOR VEHICLE TWO. VEHICLE ONE THEN STRUCK THE REAR OF VEHICLE TWO.	1. On Roadway	20. Motor Vehicle In Transport	No Injury (O)	US-29N	29	WALNUT ST	38.854270	-77.317960	City of Fairfax	FAIRFAX BLVD	property damage crash	0	0	0	0	0	2. No
201205124	4/29/2020	6:04	Wed	2. Angle	V1 WAS PARKED ON THE SIDEWALK NEAR 10834 FAIRFAX BLVD FACING EAST. V2 WAS ON EASTBOUND FAIRFAX BLVD MAKING A LEFT TURN TO GO ONTO NORTHBOUND FAIRCHESTER DR. V2 HAD THE GREEN ARROW TO MAKE THE LEFT TURN. V1 REVERSED THE VEHICLE STRIKING V2 IN THE FRONT BUMPER. V1 THEN MOVED FORWARD AND THEN REVERSED A SECOND TIME STRIKING V2 IN THE FRONT BUMPER. V1 THEN DROVE OFF ON NORTHBOUND FAIRCHESTER DR.	1. On Roadway	20. Motor Vehicle In Transport	No Injury (O)	US-29S	29	FAIRFAX BLVD FAIRCHESTER DR	38.854300	-77.318250	City of Fairfax	FAIRFAX BLVD FAIRCHESTER DR	property damage crash	0	0	0	0	0	2. No
201785215	6/8/2020	7:14	Mon	1. Rear End	VEHICLE ONE AND TWO WERE TRAVELING WEST ON FAIRFAX BLVD APPROACHING FAIRCHESTER DRIVE IN LANE TWO. VEHICLE TWO CAME TO A STOP AT THE RED LIGHT AT FAIRCHESTER DR. VEHICLE ONE, UNABLE TO STOP IN TIME, STRIKING VEHICLE TWO IN THE REAR END.	1. On Roadway	20. Motor Vehicle In Transport	No Injury (O)	US-29S	29	FAIRCHESTER DR	38.854330	-77.318000	City of Fairfax	FAIRFAX BLVD	property damage crash	0	0	0	0	0	2. No
203195167	11/14/2020	11:36	Sat	2. Angle	VEHICLE 1 AND VEHICLE 2 WERE DRIVING WEST ON FAIRFAX BLVD. VEHICLE 1 WAS IN THE LEFT LANE AND VEHICLE 2 WAS IN THE RIGHT LANE. VEHICLE 1 ATTEMPTED TO MERGE INTO THE RIGHT LANE . BEFORE VEHICLE 1 COULD STOP OR MOVE HE STRUCK VEHICLE 2 IN THE FRONT LEFT SIDE OF THE VEHICLE. VEHICLE 1 SAID HE DID NOT SEE VEHICLE 2 FOR IT WAS IN HIS BLIND SPOT.	1. On Roadway	20. Motor Vehicle In Transport	No Injury (O)	US-29S	29	2ND STREET	38.853740	-77.319550	City of Fairfax	10880 FAIRFAX BLVD	property damage crash	0	0	0	0	0	2. No



APPENDIX G
BREEZEWAY PROPERTY TIS EXCERPTS

SECTION 3 STUDY SCOPE AND ANALYSIS PARAMETERS

Overview

The subject site is located south of Fairfax Boulevard, east of Walnut Street, and west of Oak Street in the City of Fairfax, Virginia. The subject property is comprised of five parcels totaling 4.63 acres north and south of Cedar Avenue. The parcel developed with the existing Breezeway Motel is zoned DR (Commercial Retail) and the parcels developed with existing residential uses are zoned RMF (Residential Multifamily) and RH (Residential High).

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. A traffic study scoping meeting was held on June 25, 2019 and resulted in a scoping form dated July 3, 2019 that is provided in Appendix A. As previously noted, the revised development plan includes up to 10,010 SF of commercial space and 62 dwelling units. Additionally, site access has been updated per the current development plan.

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:

- Fairfax Boulevard/Meredith Drive/Oak Street
- Fairfax Boulevard/Fairchester Drive, Walnut Street
- Walnut Street/Cedar Avenue
- Walnut Street/Second Street
- Oak Street/Second Street
- Oak Street/Cedar Avenue-Panther Place
- All Site Access Drives

Site Development Program

The Applicant is proposing to redevelop the property with 62 residential units to include townhomes and stacked condos. A commercial building with up to 10,010 SF of space is proposed along Fairfax Boulevard.

Analysis Study Periods

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

Existing Traffic Volumes

Existing AM and PM commuter peak hour turning movements and pedestrian counts were conducted on Thursday, July 11, 2019, at the study intersections from 6:00 AM to 9:00 AM and from 4:00 PM to 7:00 PM. These counts were compared to counts at the Fairfax Boulevard study intersection conducted when school was in session on Wednesday, February 3, 2016 and Thursday, March 1, 2018 after deducting traffic generated by the soon to be closed Paul VI Catholic High School. This comparison indicates that the current (July 11, 2019) counts were between 7% and 23% higher than counts collected during the school year (adjusted to reflect the closure of Paul VI) during the AM peak hour and between 3% and 6% higher than counts collected during the school year (adjusted to reflect the closure of Paul VI) during the PM peak hour.

Based on this comparison, the higher current (July 11, 2019) counts were utilized in this traffic analysis. Additionally, counts along Fairfax Boulevard were balanced between the Walnut Street/Faichester Drive and Oak Street/Meredith Drive intersections in both directions by choosing the higher of the entering and exiting volumes at each intersection.

The existing vehicular traffic volumes balanced as described above are provided on Figure 3-1. All existing count data are included in Appendix B.

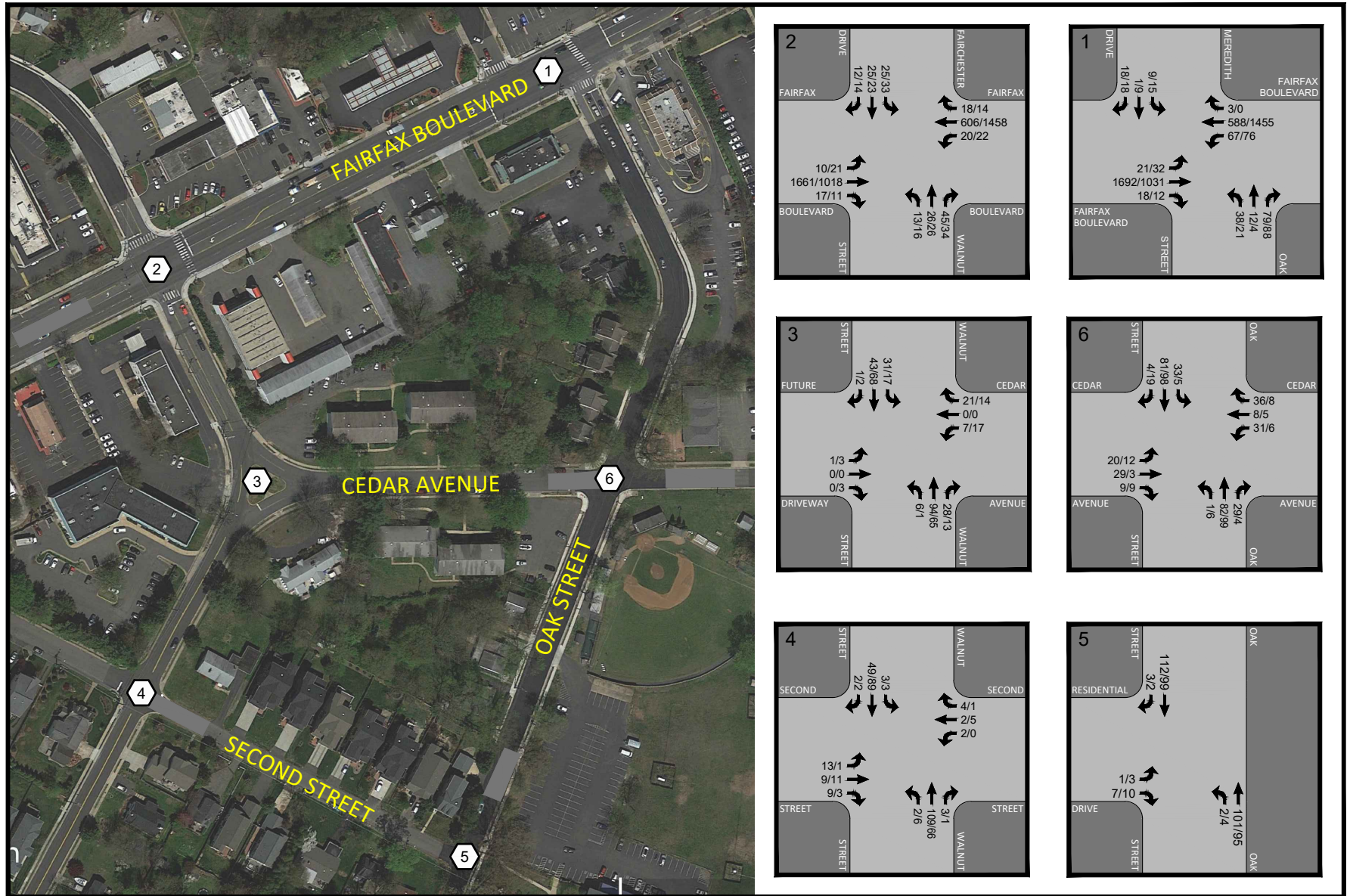


Figure 3-1
Existing Peak Hour Traffic Volumes

AM PEAK HOUR
PM PEAK HOUR
000 / 000



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City of Fairfax, Virginia

SECTION 5 ANALYSIS OF FUTURE CONDITIONS WITHOUT SITE DEVELOPMENT

Overview

Forecasts for traffic conditions without the redevelopment of the Breezeway Property were estimated at the study intersections based on a composite of existing traffic regional traffic growth, and pipeline development trips as described below. 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 modest growth in traffic volumes over the past five (5) years. AADT volumes along Fairfax Boulevard east of Main Street rose from 36,000 vehicles in 2013 to 37,000 vehicles in 2018, an average annual increase of approximately 0.55% per year.

Based on these findings, existing traffic volumes were increased by 0.55% per year to the anticipated build-out of the site in 2024.

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

- Paul VI Redevelopment
 - 259 Residential Condominiums/Townhouses
 - 7 Single Family Dwelling Units
 - 24,000 SF of Community Space
 - 20,000 SF of Retail Space

As shown in Table 5-1, these pipeline developments are anticipated to generate 543 AM peak commuter hour trips, and 912 PM commuter peak hour trips at full buildout. It is noted that not all of these trips will utilize the study intersections along Fairfax Boulevard, Walnut Street and Oak Street.

An additional alternative background conditions analysis is included in Appendix F that includes the potential redevelopment of the American Legion (Toll Brothers) site located on the east side of Oak Street. Since that development application is not currently approved, this additional analysis is provided for informational purposes only.

**Table 5-1
Breezeway Property - City of Fairfax
Background Development Trip Generation**

Use	ITE Land Use Code	Amount	Units	AM Peak Hour			PM Peak Hour			ADT
				In	Out	Total	In	Out	Total	
Novus Fairfax Gateway										
Office	710	4,000	SF	5	1	6	1	5	6	44
Quality Restaurant	931	5,000	SF	2	2	4	25	12	37	450
High Turnover Restaurant	932	7,400	SF	44	36	80	44	29	73	941
Shopping Center	820	12,600	SF	27	17	44	72	78	150	1,767
Apartments	220	395	DU	<u>39</u>	<u>158</u>	<u>197</u>	<u>153</u>	<u>82</u>	<u>235</u>	<u>2,517</u>
Total Novus Fairfax Gateway Trips	--			117	214	331	295	206	501	5,719
Paul VI - Redevelopment										
Condominiums	232	144	DU	13	58	71	40	24	64	767
Single Family Homes	210	7	DU	4	11	15	6	4	10	91
Townhomes	230	115	DU	<u>10</u>	<u>48</u>	<u>58</u>	<u>45</u>	<u>22</u>	<u>67</u>	<u>726</u>
Subtotal Residential		266	DU	27	117	144	91	50	141	1,584
Community Space	495	24,000	SF	32	17	49	32	34	66	812
Local Serving Retail	820	20,000	SF	<u>12</u>	<u>7</u>	<u>19</u>	<u>98</u>	<u>106</u>	<u>204</u>	<u>2,386</u>
Subtotal Commercial		44,000	SF	44	24	68	130	140	270	3,198
Total Paul VI Redevelopment				71	141	212	221	190	411	4,782
TOTAL BACKGROUND DEVELOPMENT TRIP GENERATION				188	355	543	516	396	912	10,501

Notes: (1) Based on Trip Generation from Development Traffic Impact Studies

Background Traffic Forecasts

The existing traffic volumes depicted on Figure 3-1, regional traffic growth, 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.

The analyses show that the signalized intersections along Fairfax Boulevard will continue to operate at level of service “C” (LOS “C”) or better during the AM and PM peak commuter periods. The side street approaches to the signalized intersections will continue to operate at LOS “E” and “F” with average delays between 76.6 seconds and 103.9 seconds. However, the volume-to-capacity (v/c) ratios for the side street approaches at intersections along Fairfax Boulevard will be well below 1.0, indicating that the lengthy delays will be the result of long cycle lengths (190 seconds during the AM commuter peak hour and 220 seconds during the 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, Walnut Street/Second Street, Oak Street/Second Street, and Oak Street/Cedar Avenue – Panther Place will operate at LOS “B” or better during each of the peak periods.

As previously noted, an additional alternative analysis is included in Appendix F that also includes the potential redevelopment of the (not currently approved) American Legion (Toll Brothers) redevelopment on the east side of Oak Street. The results of this additional analysis is generally consistent with the results summarized in Table 5-2 below with additional delays of less than 2 seconds/vehicle for any intersection approach included in the study.

Table 5-2

Breezeway Property

Background Future Intersection Capacity Analysis Summary

Intersection	Intersection Control	Approach	Existing		Background Future	
			AM Peak	PM Peak	AM Peak	PM Peak
1. Fairfax Boulevard & Meredith Drive/Oak Street	Signal	EB Appr	B (17.8)	A (8.8)	B (17.2)	A (8.1)
		WB Appr	B (14.9)	B (17.3)	B (13.8)	B (17.2)
		NB Appr	F (87.1)	F (100.2)	F (84.4)	F (100.3)
		SB Appr	F (88.4)	F (102.4)	F (88.3)	F (104.7)
		Overall	C (21.2)	B (18.7)	C (20.3)	B (17.9)
2. Fairfax Boulevard & Fairchester Drive/Walnut Street	Signal	EB Appr	B (13.0)	A (8.0)	B (12.8)	A (8.3)
		WB Appr	A (3.0)	A (1.7)	A (2.8)	A (1.7)
		NB Appr	E (76.5)	F (90.3)	E (76.6)	F (90.4)
		SB Appr	F (92.7)	F (105.7)	F (91.7)	F (103.9)
		Overall	B (14.6)	A (9.4)	B (14.0)	A (8.9)
3. Walnut Street/Cedar Avenue	Stop	EB Appr	A (0.0)	A (9.4)	B (10.7)	A (9.4)
		WB Appr	A (9.4)	A (9.6)	A (9.4)	A (9.5)
		NB Appr	A (0.4)	A (0.1)	A (0.4)	A (0.1)
		SB Appr	A (3.2)	A (1.5)	A (3.3)	A (1.7)
		Overall	A (2.4)	A (2.5)	A (2.6)	A (2.5)
4. Walnut Street/Second Street	Stop	EB Appr	A (7.5)	A (7.3)	A (7.4)	A (7.3)
		WB Appr	A (7.2)	A (7.3)	A (7.2)	A (7.3)
		NB Appr	A (7.8)	A (7.5)	A (7.8)	A (7.5)
		SB Appr	A (7.5)	A (7.7)	A (7.4)	A (7.6)
		Overall	A (7.7)	A (7.6)	A (7.6)	A (7.5)
5. Oak Street/Second Street	Stop	EB Appr	A (7.0)	A (7.1)	A (7.0)	A (7.1)
		NB Appr	A (7.7)	A (7.7)	A (7.8)	A (7.8)
		SB Appr	A (7.8)	A (7.7)	A (7.9)	A (7.8)
		Overall	A (7.7)	A (7.7)	A (7.8)	A (7.8)
6. Oak Street/Cedar Avenue/Panther Place	Stop	EB Appr	A (8.1)	A (7.6)	A (8.1)	A (7.6)
		WB Appr	A (8.0)	A (7.5)	A (8.3)	A (7.8)
		NB Appr	A (8.1)	A (7.9)	A (8.2)	A (8.0)
		SB Appr	A (8.4)	A (7.9)	A (8.5)	A (8.0)
		Overall	A (8.2)	A (7.8)	A (8.3)	A (7.9)

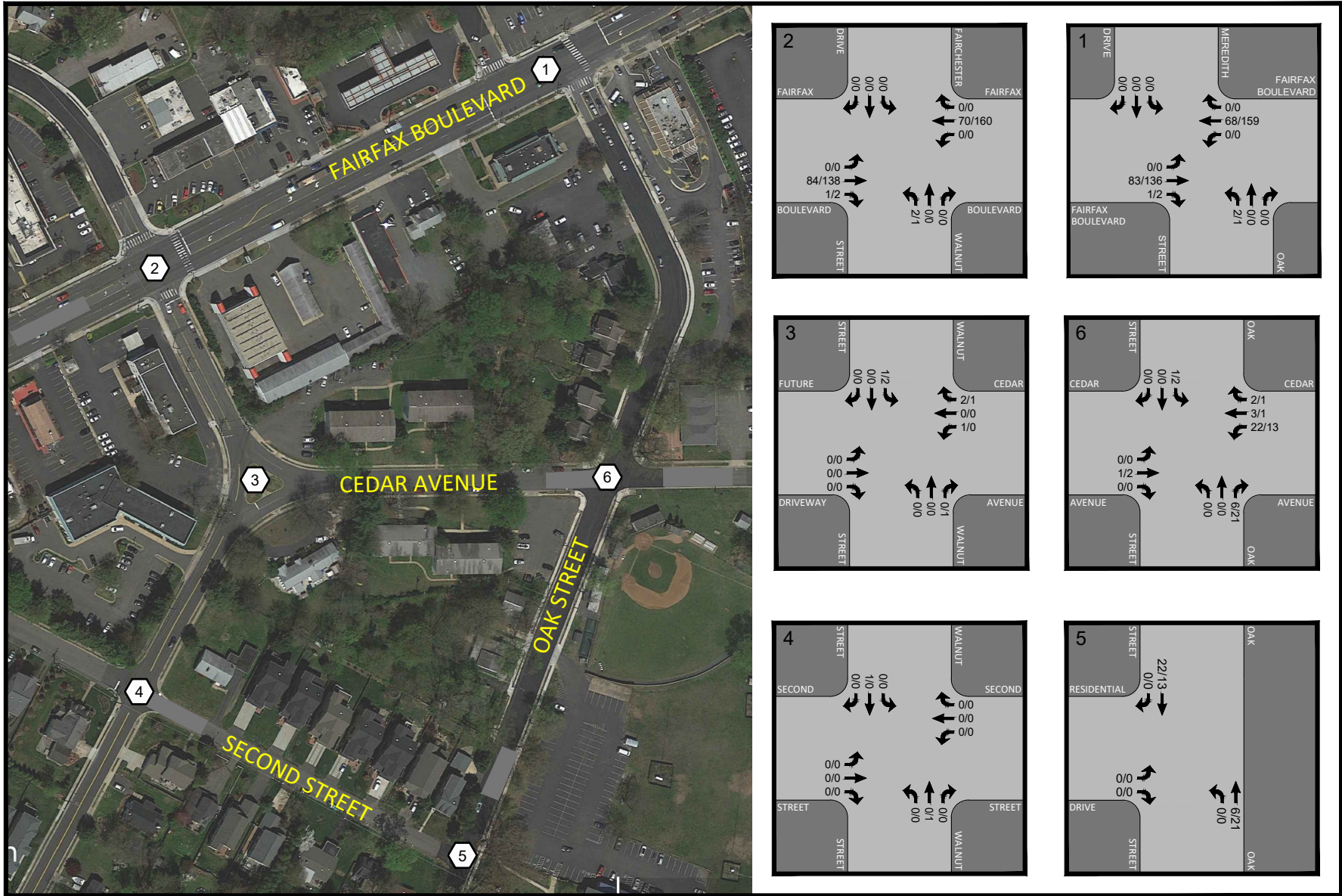


Figure 5-1
 Pipeline Development Traffic Assignments
 Includes Novus Fairfax Gateway and Paul VI Redevelopment

AM PEAK HOUR
 PM PEAK HOUR
 000 / 000



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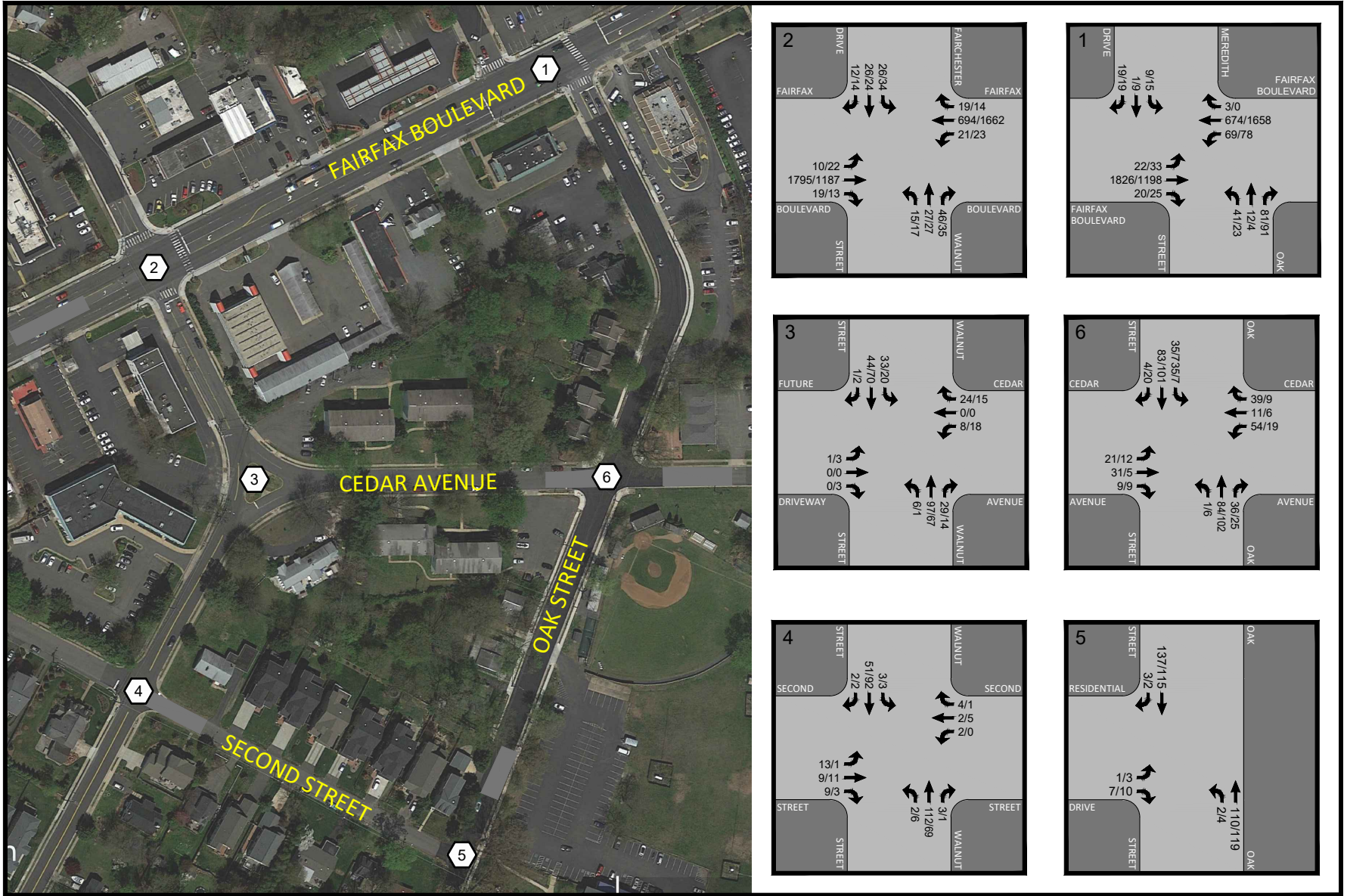


Figure 5-2
2024 Background Future Peak Hour Traffic Forecasts
With Pipeline Developments

AM PEAK HOUR
PM PEAK HOUR
000 / 000



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APPENDIX H

2022 BACKGROUND FUTURE CONDITIONS

SYNCHRO REPORTS

HCM Unsignalized Intersection Capacity Analysis
 1: Second St & Fairfax Blvd

2022 BG AM
 02/25/2021



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑	↵	
Traffic Volume (veh/h)	1768	18	0	798	10	0
Future Volume (Veh/h)	1768	18	0	798	10	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)	1922	20	0	867	11	0
Pedestrians						3
Lane Width (ft)						12.0
Walking Speed (ft/s)						4.0
Percent Blockage						0
Right turn flare (veh)						
Median type	TWLTL		TWLTL			
Median storage veh)	2		2			
Upstream signal (ft)	650					
pX, platoon unblocked					0.93	
vC, conflicting volume			1945	2368	974	
vC1, stage 1 conf vol					1935	
vC2, stage 2 conf vol					434	
vCu, unblocked vol			1945	2322	974	
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	88	100	
cM capacity (veh/h)			297	96	251	
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	1281	661	0	434	434	11
Volume Left	0	0	0	0	0	11
Volume Right	0	20	0	0	0	0
cSH	1700	1700	1700	1700	1700	96
Volume to Capacity	0.75	0.39	0.00	0.26	0.26	0.12
Queue Length 95th (ft)	0	0	0	0	0	9
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	47.5
Lane LOS						E
Approach Delay (s)	0.0	0.0				47.5
Approach LOS						E
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			59.4%	ICU Level of Service	B	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
2: Hallman St/Lazboy Driveway & Fairfax Blvd

2022 BG AM
02/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↖	↗		↖	↗			↕			↕		
Traffic Volume (veh/h)	2	1766	0	17	797	3	1	0	60	2	1	0	
Future Volume (Veh/h)	2	1766	0	17	797	3	1	0	60	2	1	0	
Sign Control	Free			Free			Stop			Stop			
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)	2	1920	0	18	866	3	1	0	65	2	1	0	
Pedestrians												1	
Lane Width (ft)												12.0	
Walking Speed (ft/s)												4.0	
Percent Blockage												0	
Right turn flare (veh)													
Median type	TWLTL				TWLTL								
Median storage veh	2				2								
Upstream signal (ft)					510								
pX, platoon unblocked	0.93						0.93	0.93			0.93	0.93	0.93
vC, conflicting volume	870	1920					2394	2830	960	1934	2828	436	
vC1, stage 1 conf vol							1924	1924			904	904	
vC2, stage 2 conf vol							470	906			1029	1924	
vCu, unblocked vol	708	1920					2347	2817	960	1852	2815	241	
tC, single (s)	4.1	4.1					7.5	6.5	6.9	7.5	6.5	6.9	
tC, 2 stage (s)							6.5	5.5			6.5	5.5	
tF (s)	2.2	2.2					3.5	4.0	3.3	3.5	4.0	3.3	
p0 queue free %	100	94					99	100	75	99	99	100	
cM capacity (veh/h)	823	304					67	104	257	147	89	706	
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1					
Volume Total	2	1280	640	18	577	292	66	3					
Volume Left	2	0	0	18	0	0	1	2					
Volume Right	0	0	0	0	0	3	65	0					
cSH	823	1700	1700	304	1700	1700	246	121					
Volume to Capacity	0.00	0.75	0.38	0.06	0.34	0.17	0.27	0.02					
Queue Length 95th (ft)	0	0	0	5	0	0	26	2					
Control Delay (s)	9.4	0.0	0.0	17.6	0.0	0.0	24.9	35.6					
Lane LOS	A			C			C	E					
Approach Delay (s)	0.0			0.4			24.9	35.6					
Approach LOS							C	E					
Intersection Summary													
Average Delay			0.7										
Intersection Capacity Utilization			59.2%		ICU Level of Service				B				
Analysis Period (min)			15										

HCM Unsignalized Intersection Capacity Analysis

3: Existing Western Site Entrance & Fairfax Blvd

2022 BG AM
02/25/2021



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↙	↑↑	↘	
Traffic Volume (veh/h)	1829	0	0	817	0	0
Future Volume (Veh/h)	1829	0	0	817	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)	1988	0	0	888	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)			260			
pX, platoon unblocked					0.93	
vC, conflicting volume			1988	2432	994	
vC1, stage 1 conf vol					1988	
vC2, stage 2 conf vol					444	
vCu, unblocked vol			1988	2387	994	
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)			286	90	244	
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	1325	663	0	444	444	0
Volume Left	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0
cSH	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.78	0.39	0.00	0.26	0.26	0.00
Queue Length 95th (ft)	0	0	0	0	0	0
Control Delay (s)	0.0	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			53.9%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
 5: Existing Eastern Site Entrance/Hampton Inn Driveway & Fairfax Blvd

2022 BG AM
 02/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↗	↕		↖	↕			↕			↕	↘	
Traffic Volume (veh/h)	3	1825	1	0	811	2	0	0	1	2	0	6	
Future Volume (Veh/h)	3	1825	1	0	811	2	0	0	1	2	0	6	
Sign Control	Free			Free			Stop			Stop			
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	1984	1	0	882	2	0	0	1	2	0	7	
Pedestrians								3			2		
Lane Width (ft)								12.0			12.0		
Walking Speed (ft/s)								4.0			4.0		
Percent Blockage								0			0		
Right turn flare (veh)													
Median type	TWLTL				None								
Median storage (veh)	2												
Upstream signal (ft)					200								
pX, platoon unblocked	0.93						0.93	0.93			0.93	0.93	0.93
vC, conflicting volume	886				1988			2442	2880	996	1884	2879	444
vC1, stage 1 conf vol							1994	1994			885	885	
vC2, stage 2 conf vol							448	886			999	1994	
vCu, unblocked vol	718				1988			2397	2870	996	1795	2869	241
tC, single (s)	4.1				4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)							6.5	5.5			6.5	5.5	
tF (s)	2.2				2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100				100			100	100	100	99	100	99
cM capacity (veh/h)	813				285			60	97	243	208	97	703
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1					
Volume Total	3	1323	662	0	588	296	1	9					
Volume Left	3	0	0	0	0	0	0	2					
Volume Right	0	0	1	0	0	2	1	7					
cSH	813	1700	1700	1700	1700	1700	243	459					
Volume to Capacity	0.00	0.78	0.39	0.00	0.35	0.17	0.00	0.02					
Queue Length 95th (ft)	0	0	0	0	0	0	0	1					
Control Delay (s)	9.4	0.0	0.0	0.0	0.0	0.0	19.9	13.0					
Lane LOS	A						C		B				
Approach Delay (s)	0.0			0.0			19.9		13.0				
Approach LOS							C		B				
Intersection Summary													
Average Delay	0.1												
Intersection Capacity Utilization	60.5%			ICU Level of Service				B					
Analysis Period (min)	15												

Queues
6: Walnut St/Fairchester Dr & Fairfax Blvd

2022 BG AM
02/25/2021



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	11	1975	39	856	37	80	38	52
v/c Ratio	0.02	0.72	0.23	0.31	0.31	0.38	0.54	0.38
Control Delay	5.0	15.2	7.4	6.6	81.0	28.4	111.2	75.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.0	15.2	7.4	6.6	81.0	28.4	111.2	75.9
Queue Length 50th (ft)	1	517	5	73	45	25	47	52
Queue Length 95th (ft)	11	1209	28	308	75	72	92	103
Internal Link Dist (ft)		120		557		220		212
Turn Bay Length (ft)	100		100		185		120	
Base Capacity (vph)	531	2752	204	2801	334	481	131	251
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.72	0.19	0.31	0.11	0.17	0.29	0.21
Intersection Summary								

HCM Signalized Intersection Capacity Analysis

6: Walnut St/Fairchester Dr & Fairfax Blvd

2022 BG AM
02/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	1797	20	36	765	22	34	19	54	35	34	14
Future Volume (vph)	10	1797	20	36	765	22	34	19	54	35	34	14
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	
Frbp, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.98		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		0.99	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	0.89		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1639	3498		1752	3425		1612	1554		1729	1818	
Flt Permitted	0.32	1.00		0.06	1.00		0.70	1.00		0.54	1.00	
Satd. Flow (perm)	549	3498		116	3425		1187	1554		978	1818	
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)	11	1953	22	39	832	24	37	21	59	38	37	15
RTOR Reduction (vph)	0	0	0	0	0	0	0	52	0	0	8	0
Lane Group Flow (vph)	11	1975	0	39	856	0	37	28	0	38	44	0
Confl. Peds. (#/hr)	3		4	4		3			4	4		
Heavy Vehicles (%)	10%	3%	0%	3%	5%	0%	12%	21%	2%	3%	0%	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)	146.0	143.2		152.4	146.4		21.1	21.1		11.7	11.7	
Effective Green, g (s)	148.0	144.2		154.4	147.4		23.1	23.1		13.7	13.7	
Actuated g/C Ratio	0.78	0.76		0.81	0.78		0.12	0.12		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)	449	2654		154	2657		144	188		70	131	
v/s Ratio Prot	0.00	c0.56		c0.01	c0.25			0.02			0.02	
v/s Ratio Perm	0.02			0.20			c0.03			c0.04		
v/c Ratio	0.02	0.74		0.25	0.32		0.26	0.15		0.54	0.33	
Uniform Delay, d1	4.8	12.7		15.3	6.4		75.7	74.7		85.1	83.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	1.9		0.9	0.3		0.9	0.4		8.3	1.5	
Delay (s)	4.8	14.6		16.2	6.7		76.6	75.0		93.5	85.3	
Level of Service	A	B		B	A		E	E		F	F	
Approach Delay (s)		14.6			7.1			75.5			88.8	
Approach LOS		B			A			E			F	
Intersection Summary												
HCM 2000 Control Delay			16.9			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.70									
Actuated Cycle Length (s)			190.0			Sum of lost time (s)				20.7		
Intersection Capacity Utilization			67.3%			ICU Level of Service				C		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis
 1: Second St & Fairfax Blvd

2022 BG PM
 02/25/2021



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑	↵	
Traffic Volume (veh/h)	1363	19	1	1808	7	0
Future Volume (Veh/h)	1363	19	1	1808	7	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	1391	19	1	1845	7	0
Pedestrians	2					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	0					
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage (veh)	2			2		
Upstream signal (ft)				650		
pX, platoon unblocked					0.76	
vC, conflicting volume			1410		2327 705	
vC1, stage 1 conf vol					1400	
vC2, stage 2 conf vol					926	
vCu, unblocked vol			1410		2114 705	
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		96 100	
cM capacity (veh/h)			480		179 379	
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	927	483	1	922	922	7
Volume Left	0	0	1	0	0	7
Volume Right	0	19	0	0	0	0
cSH	1700	1700	480	1700	1700	179
Volume to Capacity	0.55	0.28	0.00	0.54	0.54	0.04
Queue Length 95th (ft)	0	0	0	0	0	3
Control Delay (s)	0.0	0.0	12.5	0.0	0.0	25.9
Lane LOS	B			D		
Approach Delay (s)	0.0		0.0		25.9	
Approach LOS				D		
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			60.0%		ICU Level of Service B	
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis

2: Hallman St & Fairfax Blvd

2022 BG PM

02/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
Lane Configurations														
Traffic Volume (veh/h)	6	1357	0	40	1804	9	2	1	51	5	0	3		
Future Volume (Veh/h)	6	1357	0	40	1804	9	2	1	51	5	0	3		
Sign Control	Free			Free			Stop			Stop				
Grade	0%			0%			0%			0%				
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98		
Hourly flow rate (vph)	6	1385	0	41	1841	9	2	1	52	5	0	3		
Pedestrians												5		
Lane Width (ft)												12.0		
Walking Speed (ft/s)												4.0		
Percent Blockage												0		
Right turn flare (veh)														
Median type	TWLTL				TWLTL									
Median storage (veh)	2				2									
Upstream signal (ft)					510									
pX, platoon unblocked	0.76						0.76	0.76			0.76	0.76	0.76	
vC, conflicting volume	1855				1385				2402	3334	692	2690	3330	930
vC1, stage 1 conf vol							1397	1397			1932	1932		
vC2, stage 2 conf vol							1006	1937			757	1397		
vCu, unblocked vol	1498				1385				2216	3438	692	2593	3432	284
tC, single (s)	4.1				4.1				7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)							6.5	5.5			6.5	5.5		
tF (s)	2.2				2.2				3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98				92				98	99	87	93	100	99
cM capacity (veh/h)	337				490				133	90	386	72	88	541

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1	
Volume Total	6	923	462	41	1227	623	55	8	
Volume Left	6	0	0	41	0	0	2	5	
Volume Right	0	0	0	0	0	9	52	3	
cSH	337	1700	1700	490	1700	1700	342	106	
Volume to Capacity	0.02	0.54	0.27	0.08	0.72	0.37	0.16	0.08	
Queue Length 95th (ft)	1	0	0	7	0	0	14	6	
Control Delay (s)	15.9	0.0	0.0	13.0	0.0	0.0	17.5	41.7	
Lane LOS	C			B			C		E
Approach Delay (s)	0.1			0.3			17.5		41.7
Approach LOS							C		E

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	60.2%	ICU Level of Service	B
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis

3: Existing Western Site Entrance & Fairfax Blvd




















2022 BG PM
02/25/2021



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑	↵	
Traffic Volume (veh/h)	1414	0	0	1855	0	0
Future Volume (Veh/h)	1414	0	0	1855	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	1443	0	0	1893	0	0
Pedestrians					1	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					0	
Right turn flare (veh)						
Median type	TWLTL		TWLTL			
Median storage (veh)	2		2			
Upstream signal (ft)					260	
pX, platoon unblocked					0.77	
vC, conflicting volume			1444		2390 722	
vC1, stage 1 conf vol					1444	
vC2, stage 2 conf vol					946	
vCu, unblocked vol			1444		2205 722	
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)			465		169 369	
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	962	481	0	946	946	0
Volume Left	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0
cSH	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.57	0.28	0.00	0.56	0.56	0.00
Queue Length 95th (ft)	0	0	0	0	0	0
Control Delay (s)	0.0	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			54.6%		ICU Level of Service A	
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis
5: Existing Eastern Site Entrance & Fairfax Blvd

2022 BG PM
02/25/2021

														
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
Lane Configurations														
Traffic Volume (veh/h)	5	1409	0	0	1853	12	0	0	0	1	0	2		
Future Volume (Veh/h)	5	1409	0	0	1853	12	0	0	0	1	0	2		
Sign Control	Free			Free			Stop			Stop				
Grade	0%			0%			0%			0%				
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98		
Hourly flow rate (vph)	5	1438	0	0	1891	12	0	0	0	1	0	2		
Pedestrians												5		
Lane Width (ft)												12.0		
Walking Speed (ft/s)												4.0		
Percent Blockage												0		
Right turn flare (veh)														
Median type	TWLTL				None									
Median storage (veh)	2													
Upstream signal (ft)					200									
pX, platoon unblocked	0.77						0.77	0.77				0.77	0.77	0.77
vC, conflicting volume	1908				1438			2396	3356	719	2631	3350	956	
vC1, stage 1 conf vol							1448	1448			1902	1902		
vC2, stage 2 conf vol							948	1908			729	1448		
vCu, unblocked vol	1577				1438			2213	3464	719	2519	3456	338	
tC, single (s)	4.1				4.1			7.5	6.5	6.9	7.5	6.5	6.9	
tC, 2 stage (s)							6.5	5.5			6.5	5.5		
tF (s)	2.2				2.2			3.5	4.0	3.3	3.5	4.0	3.3	
p0 queue free %	98				100			100	100	100	99	100	100	
cM capacity (veh/h)	316				468			127	98	371	83	101	503	
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1						
Volume Total	5	959	479	0	1261	642	0	3						
Volume Left	5	0	0	0	0	0	0	1						
Volume Right	0	0	0	0	0	12	0	2						
cSH	316	1700	1700	1700	1700	1700	1700	188						
Volume to Capacity	0.02	0.56	0.28	0.00	0.74	0.38	0.00	0.02						
Queue Length 95th (ft)	1	0	0	0	0	0	0	1						
Control Delay (s)	16.6	0.0	0.0	0.0	0.0	0.0	0.0	24.5						
Lane LOS	C							A	C					
Approach Delay (s)	0.1				0.0			0.0	24.5					
Approach LOS							A	C						
Intersection Summary														
Average Delay				0.0										
Intersection Capacity Utilization				61.6%			ICU Level of Service			B				
Analysis Period (min)	15													

Queues
6: Walnut St/Fairchester Dr & Fairfax Blvd

2022 BG PM
02/25/2021



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	23	1400	45	1834	34	59	35	55
v/c Ratio	0.11	0.48	0.15	0.64	0.31	0.34	0.51	0.41
Control Delay	5.1	8.7	4.6	11.3	96.5	31.7	123.3	54.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.1	8.7	4.6	11.3	96.5	31.7	123.3	54.4
Queue Length 50th (ft)	3	265	6	437	49	18	50	32
Queue Length 95th (ft)	18	604	30	968	81	64	97	88
Internal Link Dist (ft)		120		557		220		212
Turn Bay Length (ft)	100		100		185		120	
Base Capacity (vph)	215	2903	318	2885	298	399	122	216
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.48	0.14	0.64	0.11	0.15	0.29	0.25

Intersection Summary

HCM Signalized Intersection Capacity Analysis
6: Walnut St/Fairchester Dr & Fairfax Blvd

2022 BG PM
02/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (vph)	23	1349	37	45	1794	22	34	13	46	35	20	35
Future Volume (vph)	23	1349	37	45	1794	22	34	13	46	35	20	35
Ideal Flow (vphp)	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	
Frbp, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.95		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		0.93	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	0.88		1.00	0.90	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	3557		1752	3532		1805	1493		1680	1686	
Flt Permitted	0.09	1.00		0.16	1.00		0.66	1.00		0.61	1.00	
Satd. Flow (perm)	171	3557		301	3532		1252	1493		1071	1686	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	23	1363	37	45	1812	22	34	13	46	35	20	35
RTOR Reduction (vph)	0	0	0	0	0	0	0	41	0	0	30	0
Lane Group Flow (vph)	23	1400	0	45	1834	0	34	18	0	35	25	0
Confl. Peds. (#/hr)	4		3	3		4			17	17		
Confl. Bikes (#/hr)			3			3			1			
Heavy Vehicles (%)	0%	1%	0%	3%	2%	0%	0%	0%	9%	0%	0%	3%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6		7	7		3	3	
Permitted Phases	2			6			7			3		
Actuated Green, G (s)	178.9	173.3		179.3	173.5		21.2	21.2		11.8	11.8	
Effective Green, g (s)	180.9	174.3		181.3	174.5		23.2	23.2		13.8	13.8	
Actuated g/C Ratio	0.82	0.79		0.82	0.79		0.11	0.11		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)	189	2818		292	2801		132	157		67	105	
v/s Ratio Prot	0.00	0.39		c0.00	c0.52			0.01			0.01	
v/s Ratio Perm	0.10			0.12			c0.03			c0.03		
v/c Ratio	0.12	0.50		0.15	0.65		0.26	0.11		0.52	0.24	
Uniform Delay, d1	9.0	7.8		5.3	9.8		90.5	89.1		99.9	98.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	0.6		0.2	1.2		1.0	0.3		7.2	1.2	
Delay (s)	9.3	8.5		5.5	11.0		91.5	89.4		107.1	99.3	
Level of Service	A	A		A	B		F	F		F	F	
Approach Delay (s)		8.5			10.9			90.2			102.3	
Approach LOS		A			B			F			F	

Intersection Summary

HCM 2000 Control Delay	14.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	220.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	67.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

APPENDIX I

**GENERAL DEVELOPMENT PLAN & SPECIAL USE
PERMIT PLAN**



VICINITY MAP
SCALE 1" = 2000'

REV#	DATE	DESCRIPTION

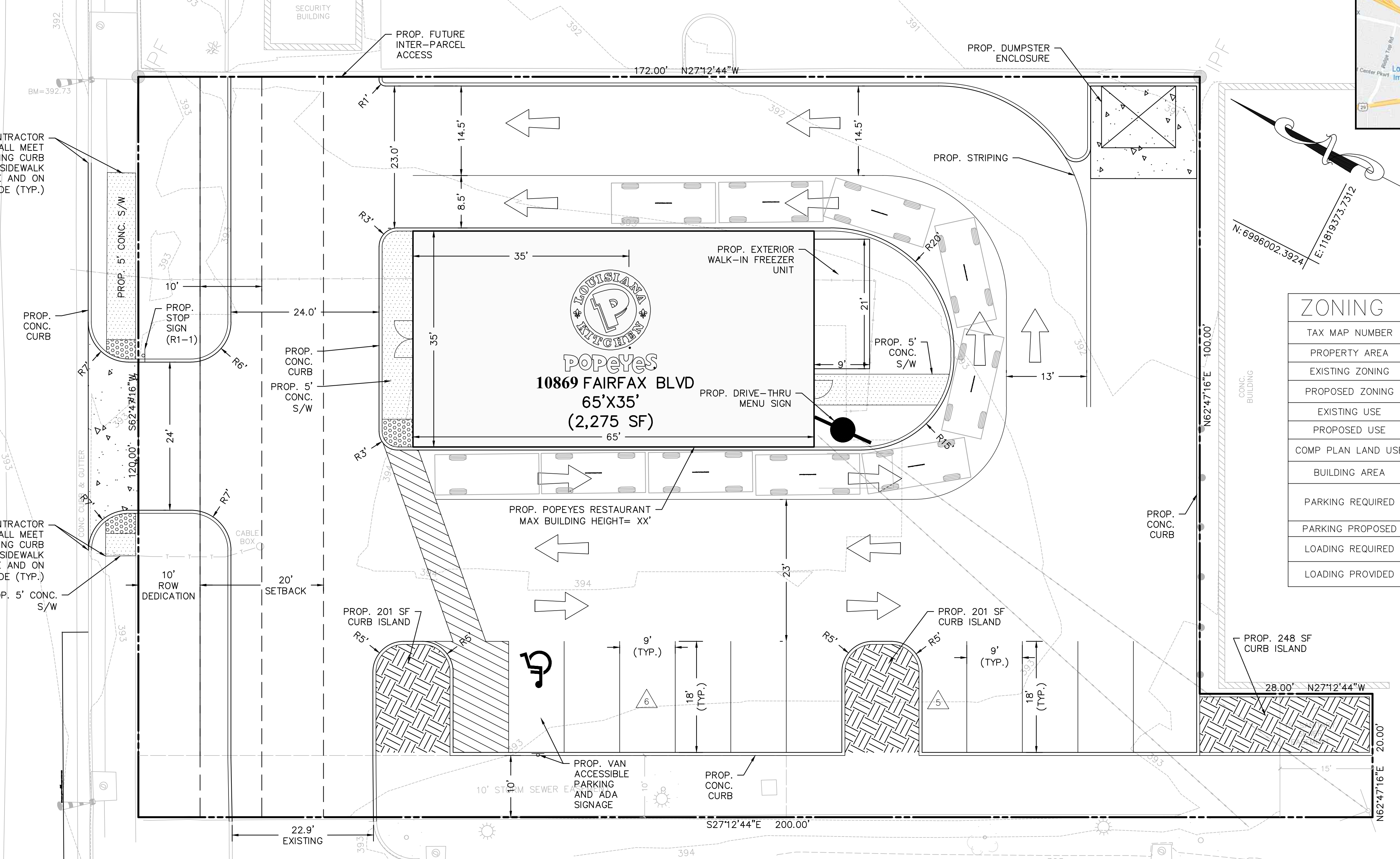
PLAN DATE: _____
WAVE CIVIL LLC
 CIVIL DESIGN ENGINEERS AND CONSULTANTS
 7202 SANFORD COURT
 ANNANDALE, VA - 22003
 PHONE# 571-749-2494
 www.wavecivil.com

GENERAL DEVELOPMENT PLAN & SPECIAL USE PERMIT PLAN
POPEYES FAST FOOD RESTAURANT
 10869 FAIRFAX BOULEVARD
 CITY OF FAIRFAX, VA
 SCALE: _____ C.I.: _____ DATE: DECEMBER 2020

FAIRFAX BLVD
 LEE HIGHWAY
 (80' R/W)

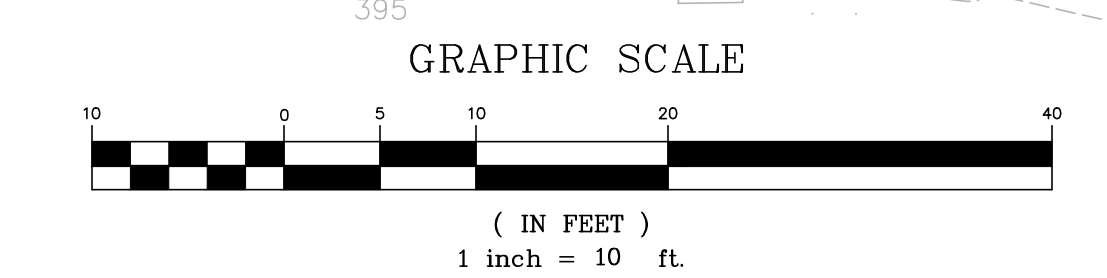
CONTRACTOR SHALL MEET EXISTING CURB AND SIDEWALK IN-LINE AND ON GRADE (TYP.)

CONTRACTOR SHALL MEET EXISTING CURB AND SIDEWALK IN-LINE AND ON GRADE (TYP.)



ZONING TABULATIONS

TAX MAP NUMBER	
PROPERTY AREA	
EXISTING ZONING	
PROPOSED ZONING	
EXISTING USE	RESTAURANT
PROPOSED USE	RESTAURANT
COMP PLAN LAND USE	
BUILDING AREA	2,275 SF
PARKING REQUIRED	1 SPACE PER 200 SF OF FLOOR AREA
PARKING PROPOSED	2,275 / 200 = 11 SPACES
LOADING REQUIRED	NONE FOR BUILDINGS UNDER 10,000 SF
LOADING PROVIDED	NONE



LEGEND

- HEAVY DUTY CONCRETE PAVING
- STANDARD DUTY CONCRETE FOR SIDEWALKS

STORMWATER NARRATIVE
 IN THE EXISTING CONDITION, THE PROPERTY IS PREDOMINANTLY IMPERVIOUS WITH 68,500 SF OF THE 79,290 SF PROPERTY COVERED BY PAVEMENT OR BUILDINGS (86.4%). GENERALLY THE PROPERTY SLOPES DOWN FROM NORTH TO SOUTH AS LARGE PORTIONS OF THE PARKING LOT SHEET FLOW INTO FAIRFAX BOULEVARD. THE RUNOFF THAT DOES NOT SHEET FLOW OFF THE SITE IS COLLECTED IN THE ONSITE DRAINAGE NETWORK THAT CONVEYS TO THE MAIN ALONG FAIRFAX BOULEVARD. ULTIMATELY ALL RUNOFF FROM THE PROPERTY IS COLLECTED IN THIS MAIN AND CONVEYED WEST ALONG FAIRFAX BOULEVARD.

IN THE PROPOSED CONDITION, 8,000 SF OF IMPERVIOUS COVER WILL BE REMOVED, RESULTING IN A PROPOSED LOT COVERAGE OF 75.5%. SITE TOPOGRAPHY WILL REMAIN THE SAME AS THE SITE WILL CONTINUE TO SLOPE DOWN TOWARDS FAIRFAX BOULEVARD. A DRAINAGE NETWORK IS PROPOSED ONSITE AND STORMWATER MANAGEMENT WILL BE PROVIDED VIA A SMALL DETENTION BASIN NEAR THE EASTERN BOUNDARY.

BETWEEN THE REDUCTION IN IMPERVIOUS COVER AND THE PROPOSED DETENTION BASIN, THIS PROJECT WILL MEET THE CHANNEL PROTECTION, FLOOD PROTECTION, AND WATER QUALITY REQUIREMENTS ESTABLISHED BY VIRGINIA DEQ.

WATER/SEWER NARRATIVE
 IN THE EXISTING CONDITION, THE PROPERTY IS OCCUPIED BY THE RODEWAY INN, A 55 UNIT MOTEL. FOR ESTIMATING WATER (AND CONSEQUENTLY SEWER) DEMANDS, IT IS ASSUMED THAT EACH MOTEL CONTAINS A SHOWER, A TOILET WITH A FLUSH VALVE, AND A SINK. USING THE FLOW VALUES ESTABLISHED IN THE AWWA M22 MANUAL, EACH UNIT WILL GENERATE 41.5 FIXTURE VALUES, WHICH RESULTS IN A TOTAL OF 2,282.5 FIXTURE VALUES FOR THE PROPERTY. UTILIZING FACTORS ESTABLISHED IN THE M22 MANUAL TO ACCOUNT FOR PRESSURE AND ACTUAL DEMAND, THE EXISTING PEAK DEMAND IS CALCULATED TO BE 145 GAL/MIN FOR THE MOTEL. THIS DOES NOT ACCOUNT FOR ADDITIONAL FIXTURES THAT ARE LIKELY PRESENT IN THE LOBBY OR MANAGER'S OFFICE.

IN THE PROPOSED CONDITION, THE MOTEL WILL BE DEMOLISHED AND A 6,049 SF WAWA WILL BE BUILT IN ITS PLACE. BASED ON PROTOTYPICAL FIXTURE SCHEDULES FOR WAWA BUILDINGS OF THIS SIZE, 166 FIXTURE UNITS WILL BE GENERATED. UTILIZING FACTORS ESTABLISHED IN THE M22 MANUAL TO ACCOUNT FOR PRESSURE AND ACTUAL DEMAND, THE EXISTING PEAK DEMAND IS CALCULATED TO BE 51 GAL/MIN. AS A RESULT OF THE CHANGE IN USE, THIS PROPERTY WILL REDUCE ITS PEAK WATER DEMAND NEARLY THREEFOLD FROM 145 GAL/MIN TO 51 GAL/MIN.

ZONING COMPLIANCE

	REQUIRED	PROPOSED
BUILDING YARDS		
FRONT (FAIRFAX BLVD)		
SIDE INTERIOR (EAST)		
SIDE INTERIOR (WEST)		
SIDE INTERIOR (SOUTH)		
LANDSCAPE BUFFERS		
RIGHT OF WAY (FAIRFAX BLVD)		
COMMERCIAL (EAST, WEST, SOUTH)		
BULK REQUIREMENTS		
MINIMUM LOT AREA		21,200 SF
MAXIMUM BUILDING COVERAGE		
MAXIMUM LOT COVERAGE		
MAXIMUM BUILDING HEIGHT		

APPROVED FOR
 CITY OF FAIRFAX, VIRGINIA
 ZONING OFFICIAL _____
 DATE _____
 APPROVAL VOID IF PLAT IS NOT OFFERED FOR RECORD WITHIN 180 DAYS AFTER DATE THEREOF

FOR LOCATION OF UTILITIES CALL 8-1-1 or 1-800-257-7777 OR LOG ON TO OR 48 HOURS IN ADVANCE OF ANY WORK IN THIS VICINITY"

APPENDIX J

2022 TOTAL FUTURE CONDITIONS SYNCHRO

REPORTS

HCM Unsignalized Intersection Capacity Analysis
 1: Second St & Fairfax Blvd

2022 TF AM
 02/25/2021



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↙	↑↑	↘	
Traffic Volume (veh/h)	1786	18	0	816	10	0
Future Volume (Veh/h)	1786	18	0	816	10	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)	1941	20	0	887	11	0
Pedestrians						3
Lane Width (ft)						12.0
Walking Speed (ft/s)						4.0
Percent Blockage						0
Right turn flare (veh)						
Median type	TWLTL		TWLTL			
Median storage veh)	2		2			
Upstream signal (ft)			651			
pX, platoon unblocked						0.93
vC, conflicting volume			1964	2398	984	
vC1, stage 1 conf vol						1954
vC2, stage 2 conf vol						444
vCu, unblocked vol			1964	2351	984	
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	88	100	
cM capacity (veh/h)			292	93	247	
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	1294	667	0	444	444	11
Volume Left	0	0	0	0	0	11
Volume Right	0	20	0	0	0	0
cSH	1700	1700	1700	1700	1700	93
Volume to Capacity	0.76	0.39	0.00	0.26	0.26	0.12
Queue Length 95th (ft)	0	0	0	0	0	10
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	48.7
Lane LOS						E
Approach Delay (s)	0.0		0.0			48.7
Approach LOS						E
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			59.9%	ICU Level of Service	B	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

2: Hallman St/Lazboy Driveway & Fairfax Blvd

2022 TF AM

02/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↖	↕		↖	↕			↕			↕		
Traffic Volume (veh/h)	2	1784	0	19	815	3	1	0	63	2	1	0	
Future Volume (Veh/h)	2	1784	0	19	815	3	1	0	63	2	1	0	
Sign Control	Free			Free			Stop			Stop			
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)	2	1939	0	21	886	3	1	0	68	2	1	0	
Pedestrians												1	
Lane Width (ft)												12.0	
Walking Speed (ft/s)												4.0	
Percent Blockage												0	
Right turn flare (veh)													
Median type	TWLTL				TWLTL								
Median storage veh	2				2								
Upstream signal (ft)					511								
pX, platoon unblocked	0.93						0.93	0.93			0.93	0.93	0.93
vC, conflicting volume	890				1939			2428	2875	970	1972	2874	446
vC1, stage 1 conf vol							1943	1943			930	930	
vC2, stage 2 conf vol							486	932			1042	1943	
vCu, unblocked vol	721				1939			2383	2865	970	1890	2863	241
tC, single (s)	4.1				4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)							6.5	5.5			6.5	5.5	
tF (s)	2.2				2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100				93			98	100	73	99	99	100
cM capacity (veh/h)	811				299			65	102	253	138	84	703
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1					
Volume Total	2	1293	646	21	591	298	69	3					
Volume Left	2	0	0	21	0	0	1	2					
Volume Right	0	0	0	0	0	3	68	0					
cSH	811	1700	1700	299	1700	1700	243	114					
Volume to Capacity	0.00	0.76	0.38	0.07	0.35	0.18	0.28	0.03					
Queue Length 95th (ft)	0	0	0	6	0	0	28	2					
Control Delay (s)	9.5	0.0	0.0	17.9	0.0	0.0	25.6	37.5					
Lane LOS	A			C			D		E				
Approach Delay (s)	0.0			0.4			25.6		37.5				
Approach LOS							D		E				
Intersection Summary													
Average Delay	0.8												
Intersection Capacity Utilization	59.9%			ICU Level of Service				B					
Analysis Period (min)	15												

HCM Unsignalized Intersection Capacity Analysis
 4: Future Site Entrance/Hampton Inn Driveway & Fairfax Blvd

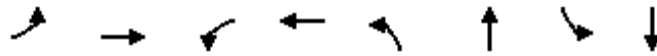
2022 TF AM
 02/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	3	1825	22	25	811	2	20	0	26	2	0	6	
Future Volume (Veh/h)	3	1825	22	25	811	2	20	0	26	2	0	6	
Sign Control	Free			Free			Stop			Stop			
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	1984	24	27	882	2	22	0	28	2	0	7	
Pedestrians								3			2		
Lane Width (ft)								12.0			12.0		
Walking Speed (ft/s)								4.0			4.0		
Percent Blockage								0			0		
Right turn flare (veh)													
Median type	TWLTL				None								
Median storage (veh)	2												
Upstream signal (ft)					230								
pX, platoon unblocked	0.92						0.92	0.92			0.92	0.92	0.92
vC, conflicting volume	886				2011			2507	2945	1007	1965	2956	444
vC1, stage 1 conf vol							2005	2005			939	939	
vC2, stage 2 conf vol							502	940			1026	2017	
vCu, unblocked vol	708				2011			2466	2940	1007	1878	2952	229
tC, single (s)	4.1				4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)							6.5	5.5			6.5	5.5	
tF (s)	2.2				2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100				90			63	100	88	99	100	99
cM capacity (veh/h)	816				279			59	95	238	160	70	712
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1					
Volume Total	3	1323	685	27	588	296	50	9					
Volume Left	3	0	0	27	0	0	22	2					
Volume Right	0	0	24	0	0	2	28	7					
cSH	816	1700	1700	279	1700	1700	102	404					
Volume to Capacity	0.00	0.78	0.40	0.10	0.35	0.17	0.49	0.02					
Queue Length 95th (ft)	0	0	0	8	0	0	54	2					
Control Delay (s)	9.4	0.0	0.0	19.3	0.0	0.0	70.4	14.1					
Lane LOS	A			C			F		B				
Approach Delay (s)	0.0			0.6			70.4		14.1				
Approach LOS							F		B				
Intersection Summary													
Average Delay	1.4												
Intersection Capacity Utilization	62.5%			ICU Level of Service				B					
Analysis Period (min)	15												

Queues
6: Walnut St/Fairchester Dr & Fairfax Blvd

2022 TF AM
02/25/2021



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	16	1997	39	875	39	80	38	58
v/c Ratio	0.03	0.73	0.23	0.32	0.34	0.38	0.54	0.41
Control Delay	4.9	15.5	7.6	7.3	82.4	28.4	110.2	74.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.9	15.5	7.6	7.3	82.4	28.4	110.2	74.3
Queue Length 50th (ft)	2	534	5	134	48	25	47	56
Queue Length 95th (ft)	15	1240	28	317	78	72	92	109
Internal Link Dist (ft)		150		557		220		212
Turn Bay Length (ft)	100		100		185		120	
Base Capacity (vph)	516	2750	202	2750	323	481	132	251
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.73	0.19	0.32	0.12	0.17	0.29	0.23
Intersection Summary								

HCM Signalized Intersection Capacity Analysis
6: Walnut St/Fairchester Dr & Fairfax Blvd

2022 TF AM
02/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (vph)	15	1815	22	36	783	22	36	19	54	35	34	19
Future Volume (vph)	15	1815	22	36	783	22	36	19	54	35	34	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	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.98		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		0.99	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)	1639	3498		1752	3425		1612	1554		1730	1797	
Flt Permitted	0.31	1.00		0.06	1.00		0.68	1.00		0.54	1.00	
Satd. Flow (perm)	530	3498		112	3425		1148	1554		980	1797	
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	1973	24	39	851	24	39	21	59	38	37	21
RTOR Reduction (vph)	0	0	0	0	0	0	0	52	0	0	11	0
Lane Group Flow (vph)	16	1997	0	39	875	0	39	28	0	38	47	0
Confl. Peds. (#/hr)	3		4	4		3			4	4		
Heavy Vehicles (%)	10%	3%	0%	3%	5%	0%	12%	21%	2%	3%	0%	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)	147.3	143.1		150.9	144.9		21.2	21.2		11.8	11.8	
Effective Green, g (s)	149.3	144.1		152.9	145.9		23.2	23.2		13.8	13.8	
Actuated g/C Ratio	0.79	0.76		0.80	0.77		0.12	0.12		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)	446	2652		150	2630		140	189		71	130	
v/s Ratio Prot	0.00	c0.57		c0.01	0.26			0.02			0.03	
v/s Ratio Perm	0.03			0.20			c0.03			c0.04		
v/c Ratio	0.04	0.75		0.26	0.33		0.28	0.15		0.54	0.36	
Uniform Delay, d1	4.6	12.9		15.8	6.9		75.8	74.6		85.0	83.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	2.0		0.9	0.3		1.1	0.4		7.6	1.7	
Delay (s)	4.6	15.0		16.8	7.2		76.9	74.9		92.6	85.6	
Level of Service	A	B		B	A		E	E		F	F	
Approach Delay (s)		14.9			7.6			75.6			88.4	
Approach LOS		B			A			E			F	
Intersection Summary												
HCM 2000 Control Delay			17.3				HCM 2000 Level of Service			B		
HCM 2000 Volume to Capacity ratio			0.71									
Actuated Cycle Length (s)			190.0			Sum of lost time (s)			20.7			
Intersection Capacity Utilization			68.0%			ICU Level of Service			C			
Analysis Period (min)			15									

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis

1: Second St & Fairfax Blvd

02/25/2021



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↙	↑↑	↘	
Traffic Volume (veh/h)	1378	19	1	1822	7	0
Future Volume (Veh/h)	1378	19	1	1822	7	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	1406	19	1	1859	7	0
Pedestrians	2					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	0					
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage (veh)	2			2		
Upstream signal (ft)				651		
pX, platoon unblocked				0.76		
vC, conflicting volume	1425			2349	712	
vC1, stage 1 conf vol				1416		
vC2, stage 2 conf vol				934		
vCu, unblocked vol	1425			2140	712	
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			96	100	
cM capacity (veh/h)	473			176	375	
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	937	488	1	930	930	7
Volume Left	0	0	1	0	0	7
Volume Right	0	19	0	0	0	0
cSH	1700	1700	473	1700	1700	176
Volume to Capacity	0.55	0.29	0.00	0.55	0.55	0.04
Queue Length 95th (ft)	0	0	0	0	0	3
Control Delay (s)	0.0	0.0	12.6	0.0	0.0	26.3
Lane LOS	B			D		
Approach Delay (s)	0.0			26.3		
Approach LOS				D		
Intersection Summary						
Average Delay	0.1					
Intersection Capacity Utilization	60.4%			ICU Level of Service	B	
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis

2: Hallman St & Fairfax Blvd

02/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	6	1372	0	42	1818	9	2	1	53	5	0	3	
Future Volume (Veh/h)	6	1372	0	42	1818	9	2	1	53	5	0	3	
Sign Control	Free			Free			Stop			Stop			
Grade	0%			0%			0%			0%			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	
Hourly flow rate (vph)	6	1400	0	43	1855	9	2	1	54	5	0	3	
Pedestrians												5	
Lane Width (ft)												12.0	
Walking Speed (ft/s)												4.0	
Percent Blockage												0	
Right turn flare (veh)													
Median type	TWLTL				TWLTL								
Median storage veh	2				2								
Upstream signal (ft)					511								
pX, platoon unblocked	0.76						0.76	0.76			0.76	0.76	0.76
vC, conflicting volume	1869				1400			2428	3367	700	2717	3362	937
vC1, stage 1 conf vol							1412	1412			1950	1950	
vC2, stage 2 conf vol							1016	1955			766	1412	
vCu, unblocked vol	1509				1400			2247	3484	700	2627	3478	281
tC, single (s)	4.1				4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)							6.5	5.5			6.5	5.5	
tF (s)	2.2				2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98				91			98	99	86	93	100	99
cM capacity (veh/h)	332				484			130	87	382	69	85	541

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1	
Volume Total	6	933	467	43	1237	627	57	8	
Volume Left	6	0	0	43	0	0	2	5	
Volume Right	0	0	0	0	0	9	54	3	
cSH	332	1700	1700	484	1700	1700	339	103	
Volume to Capacity	0.02	0.55	0.27	0.09	0.73	0.37	0.17	0.08	
Queue Length 95th (ft)	1	0	0	7	0	0	15	6	
Control Delay (s)	16.0	0.0	0.0	13.2	0.0	0.0	17.8	43.0	
Lane LOS	C			B			C		E
Approach Delay (s)	0.1			0.3			17.8		43.0
Approach LOS							C		E



















Intersection Summary

Average Delay	0.6								
Intersection Capacity Utilization	60.6%			ICU Level of Service				B	
Analysis Period (min)	15								

HCM Unsignalized Intersection Capacity Analysis

4: Future Site Entrance & Fairfax Blvd

02/25/2021

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	5	1409	17	21	1853	12	16	0	20	1	0	2	
Future Volume (Veh/h)	5	1409	17	21	1853	12	16	0	20	1	0	2	
Sign Control	Free			Free			Stop			Stop			
Grade	0%			0%			0%			0%			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	
Hourly flow rate (vph)	5	1438	17	21	1891	12	16	0	20	1	0	2	
Pedestrians												5	
Lane Width (ft)												12.0	
Walking Speed (ft/s)												4.0	
Percent Blockage												0	
Right turn flare (veh)													
Median type	TWLTL				None								
Median storage (veh)	2												
Upstream signal (ft)					230								
pX, platoon unblocked	0.76						0.76	0.76			0.76	0.76	0.76
vC, conflicting volume	1908				1455			2446	3406	728	2693	3409	956
vC1, stage 1 conf vol							1456	1456			1944	1944	
vC2, stage 2 conf vol							990	1950			749	1465	
vCu, unblocked vol	1568				1455			2274	3533	728	2598	3536	321
tC, single (s)	4.1				4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)							6.5	5.5			6.5	5.5	
tF (s)	2.2				2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98				95			87	100	95	99	100	100
cM capacity (veh/h)	317				461			124	90	366	74	90	513
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1					
Volume Total	5	959	496	21	1261	642	36	3					
Volume Left	5	0	0	21	0	0	16	1					
Volume Right	0	0	17	0	0	12	20	2					
cSH	317	1700	1700	461	1700	1700	196	172					
Volume to Capacity	0.02	0.56	0.29	0.05	0.74	0.38	0.18	0.02					
Queue Length 95th (ft)	1	0	0	4	0	0	16	1					
Control Delay (s)	16.6	0.0	0.0	13.2	0.0	0.0	27.4	26.3					
Lane LOS	C			B			D		D				
Approach Delay (s)	0.1				0.1			27.4	26.3				
Approach LOS							D		D				
Intersection Summary													
Average Delay				0.4									
Intersection Capacity Utilization				61.6%			ICU Level of Service			B			
Analysis Period (min)				15									

Queues

6: Walnut St/Fairchester Dr & Fairfax Blvd

02/25/2021



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	27	1416	45	1849	36	59	35	59
v/c Ratio	0.13	0.49	0.15	0.64	0.34	0.34	0.51	0.42
Control Delay	5.3	8.7	4.6	11.5	98.0	31.7	123.3	52.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.3	8.7	4.6	11.5	98.0	31.7	123.3	52.4
Queue Length 50th (ft)	3	269	6	444	52	18	50	32
Queue Length 95th (ft)	20	614	30	987	84	64	97	89
Internal Link Dist (ft)		150		557		220		212
Turn Bay Length (ft)	100		100		185		120	
Base Capacity (vph)	212	2903	313	2884	290	399	122	218
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.49	0.14	0.64	0.12	0.15	0.29	0.27

Intersection Summary

HCM Signalized Intersection Capacity Analysis

6: Walnut St/Fairchester Dr & Fairfax Blvd

02/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↕↰		↰	↕↰		↰	↰		↰	↰	
Traffic Volume (vph)	27	1363	39	45	1809	22	36	13	46	35	20	39
Future Volume (vph)	27	1363	39	45	1809	22	36	13	46	35	20	39
Ideal Flow (vphp)	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	
Frbp, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.95		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		0.93	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	0.88		1.00	0.90	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	3557		1752	3532		1805	1493		1680	1678	
Flt Permitted	0.09	1.00		0.16	1.00		0.64	1.00		0.61	1.00	
Satd. Flow (perm)	167	3557		295	3532		1219	1493		1071	1678	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	27	1377	39	45	1827	22	36	13	46	35	20	39
RTOR Reduction (vph)	0	1	0	0	0	0	0	41	0	0	34	0
Lane Group Flow (vph)	27	1415	0	45	1849	0	36	18	0	35	25	0
Confl. Peds. (#/hr)	4		3	3		4			17	17		
Confl. Bikes (#/hr)			3			3			1			
Heavy Vehicles (%)	0%	1%	0%	3%	2%	0%	0%	0%	9%	0%	0%	3%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6		7	7		3	3	
Permitted Phases	2			6			7			3		
Actuated Green, G (s)	179.0	173.3		179.2	173.4		21.2	21.2		11.8	11.8	
Effective Green, g (s)	181.0	174.3		181.2	174.4		23.2	23.2		13.8	13.8	
Actuated g/C Ratio	0.82	0.79		0.82	0.79		0.11	0.11		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)	187	2818		288	2799		128	157		67	105	
v/s Ratio Prot	0.00	0.40		c0.00	c0.52			0.01			0.02	
v/s Ratio Perm	0.11			0.12			c0.03			c0.03		
v/c Ratio	0.14	0.50		0.16	0.66		0.28	0.11		0.52	0.24	
Uniform Delay, d1	9.4	7.9		5.4	9.9		90.7	89.1		99.9	98.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	0.6		0.3	1.2		1.2	0.3		7.2	1.2	
Delay (s)	9.8	8.5		5.6	11.2		91.9	89.4		107.1	99.3	
Level of Service	A	A		A	B		F	F		F	F	
Approach Delay (s)		8.6			11.0			90.4			102.2	
Approach LOS		A			B			F			F	

Intersection Summary

HCM 2000 Control Delay	14.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	220.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	67.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			