APPENDIX D:
TRANSPORTATION DATA

Abrams Associates, Transportation Impact Analysis, Las Trampas Expansion Project

Transportation Impact Analysis

Las Trampas Expansion Project

City of Lafayette

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September 13, 2016

Las Trampas Expansion Project
City of Lafayette

TRANSPORTATION IMPACT ANALYSIS

1) EXECUTIVE SUMMARY

This transportation impact study describes the existing and future conditions for transportation with and without the proposed Las Trampas expansion project. The study presents information on the regional and local roadway networks, pedestrian and transit conditions, and provides an analysis of the effects on transportation facilities associated with the project. This study also describes the regulatory setting; the criterion used for determining the significance of environmental impacts; and summarizes potential environmental impacts and appropriate mitigation measures. This study has been conducted in accordance with the requirements and methodologies set forth by The City of Lafayette, the Contra Costa County Transportation Authority (CCTA), Caltrans, and the applicable provisions of CEQA.

Based on this analysis development of the project would not result in any intersections exceeding City or Caltrans standards and would not otherwise cause any significant transportation impacts. As a result, no off-site traffic or transportation mitigations are recommended.

2) PROJECT DESCRIPTION

As mentioned above, the proposed project is an expansion of the existing Las Trampas school for adults with developmental disabilities. The proposed expansion will include construction of two story building with 24,500 square feet of space. Three of the existing four school buildings on the site would be demolished and with the expanded/upgraded facilities the school population is proposed to be increased from 75 to 120 students. The project site is located on Lana Lane in the City of Lafayette. All access to the site will be from existing driveway to Las Trampas on Moraga Boulevard and on Foye Drive. **Figure 1** shows the location of the project and the surrounding roadway network. **Figure 2** shows the proposed site plan for the project.

3) ENVIRONMENTAL SETTING

This section of the report describes the roadways, traffic conditions and other existing transportation characteristics in the vicinity of the project. The primary basis of the analysis is the peak hour level of service for the key intersections. The hours identified as the “peak” hours are generally between 7:30 a.m. and 8:30 a.m. and from 4:30 p.m. to 5:30 p.m. for the majority of the transportation facilities described. Throughout this report, these peak hours will be identified as the AM and PM peak hours, respectively.

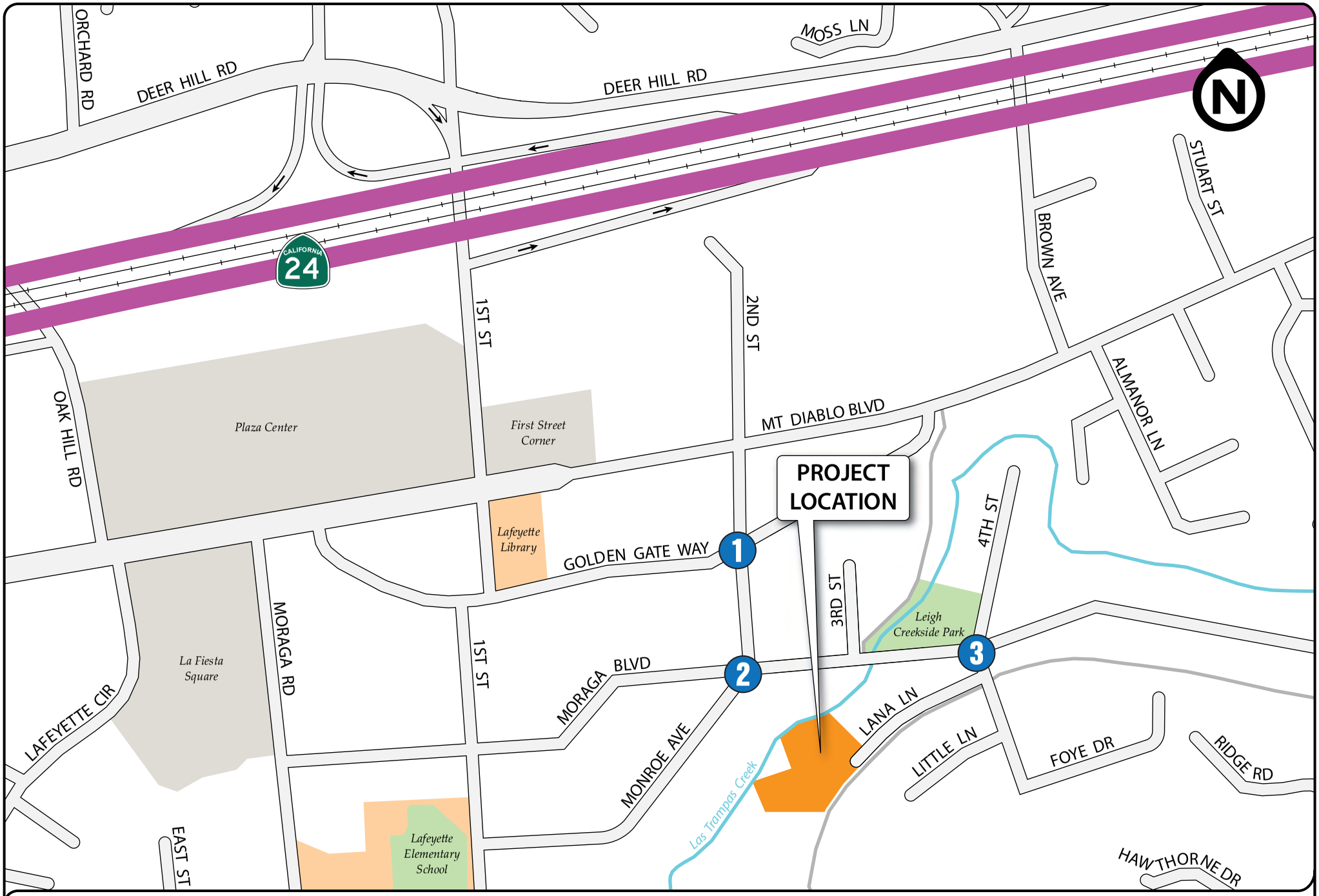

FIGURE 1 | PROJECT LOCATION
TRANSPORTATION IMPACT ANALYSIS
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FIGURE 2 | SITE PLAN
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3.1 Project Study Intersections

Based on the project's trip generation and the potential for traffic impacts a list of project study intersections was prepared in coordination with City of Lafayette staff. **Figure 1** shows the location of the three project study intersections. As mentioned above, all access to the site will be from the existing Las Trampas driveways on Moraga Boulevard and Foye Drive. There are three study intersections included in the analysis and all of the intersections are controlled with stop signs.

Project Study Intersections

1. Second Street at Golden Gate Way
2. Second Street at Moraga Boulevard/Monroe Avenue
3. Moraga Boulevard at Fourth Street/Foye Drive

Please note this list includes all intersections where over 50 peak hour trips could potentially be added in accordance with the Contra Costa Transportation Authority's Technical Procedures (January, 2013) and Caltrans' Guidelines for the Preparation of Traffic Impact Studies (December 2002).

3.2 Traffic Analysis Scenarios

The study intersections were evaluated for the following five scenarios:

- Scenario 1: *Existing Conditions* – Level of Service (LOS) based on existing peak hour volumes and existing intersection configurations.
- Scenario 2: *Existing Plus Project* – Existing traffic volumes plus trips from the proposed project.
- Scenario 3: *Cumulative Conditions* – This scenario includes year 2040 cumulative volumes based on planned and approved projects and the most recent release of the Countywide Travel Demand Model.
- Scenario 4: *Cumulative Plus Project Conditions* – This scenario includes year 2040 cumulative volumes based on the most recent release of the Countywide Travel Demand Model plus the trips from the proposed project.

3.3 Existing Roadway Network

As discussed previously, the project location and the surrounding roadway network are illustrated in **Figure 1**. The following is a more detailed description of the roadways that could be affected by the project:

- **Moraga Boulevard –** Moraga Boulevard is a two lane collector road that extends from Moraga Road to terminate to the east at Carol Lane. Moraga Boulevard has a speed limit of 25 mph in the project study area.
- **Golden Gate Way –** Golden Gate Way is a two lane collector road serving commercial land uses that extends south from Mt. Diablo Boulevard for three blocks before terminating back at Mt. Diablo Boulevard again. Golden Gate Way has a speed limit of 25 mph in the project study area.

- **Second Street –** Second Street is a two lane collector road serving commercial and residential land uses and providing access to Mt. Diablo Boulevard. Second Street extends south from near I-680 freeway across Mt. Diablo Boulevard for three blocks before terminate at Moraga Boulevard to the south. Second Street has a speed limit of 25 mph in the project study area.

- **Monroe Avenue, 4th Street, and Foye Drive –** Monroe Avenue, 4th Street, and Foye Drive are all local two lane streets that serve residential land uses. All of these streets have a 25 mph speed limit.

3.4 Intersection Analysis Methodology

Existing operational conditions at the three study intersections have been evaluated according to the requirements set forth by the City of Lafayette, the Contra Costa Transportation Authority, and Caltrans. Analysis of traffic operations was conducted using the 2010 *Highway Capacity Manual* (*HCM*) Level of Service (LOS) methodology analyzed with Synchro software.[1] Level of service is an expression, in the form of a scale, of the relationship between the capacity of an intersection (or roadway segment) to accommodate the volume of traffic moving through it at any given time. The level of service scale describes traffic flow with six ratings ranging from A to F, with "A" indicating relatively free flow of traffic and "F" indicating stop-and-go traffic and traffic jams.

As the amount of traffic moving through a given intersection or roadway segment increases, the traffic flow conditions that motorists experience rapidly deteriorate as the capacity of the intersection or roadway segment is reached. Under such conditions, there is general instability in the traffic flow, which means that relatively small incidents (e.g., momentary engine stall) can cause considerable fluctuations in speeds and delays that lead to traffic congestion. This near-capacity situation is labeled level of service (LOS) E. Beyond LOS E, the intersection or roadway segment capacity has been exceeded, and arriving traffic will exceed the ability of the intersection to accommodate it.

For signalized intersections, The *HCM* methodology determines the capacity of each lane group approaching the intersection. The LOS is then based on average control delay (in seconds per vehicle) for the various movements within the intersection. A combined weighted average control delay and LOS are presented for the intersection. A summary of the HCM results and copies of the detailed HCM LOS calculations are included in the appendix to this report. **Table 1** summarizes the relationship between LOS, average control delay, and the volume to capacity ratio at signalized intersections. **Table 2** summarizes the relationship between LOS and average control delay at unsignalized intersections.

For unsignalized (all-way stop controlled and two-way stop controlled) intersections, the average control delay and LOS operating conditions are calculated by approach (e.g., northbound) and movement (e.g., northbound left-turn) for those movements that are subject to delay. In general, the operating conditions for unsignalized intersections are presented for the worst approach.

[1] *2010 Highway Capacity Manual*, Transportation Research Board, Washington D.C., 2011

TABLE 1
SIGNALIZED INTERSECTION LEVEL OF SERVICE DEFINITIONS

Level of Service	Description of Operations	Average Delay (sec/veh)	Volume to Capacity Ratio
A	Insignificant Delays: No approach phase is fully used and no vehicle waits longer than one red indication.	≤ 10	< 0.60
B	Minimal Delays: An occasional approach phase is fully used. Drivers begin to feel restricted.	> 10 to 20	> 0.61 to 0.70
C	Acceptable Delays: Major approach phase may become fully used. Most drivers feel somewhat restricted.	> 20 to 35	> 0.71 to 0.80
D	Tolerable Delays: Drivers may wait through no more than one red indication. Queues may develop but dissipate rapidly without excessive delays.	> 35 to 55	> 0.81 to 0.90
E	Significant Delays: Volumes approaching capacity. Vehicles may wait through several signal cycles and long vehicle queues from upstream.	> 55 to 80	> 0.91 to 1.00
F	Excessive Delays: Represents conditions at capacity, with extremely long delays. Queues may block upstream intersections.	> 80	> 1.00

SOURCES: 2010 *Highway Capacity Manual*, Transportation Research Board, 2011.

TABLE 2
UNSIGNALIZED INTERSECTION LEVEL OF SERVICE DEFINITIONS

Level of Service	Description of Operations	Average Delay (seconds/vehicle)
A	No delay for stop-controlled approaches.	0 to 10
B	Operations with minor delays.	> 10 to 15
C	Operations with moderate delays.	> 15 to 25
D	Operations with some delays.	> 25 to 35
E	Operations with high delays and long queues.	> 35 to 50
F	Operation with extreme congestion, with very high delays and long queues unacceptable to most drivers.	> 50

SOURCE: 2010 *Highway Capacity Manual*, Transportation Research Board, 2011.

3.5 Existing Intersection Capacity Conditions (Scenario 1)

The existing intersection geometry at each of the project study intersections can be seen in **Figure 3.** Traffic counts at the study intersections were conducted in May of 2016 when schools were in session. **Figure 4** presents the existing traffic volumes at the project study intersections. **Table 3** summarizes the associated LOS computation results for the existing weekday AM and PM peak hour conditions. Please note that the corresponding LOS analysis calculation sheets are presented in the *Traffic Analysis Appendix*. As shown in **Table 3**, all of the signalized study intersections currently have acceptable conditions (LOS D with a volume to capacity ratio of 0.84 or better) during the weekday AM and PM peak hours.

TABLE 3
EXISTING INTERSECTION LEVEL OF SERVICE CONDITIONS

INTERSECTION		CONTROL	PEAK HOUR	EXISTING	
				Delay	LOS
1	GOLDEN GATE WAY & 2ND STREET	Two Way Stop	AM	9.9	A
			PM	8.3	A
2	MONROE AVE/2ND STREET & MORAGA BLVD	Two Way Stop	AM	8.4	A
			PM	8.1	A
3	FOYE DR/4TH STREET & MORAGA BLVD	Two Way Stop	AM	9.9	A
			PM	9.8	A

SOURCE: Abrams Associates, 2016
NOTES: HCM LOS results are presented in terms of average intersection delay in seconds per vehicle.

3.6 Pedestrian and Bicycle Facilities

Bicycle paths, lanes and routes are typical examples of bicycle transportation facilities, which are defined by Caltrans as being in one of the following three classes:

Class I – Provides a completely separated facility designed for the exclusive use of bicyclists and pedestrians with crossing points minimized.

Class II – Provides a restricted right-of-way designated lane for the exclusive or semi-exclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited, but with vehicle parking and cross-flows by pedestrians and motorists permitted.

Class III – Provides a route designated by signs or permanent markings and shared with pedestrians and motorists.

There are sidewalks on most streets in the project study area with the exception of Foye Drive and Lana Lane. In addition, the Class 1 Lafayette Moraga Trail runs adjacent to the project site.

3.7 Transit Service

Two major public transit operators provide service within or adjacent to the study area. These include BART and AC Transit. These operators are described below.

Bay Area Rapid Transit (BART) – BART is a rapid mass transit system which provides regional transportation connections to much of the Bay Area. It runs from the North Bay Area in

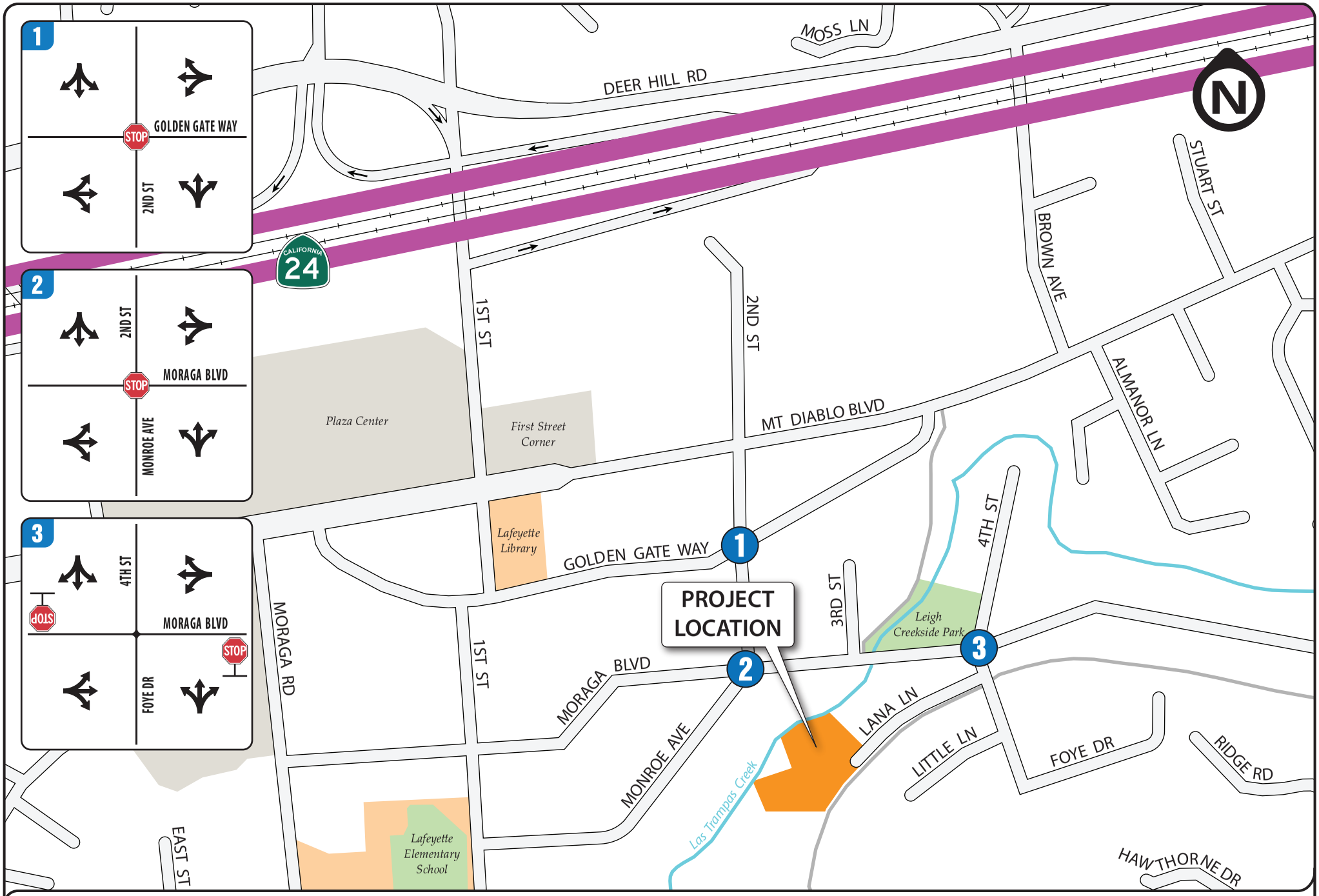

FIGURE 3 | EXISTING LANE CONFIGURATION
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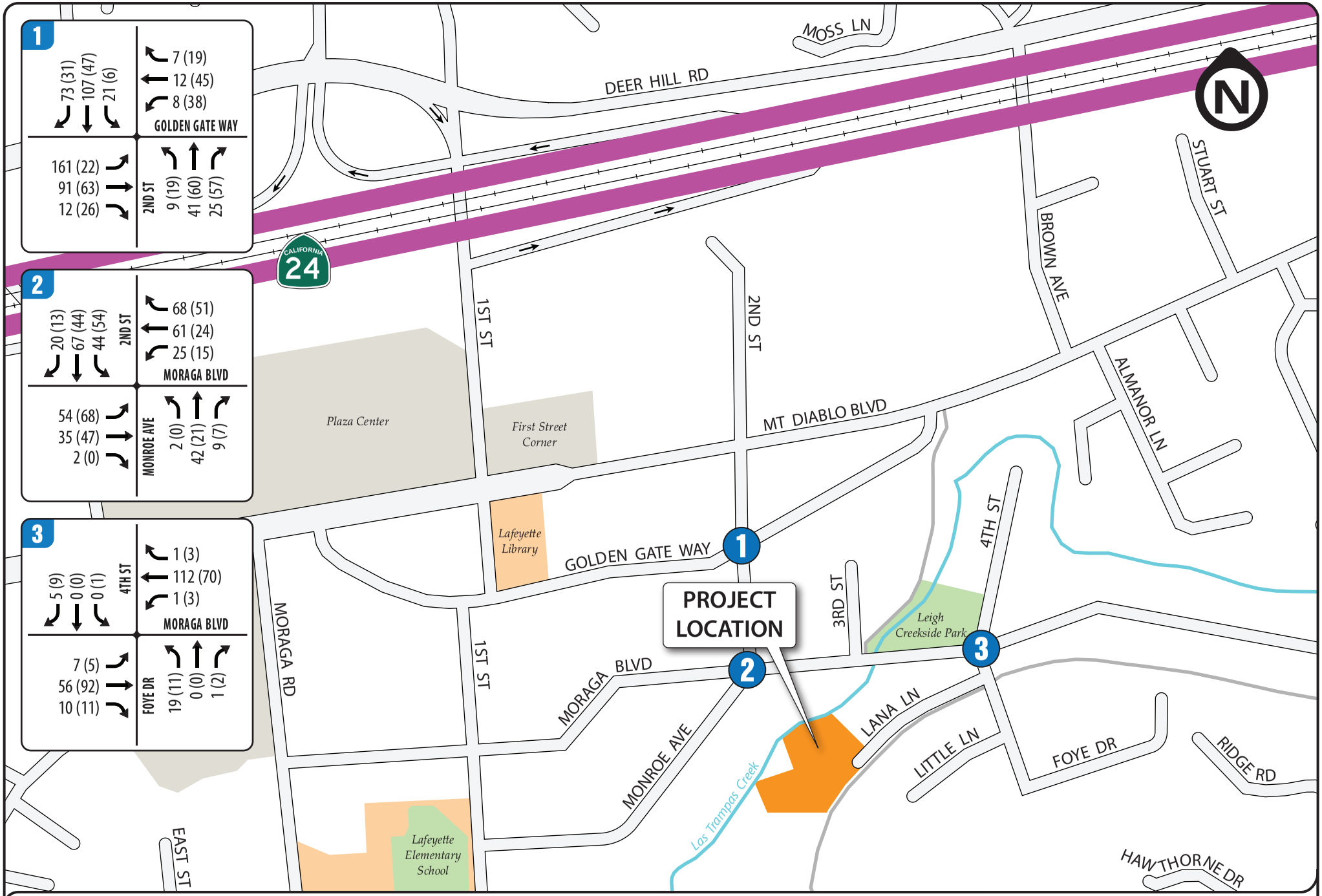

FIGURE 4 | EXISTING AM(PM) PEAK HOUR TRAFFIC VOLUMES
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Richmond to the South Bay Area in Fremont. In the east-west direction it runs from Pittsburg to the San Francisco Airport and Milbrae with several connections in Oakland. BART has trains running from about 4:00 am to 12:30 am daily with a weekday frequency of 15 minutes.

The County Connection – The Central Contra Costa Transit Authority (CCCTA) provides bus service in Lafayette and the surrounding communities through The County Connection. County Connection Routes 6 and 25 provide service from the Lafayette BART Station. Along Moraga Road, Route 6 has stops at Moraga Boulevard. Route 6 operates Monday through Friday with approximately one hour headways between 6:40 a.m. and 8:45 p.m. On Mt. Diablo Boulevard, Route 25 has stops at 2nd Street. Route 25 operates Monday through Friday with approximately one hour headways between 7:30 a.m. and 6:20 p.m.

4) REGULATORY CONTEXT

Existing policies, laws and regulations that apply to the proposed project are summarized below.

4.1 State

The California Department of Transportation (Caltrans) has jurisdiction over State highways. The Guide for the Preparation of Traffic Impact Studies provides consistent guidance for Caltrans staff reviewing development/land use change proposals. The Guide also informs local agencies about information needed for Caltrans to analyze the traffic impacts to state highway facilities which include freeway segments, on- or off-ramps, and signalized intersections.

4.2 Local

Contra Costa Countywide Transportation Plan Update (2014) - The transportation policies that are currently applicable within Contra Costa County are based on the Contra Costa County Transportation Plan. This document identifies standards and procedures for analyzing transportation impacts in the county.

City of Lafayette General Plan - The Transportation and Circulation Element included in the City of Lafayette General Plan was prepared pursuant to Section 65302(b) of the California Government Code. The Transportation and Circulation Element addresses existing and planned transportation routes, terminals, and other local public utilities and facilities. The General Plan identifies roadway and transit goals and policies that have been adopted to ensure that the transportation system of the City will have adequate capacity to serve planned growth. These goals and policies are intended to provide a plan and implementation measures for an integrated, multi-modal transportation system that will safely and efficiently meet the transportation needs of all economic and social segments of the City.

4.3 Significance Criteria

The City of Lafayette General Plan establishes the minimum acceptable standards for traffic operations for intersections and roadways in the City. Please note that as the acting CMA the CCTA establishes the traffic LOS standards for all state highway facilities in Contra Costa County, which supersede the general Caltrans operational standard for all state highways. As the designated Congestion Management Agency (CMA) representing the jurisdictions of Contra Costa County, the Contra Costa Transportation Authority (the Authority) is responsible for preparing and adopting a Congestion Management Program (CMP). Consistent with the CMP

legislation, the Authority establishes the level-of-service standards for the CMP network and Routes of Regional Significance.

City of Lafayette Intersection Significance Thresholds - Project-related operational impacts on the signalized study intersections on City of Lafayette arterials are based on the facility type and location. Impacts are considered significant if project-related traffic causes the Level of Service (LOS) rating to deteriorate beyond volume to capacity (v/c) ratio of 0.89 for intersections in the downtown area and 0.84 for intersections outside the downtown area.

According to CEQA guidelines, a project would have a significant impact if it would:

- Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including, but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths and mass transit.
- Conflict with an applicable congestion management program, including, but not limited to, level-of-service standards, and travel demand measures, or other standards established by a county congestion management agency for designated roadways.
- Result in inadequate emergency vehicle access.
- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.
- Result in a projected future over-capacity freeway condition where current long-range planning studies show an under-capacity condition.
- Result in an internal circulation system design that does not meet City standards.

5) IMPACTS AND MITIGATION MEASURES

5.1 Project Trip Generation

The proposed project would consist of expansion to a school for developmentally disabled adults. The most reliable trip generation forecasts for these types of schools are typically based on the number of students. For this project the proposed expansion is proposed to increase the student population from 75 to 120 The trip generation calculations are shown in **Table 4**. They are based on rates from the Institute of Transportation Engineer's (ITE) Trip Generation Manual, 9th Edition. Please note these estimates are conservative for the AM peak hour since private schools typically start at 8:00 AM and the Las Trampas School morning drop off occurs from 8:30 AM to 9:30 AM. However, no reductions were taken to account for this factor.

TABLE 4
TRIP GENERATION CALCULATIONS

Land Use	*Size*	*ADT*	*AM Peak Hour*			*PM Peak Hour*		
			In	*Out*	*Total*	*In*	*Out*	*Total*
ITE Private School Trip Rates (ITE Land Use Code 536)		2.48	0.49	0.32	0.81	0.07	0.10	0.17
Project Trip Generation	*45 Students*	*112*	*22*	*14*	*36*	*3*	*5*	*8*

The total trip generation reflects all vehicle trips that would be counted at the project driveways, both inbound and outbound. As shown in **Table 5**, the project is forecast to generate approximately 36 net new vehicle trips during the AM peak hour and 8 new trips during the PM peak hour. To determine the worst-case impacts the trips generated are estimated for the peak commute hours of 7:30 a.m. to 8:30 a.m. and 4:30 p.m. and 5:30 p.m., which represent the peak of "*adjacent street traffic*". This is when the project traffic would contribute to the greatest amount of congestion.

5.2 Project Trip Distribution

The trip distribution assumptions are based on the project's proximity to the freeway interchange, the directional split at nearby intersections, and the land use patterns in the area. **Figure 5** shows the project traffic that is forecast to be added at each of the study intersections.

5.3 Existing Plus Project Traffic Capacity Conditions (Scenario 2)

This scenario evaluates the existing conditions with the addition of traffic from the proposed project. The capacity calculations for the Existing Plus Project scenario are shown in **Table 5** and the resulting volumes at the two project study intersections are shown in **Figure 6**. Please note that the corresponding LOS analysis calculation sheets are presented in the Traffic Analysis Appendix. As shown in **Table 5**, both of the project study intersections would have acceptable conditions with LOS B or better operations during the weekday AM and PM peak hours.

TABLE 5
EXISTING PLUS PROJECT INTERSECTION LEVEL OF SERVICE CONDITIONS

	INTERSECTION	CONTROL	PEAK HOUR	EXISTING		EXISTING PLUS PROJECT	
				Delay	LOS	Delay	LOS
1	GOLDEN GATE WAY & 2ND STREET	Two Way Stop	AM	9.9	A	10.0	A
			PM	8.3	A	8.3	A
2	MONROE AVE/2ND STREET & MORAGA BLVD	Two Way Stop	AM	8.4	A	8.6	A
			PM	8.1	A	8.1	A
3	FOYE DR/4TH STREET & MORAGA BLVD	Two Way Stop	AM	9.9	A	10.2	B
			PM	9.8	A	9.8	A

SOURCE: Abrams Associates, 2016
NOTES: HCM LOS results are presented in terms of average intersection delay in seconds per vehicle.

5.4 Cumulative Traffic Capacity Conditions (Scenario 3)

For the cumulative conditions, the intersection traffic volumes were based on the County's traffic model for the area which equates to a 0.5% increase in traffic per year to the Year 2040. Since there are no programmed improvements for the study area, it was assumed that the roadway network for Cumulative conditions would be unchanged from its current configuration. **Figure 7** presents the cumulative build-out traffic volumes and **Table 6** summarizes the LOS results for the Cumulative (Year 2040) traffic conditions at each of the project study intersections. As shown on this table, both of the study intersections would continue to have acceptable conditions during the weekday AM and PM peak commute hours.

FIGURE 5 | PROJECT AM(PM) PEAK HOUR TRAFFIC VOLUMES
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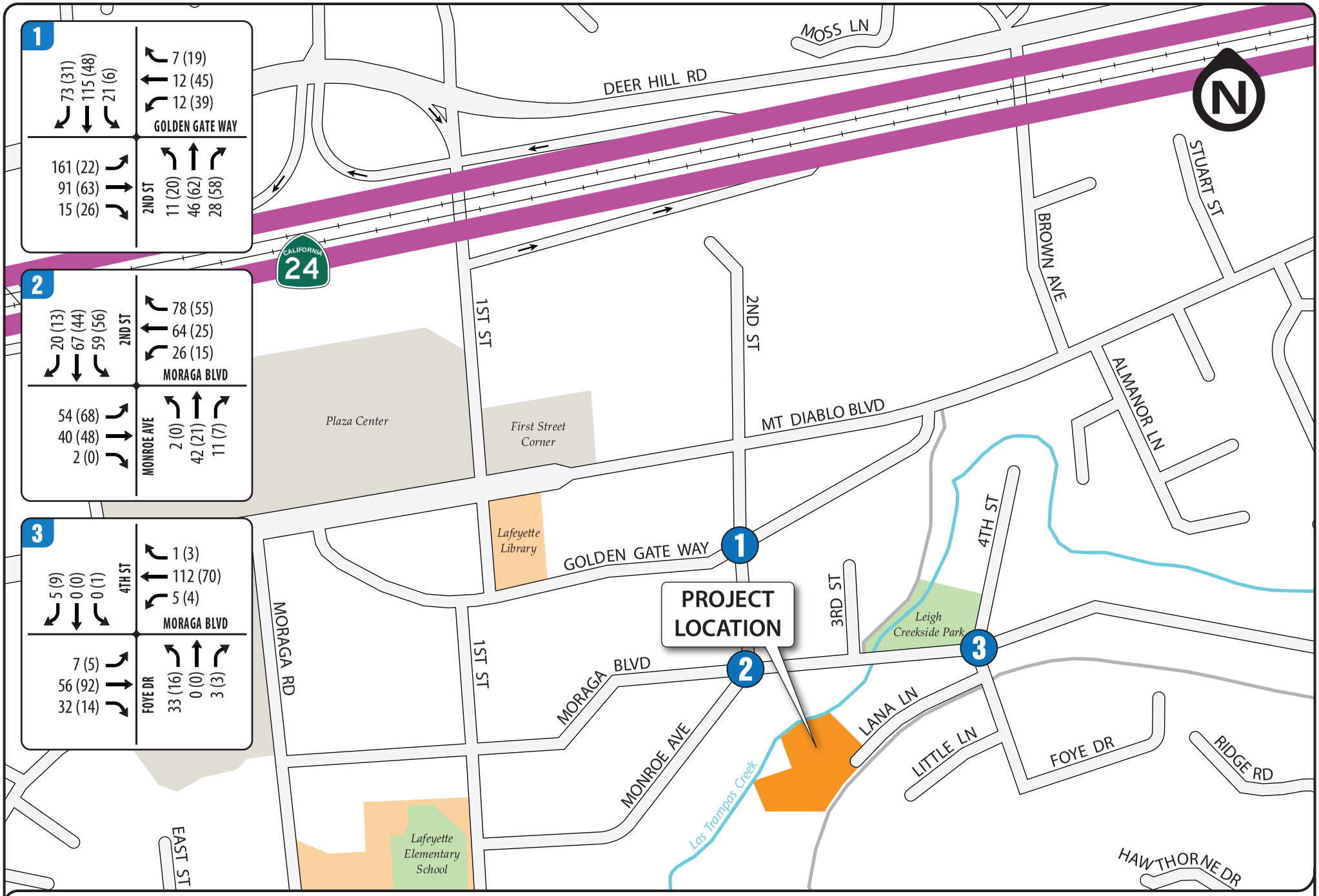

FIGURE 6 | EXISTING PLUS PROJECT AM(PM) PEAK HOUR TRAFFIC VOLUMES
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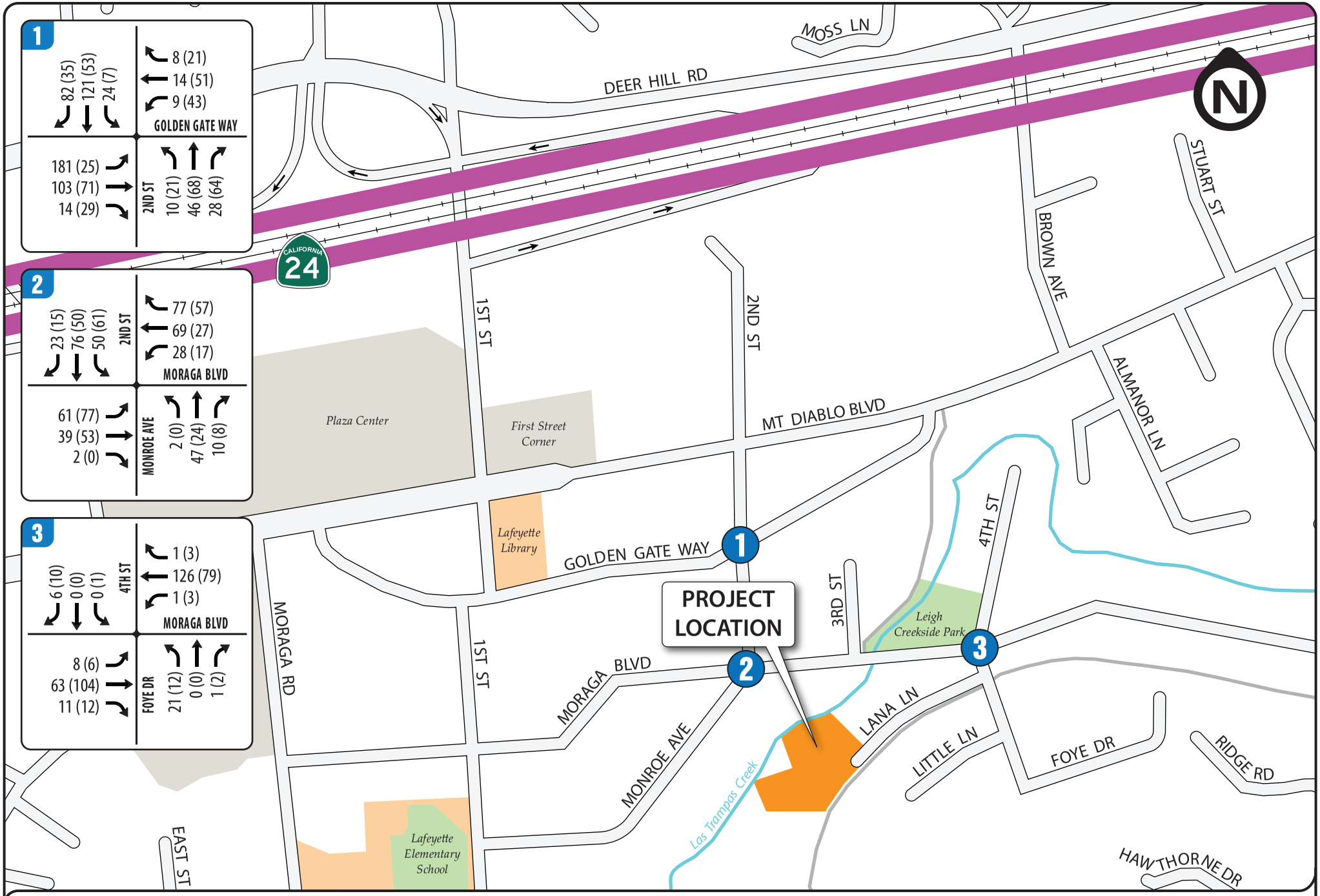

FIGURE 7 | CUMULATIVE AM(PM) PEAK HOUR TRAFFIC VOLUMES
TRANSPORTATION IMPACT ANALYSIS
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TABLE 6
CUMULATIVE INTERSECTION LEVEL OF SERVICE CONDITIONS

	INTERSECTION	CONTROL	PEAK HOUR	CUMULATIVE		CUMULATIVE PLUS PROJECT	
				Delay	LOS	Delay	LOS
1	GOLDEN GATE WAY & 2ND STREET	Two Way Stop	AM	10.6	B	10.8	B
			PM	8.5	A	8.6	A
2	MONROE AVE/2ND STREET & MORAGA BLVD	Two Way Stop	AM	8.7	A	8.9	A
			PM	8.3	A	8.3	A
3	FOYE DR/4TH STREET & MORAGA BLVD	Two Way Stop	AM	10.2	B	10.4	B
			PM	10.0	B	10.1	B

SOURCE: Abrams Associates, 2016
NOTES: HCM LOS results are presented in terms of average intersection delay in seconds per vehicle.

5.5 Cumulative Plus Project Traffic Capacity Conditions (Scenario 4)

Figure 8 presents the cumulative build-out traffic volumes including the traffic from the proposed Las Trampas school expansion. **Table 6** summarizes the LOS results for the Cumulative Plus Project (Year 2040) traffic conditions at each of the project study intersections. As shown on this table, all of the study intersections would continue to have acceptable conditions (LOS D or better) during the weekday AM and PM peak commute hours with the addition of traffic from the proposed project.

5.6 Internal Circulation and Access

No internal site circulation or access issues have been identified that would cause a traffic safety problem or any unusual traffic congestion or delay. At the existing Las Trampas project entrances there were no capacity problems or safety issues identified.

5.7 Parking

The proposed project would provide an adequate supply of off-street parking based on the City's requirements, which require 66 parking places. The project is currently proposing to exceed the City's parking requirements by providing 71 parking spaces and subject to final City approval of the proposed parking plan there should be no significant parking effects expected to the surrounding properties.

Parking Demand Based on ITE Parking Generation Rates - To provide additional justification for the parking supply, **Table 7** also provides a summary of the parking demand results using the average ITE parking generation rates for assisted living taken from the 4th Edition of the *ITE Parking Generation Manual*. As shown in **Table 7**, the peak parking demand generated by the project would be forecast to be approximately 47 parking spaces based on the ITE data.

5.8 Pedestrian and Bicycle Impacts

The project would generate additional pedestrian and bicycle traffic in the area, thereby potentially increasing conflicts between vehicles, bicycles, and pedestrians. However, the project would not conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks) or generate pedestrian, bicycle, or transit travel

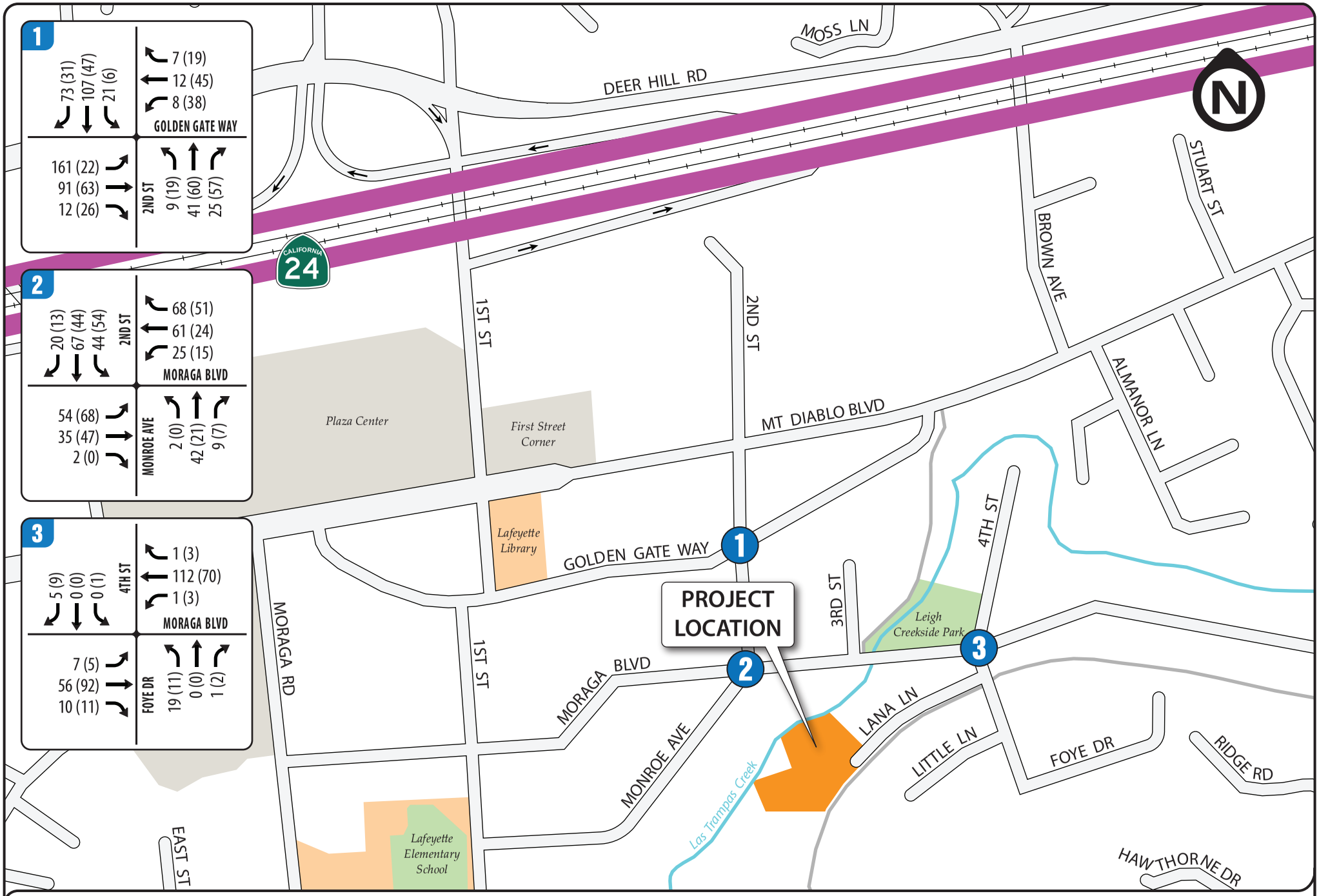

FIGURE 8 | CUMULATIVE PLUS PROJECT AM(PM) PEAK HOUR TRAFFIC VOLUMES
TRANSPORTATION IMPACT ANALYSIS
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demand that would not be accommodated by transit, bicycle, or pedestrian facilities and plans. Based on our review there would be no significant impacts to bicycle or pedestrian safety in the area and no mitigations or improvements are recommended at this time.

Table 7
Off-Street Parking Calculations Using Parking Demand Data from the Institute of Transportation Engineers

Scenario	Data Source	Land Use	Size		Parking Demand	Required Spaces
Proposed Project	ITE Parking Demand Rates	Private School	120	students	0.39 per student	47 spaces

5.9 Transit Impacts

The proposed project would not interfere with any existing bus routes and would not remove or relocate any existing bus stops. The proposed Project could also potentially help support existing bus services with additional transit ridership and would not conflict with any transit plans or goals of the City or The County Connection.

Although the proposed project does have the potential to result in an increase in patronage on bus lines in the area, based on this analysis the project would not result in degradation of the level of service (or a significant increase in delay) on any roadway segments currently being utilized by bus transit in the area and, as such, no significant impacts to transit are expected. As a result, the project would not be expected to result in any significant impacts to transit service in the area.

5.10 Recommended Mitigation Measures

The project would not cause any intersections in the study area to exceed established standards and no vehicular traffic mitigations are recommended.

Project-Specific Impacts and Mitigation Measures

TR-1 Impacts related to pedestrian facilities.

The proposed project would generate additional pedestrian and bicycle traffic in the area, thereby potentially increasing conflicts between vehicles, bicycles, and pedestrians. Based on the City's significance criteria the project's impacts on pedestrian travel would be considered less than significant and no mitigations would be required.

Mitigation Measure(s)
None required.

TR-2 Impacts related to bicycle facilities.

Although the proposed project would increase vehicle and pedestrian traffic in the project vicinity it is not expected to significantly impact or change the design of any existing bicycle facilities or create any new safety problems for bicyclists in the area.

Mitigation Measure(s)
None required.

TR-3 Impacts related to transit facilities.

The proposed project has the potential to increase patronage on bus lines in the area. However, based on this analysis the project would not result in degradation of the level of service (or a significant increase in delay) on any roadway segments currently being utilized by bus transit in the area. As a result, the project would not be expected to result in any significant impacts to transit service in the area.

Mitigation Measure(s)
None required.

TR-4 Construction activities associated with the proposed project would result in an increase in traffic to and from the site and could lead to unsafe conditions near the project site.

The increase in traffic as a result of construction activities associated with the proposed project has been quantified assuming a worst-case single phase construction period of 12 months.

Heavy Equipment

Approximately six pieces of heavy equipment are estimated to be transported on and off the site each month throughout the construction of the proposed project. Heavy equipment transport to and from the site could cause traffic impacts in the vicinity of the project site during construction. However, each load would be required to obtain all necessary permits, which would include conditions. Prior to issuance of grading and building permits, the project applicant would be required to submit a Traffic Control Plan.

The requirements within the Traffic Control Plan include, but are not limited to, the following: truck drivers would be notified of and required to use the most direct route between the site and the freeway, as determined by the City Engineering Services Department; all site ingress and egress would occur only at the main driveway to the project site and construction activities may require installation of temporary (or ultimate) traffic signals as determined by the City Engineer; specifically designated travel routes for large vehicles would be monitored and controlled by flaggers for large construction vehicle ingress and egress; warning signs indicating frequent truck entry and exit would be posted on adjacent roads; and any debris and mud on nearby streets caused by trucks would be monitored daily and may require instituting a street cleaning program. In addition, eight loads of heavy equipment being hauled to and from the site each month would be short-term and temporary.

Employees

The weekday work is expected to begin around 7:00 AM and end around 4:00 PM. The construction worker arrival peak would occur between 6:30 AM and 7:30 AM, and the departure peak would occur between 4:00 PM and 5:00 PM. It should be noted that the number of trips generated during construction would not only be temporary, but should also be less than the proposed project trip generation at buildout.

Based on past construction of similar projects, construction workers could require parking for up to 30 vehicles during the peak construction period. Additionally, deliveries,

visits, and other activities may generate peak non-worker parking demand of 10 to 20 trucks and automobiles per day. Therefore, up to 50 vehicle parking spaces may be required during the peak construction period just for the construction employees. Furthermore the Traffic Control Plan will require construction employee parking be provided on the project site or in off-site parking lots to eliminate conflicts with nearby residential areas. The construction of the project can also be staggered so that employee parking demand can be met by using on-site parking. Therefore the impacts of construction-related employee traffic and parking are considered less-than-significant.

Construction Material Import

The project would also require the importation of construction material, including raw materials for the building pads, the buildings, the parking areas, and landscaping. Under the provisions of the Traffic Control Plan, if importation and exportation of material becomes a traffic nuisance, then the City Engineer may limit the hours the activities can take place.

Traffic Control Plan

The Traffic Control Plan would indicate how parking for construction workers would be provided during construction and ensure a safe flow of traffic in the project area during construction. This analysis assumed construction of the entire project in one phase to identify the potential worst-case traffic effects. If the project is built in phases over time, the effects of each phase will be the same or less. Each phase will be subject to a Traffic Control Plan and oversight by the City Engineer. The last phase may require added worker parking measures, depending on the circumstances, as there will not be any remaining vacant land for parking. Therefore, the construction activities associated with the proposed project or its individual phases would not be expected to lead to noticeable congestion in the vicinity of the site or the perception of decreased traffic safety resulting in a ***less-than-significant*** impact.

Mitigation Measure(s)
None required.

TR-5 Impacts to freeway operations.

The development of the proposed project could generate a minor increase the total traffic on State Route 24 during both AM and PM peak hours but the increase to any one segment is forecast to be well under 50 trips per hour. Therefore, the proposed project would have a ***less-than-significant*** impact to freeway operations.

Mitigation Measure(s)
None required.

TR-6 Impacts related to site access and circulation.

The proposed project would utilize the same existing unsignalized driveway which has been used by the school for many years. Based on a review of the proposed site plan it was determined that the site circulation should function well and would not cause any safety or operational problems. The project site design has been required to conform to City design standards and the plan is not expected to create any significant impacts to

pedestrians, bicyclists or traffic operations. Therefore, impacts related to site access and circulation to the proposed project would be ***less-than-significant***.

Mitigation Measure(s)
None required.

TR-7 Impacts regarding emergency vehicle access on and surrounding the proposed project site.

Sufficient emergency access is determined by factors such as number of access points, roadway width, and proximity to fire stations. The plan for the proposed project includes a primary entrance on Lana Lane and secondary access is provided via the Lafayette-Moraga Trail. All lane widths within the project should meet the minimum width that can accommodate emergency vehicles and the final emergency vehicle access plan would be subject to approval from the Fire Department. Therefore, the development of the proposed project is expected to have ***less-than-significant*** impacts regarding emergency vehicle access.

Mitigation Measure(s)
None required.

Transportation Impact Analysis Technical Appendix

Las Trampas Expansion Project

City of Lafayette

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Abrams Associates
TRAFFIC ENGINEERING, INC.

April 13, 2017

Intersection	
Intersection Delay, s/veh	9.9
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	161	91	12	0	8	12	7	0	9	41	25
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	175	99	13	0	9	13	8	0	10	45	27
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	10.7	8.2	8.5
HCM LOS	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	12%	61%	30%	10%
Vol Thru, %	55%	34%	44%	53%
Vol Right, %	33%	5%	26%	36%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	75	264	27	201
LT Vol	9	161	8	21
Through Vol	41	91	12	107
RT Vol	25	12	7	73
Lane Flow Rate	82	287	29	218
Geometry Grp	1	1	1	1
Degree of Util (X)	0.109	0.38	0.04	0.28
Departure Headway (Hd)	4.803	4.766	4.906	4.616
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	743	752	725	776
Service Time	2.858	2.812	2.97	2.661
HCM Lane V/C Ratio	0.11	0.382	0.04	0.281
HCM Control Delay	8.5	10.7	8.2	9.5
HCM Lane LOS	A	B	A	A
HCM 95th-tile Q	0.4	1.8	0.1	1.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	21	107	73
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	23	116	79
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	9.5
HCM LOS	A

Lane

Intersection	
Intersection Delay, s/veh	8.4
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Vol, veh/h	0	54	35	2	0	25	61	68	0	2	42	9	0	44	67	20
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	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	59	38	2	0	27	66	74	0	2	46	10	0	48	73	22
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.4	8.4	8	8.6
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	59%	16%	34%
Vol Thru, %	79%	38%	40%	51%
Vol Right, %	17%	2%	44%	15%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	53	91	154	131
LT Vol	2	54	25	44
Through Vol	42	35	61	67
RT Vol	9	2	68	20
Lane Flow Rate	58	99	167	142
Geometry Grp	1	1	1	1
Degree of Util (X)	0.074	0.129	0.2	0.181
Departure Headway (Hd)	4.616	4.697	4.292	4.583
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	775	764	837	783
Service Time	2.647	2.722	2.314	2.611
HCM Lane V/C Ratio	0.075	0.13	0.2	0.181
HCM Control Delay	8	8.4	8.4	8.6
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.4	0.7	0.7

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	7	56	10	1	112	1	19	0	1	0	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	61	11	1	122	1	21	0	1	0	0	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	123	0	0	72	0	0	209	207	66	206	211	122
Stage 1	-	-	-	-	-	-	82	82	-	124	124	-
Stage 2	-	-	-	-	-	-	127	125	-	82	87	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1464	-	-	1528	-	-	748	690	998	752	686	929
Stage 1	-	-	-	-	-	-	926	827	-	880	793	-
Stage 2	-	-	-	-	-	-	877	792	-	926	823	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1464	-	-	1528	-	-	740	685	998	747	681	929
Mov Cap-2 Maneuver	-	-	-	-	-	-	740	685	-	747	681	-
Stage 1	-	-	-	-	-	-	920	822	-	875	792	-
Stage 2	-	-	-	-	-	-	871	791	-	919	818	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	0.1	9.9	8.9
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	750	1464	-	-	1528	-	-	929
HCM Lane V/C Ratio	0.029	0.005	-	-	0.001	-	-	0.006
HCM Control Delay (s)	9.9	7.5	0	-	7.4	0	-	8.9
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Intersection	
Intersection Delay, s/veh	8.3
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	22	63	26	0	38	45	19	0	19	60	57
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	24	68	28	0	41	49	21	0	21	65	62
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	8.3	8.4	8.3
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	20%	37%	7%
Vol Thru, %	44%	57%	44%	56%
Vol Right, %	42%	23%	19%	37%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	136	111	102	84
LT Vol	19	22	38	6
Through Vol	60	63	45	47
RT Vol	57	26	19	31
Lane Flow Rate	148	121	111	91
Geometry Grp	1	1	1	1
Degree of Util (X)	0.179	0.151	0.141	0.112
Departure Headway (Hd)	4.352	4.501	4.574	4.43
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	825	798	784	809
Service Time	2.377	2.527	2.601	2.459
HCM Lane V/C Ratio	0.179	0.152	0.142	0.112
HCM Control Delay	8.3	8.3	8.4	8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.6	0.5	0.5	0.4

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	6	47	31
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	7	51	34
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	8
HCM LOS	A

Lane

Intersection	
Intersection Delay, s/veh	8.1
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Vol, veh/h	0	68	47	0	0	15	24	51	0	0	21	7	0	54	44	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	74	51	0	0	16	26	55	0	0	23	8	0	59	48	14
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.4	7.7	7.6	8.3
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	59%	17%	49%
Vol Thru, %	75%	41%	27%	40%
Vol Right, %	25%	0%	57%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	28	115	90	111
LT Vol	0	68	15	54
Through Vol	21	47	24	44
RT Vol	7	0	51	13
Lane Flow Rate	30	125	98	121
Geometry Grp	1	1	1	1
Degree of Util (X)	0.037	0.156	0.112	0.151
Departure Headway (Hd)	4.422	4.505	4.119	4.494
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	811	799	873	800
Service Time	2.442	2.521	2.134	2.51
HCM Lane V/C Ratio	0.037	0.156	0.112	0.151
HCM Control Delay	7.6	8.4	7.7	8.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0.6	0.4	0.5

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	5	92	11	3	70	3	11	0	2	1	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	100	12	3	76	3	12	0	2	1	0	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	79	0	0	112	0	0	206	203	106	202	207	78
Stage 1	-	-	-	-	-	-	117	117	-	84	84	-
Stage 2	-	-	-	-	-	-	89	86	-	118	123	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1519	-	-	1478	-	-	752	693	948	756	690	983
Stage 1	-	-	-	-	-	-	888	799	-	924	825	-
Stage 2	-	-	-	-	-	-	918	824	-	887	794	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1519	-	-	1478	-	-	741	689	948	751	686	983
Mov Cap-2 Maneuver	-	-	-	-	-	-	741	689	-	751	686	-
Stage 1	-	-	-	-	-	-	884	796	-	920	823	-
Stage 2	-	-	-	-	-	-	907	822	-	881	791	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.3	9.8	8.8
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	767	1519	-	-	1478	-	-	954
HCM Lane V/C Ratio	0.018	0.004	-	-	0.002	-	-	0.011
HCM Control Delay (s)	9.8	7.4	0	-	7.4	0	-	8.8
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Intersection	
Intersection Delay, s/veh	10
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	161	91	15	0	12	12	7	0	11	46	28
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	175	99	16	0	13	13	8	0	12	50	30
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	10.9	8.3	8.6
HCM LOS	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	13%	60%	39%	10%
Vol Thru, %	54%	34%	39%	55%
Vol Right, %	33%	6%	23%	35%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	85	267	31	209
LT Vol	11	161	12	21
Through Vol	46	91	12	115
RT Vol	28	15	7	73
Lane Flow Rate	92	290	34	227
Geometry Grp	1	1	1	1
Degree of Util (X)	0.124	0.388	0.047	0.294
Departure Headway (Hd)	4.848	4.815	5.008	4.665
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	735	743	710	768
Service Time	2.907	2.865	3.077	2.712
HCM Lane V/C Ratio	0.125	0.39	0.048	0.296
HCM Control Delay	8.6	10.9	8.3	9.7
HCM Lane LOS	A	B	A	A
HCM 95th-tile Q	0.4	1.8	0.1	1.2

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	21	115	73
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	23	125	79
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	9.7
HCM LOS	A

Lane

Intersection	
Intersection Delay, s/veh	8.6
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Vol, veh/h	0	54	40	2	0	26	64	78	0	2	42	11	0	59	67	20
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	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	59	43	2	0	28	70	85	0	2	46	12	0	64	73	22
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.6	8.6	8.1	8.9
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	56%	15%	40%
Vol Thru, %	76%	42%	38%	46%
Vol Right, %	20%	2%	46%	14%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	55	96	168	146
LT Vol	2	54	26	59
Through Vol	42	40	64	67
RT Vol	11	2	78	20
Lane Flow Rate	60	104	183	159
Geometry Grp	1	1	1	1
Degree of Util (X)	0.078	0.138	0.22	0.205
Departure Headway (Hd)	4.67	4.759	4.334	4.659
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	765	752	827	770
Service Time	2.71	2.792	2.363	2.693
HCM Lane V/C Ratio	0.078	0.138	0.221	0.206
HCM Control Delay	8.1	8.6	8.6	8.9
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	0.5	0.8	0.8

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	7	56	32	5	112	1	33	0	3	0	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	61	35	5	122	1	36	0	3	0	0	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	123	0	0	96	0	0	229	227	78	228	244	122
Stage 1	-	-	-	-	-	-	93	93	-	133	133	-
Stage 2	-	-	-	-	-	-	136	134	-	95	111	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1464	-	-	1498	-	-	726	672	983	727	658	929
Stage 1	-	-	-	-	-	-	914	818	-	870	786	-
Stage 2	-	-	-	-	-	-	867	785	-	912	804	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1464	-	-	1498	-	-	716	665	983	719	651	929
Mov Cap-2 Maneuver	-	-	-	-	-	-	716	665	-	719	651	-
Stage 1	-	-	-	-	-	-	909	813	-	865	783	-
Stage 2	-	-	-	-	-	-	858	782	-	904	799	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0.3	10.2	8.9
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	733	1464	-	-	1498	-	-	929
HCM Lane V/C Ratio	0.053	0.005	-	-	0.004	-	-	0.006
HCM Control Delay (s)	10.2	7.5	0	-	7.4	0	-	8.9
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0

Intersection	
Intersection Delay, s/veh	8.3
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	22	63	26	0	39	45	19	0	20	62	58
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	24	68	28	0	42	49	21	0	22	67	63
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	8.3	8.4	8.4
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	20%	38%	7%
Vol Thru, %	44%	57%	44%	56%
Vol Right, %	41%	23%	18%	36%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	140	111	103	85
LT Vol	20	22	39	6
Through Vol	62	63	45	48
RT Vol	58	26	19	31
Lane Flow Rate	152	121	112	92
Geometry Grp	1	1	1	1
Degree of Util (X)	0.184	0.151	0.143	0.114
Departure Headway (Hd)	4.36	4.514	4.589	4.442
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	823	794	781	807
Service Time	2.386	2.543	2.617	2.47
HCM Lane V/C Ratio	0.185	0.152	0.143	0.114
HCM Control Delay	8.4	8.3	8.4	8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.7	0.5	0.5	0.4

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	6	48	31
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	7	52	34
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	8
HCM LOS	A

Lane

Intersection	
Intersection Delay, s/veh	8.1
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Vol, veh/h	0	68	48	0	0	15	25	55	0	0	21	7	0	56	44	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	74	52	0	0	16	27	60	0	0	23	8	0	61	48	14
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.4	7.7	7.6	8.4
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	59%	16%	50%
Vol Thru, %	75%	41%	26%	39%
Vol Right, %	25%	0%	58%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	28	116	95	113
LT Vol	0	68	15	56
Through Vol	21	48	25	44
RT Vol	7	0	55	13
Lane Flow Rate	30	126	103	123
Geometry Grp	1	1	1	1
Degree of Util (X)	0.038	0.158	0.118	0.154
Departure Headway (Hd)	4.441	4.517	4.119	4.512
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	807	796	873	797
Service Time	2.461	2.533	2.135	2.529
HCM Lane V/C Ratio	0.037	0.158	0.118	0.154
HCM Control Delay	7.6	8.4	7.7	8.4
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0.6	0.4	0.5

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	5	92	14	4	70	3	16	0	3	1	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	100	15	4	76	3	17	0	3	1	0	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	79	0	0	115	0	0	209	206	108	206	212	78
Stage 1	-	-	-	-	-	-	118	118	-	86	86	-
Stage 2	-	-	-	-	-	-	91	88	-	120	126	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1519	-	-	1474	-	-	748	691	946	752	685	983
Stage 1	-	-	-	-	-	-	887	798	-	922	824	-
Stage 2	-	-	-	-	-	-	916	822	-	884	792	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1519	-	-	1474	-	-	737	686	946	745	680	983
Mov Cap-2 Maneuver	-	-	-	-	-	-	737	686	-	745	680	-
Stage 1	-	-	-	-	-	-	883	795	-	918	822	-
Stage 2	-	-	-	-	-	-	904	820	-	877	789	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.4	9.8	8.8
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	764	1519	-	-	1474	-	-	953
HCM Lane V/C Ratio	0.027	0.004	-	-	0.003	-	-	0.011
HCM Control Delay (s)	9.8	7.4	0	-	7.5	0	-	8.8
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Intersection	
Intersection Delay, s/veh	10.6
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	181	103	14	0	9	14	8	0	10	46	28
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	197	112	15	0	10	15	9	0	11	50	30
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	11.7	8.4	8.8
HCM LOS	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	12%	61%	29%	11%
Vol Thru, %	55%	35%	45%	53%
Vol Right, %	33%	5%	26%	36%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	84	298	31	227
LT Vol	10	181	9	24
Through Vol	46	103	14	121
RT Vol	28	14	8	82
Lane Flow Rate	91	324	34	247
Geometry Grp	1	1	1	1
Degree of Util (X)	0.126	0.438	0.047	0.326
Departure Headway (Hd)	4.967	4.873	5.073	4.75
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	716	735	698	753
Service Time	3.039	2.936	3.162	2.807
HCM Lane V/C Ratio	0.127	0.441	0.049	0.328
HCM Control Delay	8.8	11.7	8.4	10.1
HCM Lane LOS	A	B	A	B
HCM 95th-tile Q	0.4	2.2	0.1	1.4

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	24	121	82
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	26	132	89
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	10.1
HCM LOS	B

Lane

Intersection	
Intersection Delay, s/veh	8.7
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Vol, veh/h	0	61	39	2	0	28	69	77	0	2	47	10	0	50	76	23
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	66	42	2	0	30	75	84	0	2	51	11	0	54	83	25
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.7	8.7	8.2	9
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	3%	60%	16%	34%
Vol Thru, %	80%	38%	40%	51%
Vol Right, %	17%	2%	44%	15%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	59	102	174	149
LT Vol	2	61	28	50
Through Vol	47	39	69	76
RT Vol	10	2	77	23
Lane Flow Rate	64	111	189	162
Geometry Grp	1	1	1	1
Degree of Util (X)	0.084	0.148	0.23	0.21
Departure Headway (Hd)	4.73	4.796	4.376	4.676
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	755	746	819	766
Service Time	2.772	2.832	2.408	2.712
HCM Lane V/C Ratio	0.085	0.149	0.231	0.211
HCM Control Delay	8.2	8.7	8.7	9
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	0.5	0.9	0.8

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	8	63	11	1	126	1	21	0	1	0	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	68	12	1	137	1	23	0	1	0	0	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	138	0	0	80	0	0	235	232	74	232	238	138
Stage 1	-	-	-	-	-	-	92	92	-	140	140	-
Stage 2	-	-	-	-	-	-	143	140	-	92	98	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1446	-	-	1518	-	-	720	668	988	723	663	910
Stage 1	-	-	-	-	-	-	915	819	-	863	781	-
Stage 2	-	-	-	-	-	-	860	781	-	915	814	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1446	-	-	1518	-	-	710	663	988	718	658	910
Mov Cap-2 Maneuver	-	-	-	-	-	-	710	663	-	718	658	-
Stage 1	-	-	-	-	-	-	909	813	-	857	780	-
Stage 2	-	-	-	-	-	-	853	780	-	908	808	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	0.1	10.2	9
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	719	1446	-	-	1518	-	-	910
HCM Lane V/C Ratio	0.033	0.006	-	-	0.001	-	-	0.007
HCM Control Delay (s)	10.2	7.5	0	-	7.4	0	-	9
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Intersection	
Intersection Delay, s/veh	8.5
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	25	71	29	0	43	51	21	0	21	68	64
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	27	77	32	0	47	55	23	0	23	74	70
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	8.6	8.6	8.6
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	20%	37%	7%
Vol Thru, %	44%	57%	44%	56%
Vol Right, %	42%	23%	18%	37%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	153	125	115	95
LT Vol	21	25	43	7
Through Vol	68	71	51	53
RT Vol	64	29	21	35
Lane Flow Rate	166	136	125	103
Geometry Grp	1	1	1	1
Degree of Util (X)	0.205	0.174	0.162	0.13
Departure Headway (Hd)	4.444	4.599	4.675	4.533
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	807	779	766	789
Service Time	2.479	2.635	2.712	2.572
HCM Lane V/C Ratio	0.206	0.175	0.163	0.131
HCM Control Delay	8.6	8.6	8.6	8.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.8	0.6	0.6	0.4

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	7	53	35
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	8	58	38
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	8.3
HCM LOS	A

Lane

Intersection	
Intersection Delay, s/veh	8.3
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Vol, veh/h	0	77	53	0	0	17	27	57	0	0	24	8	0	61	50	15
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	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	84	58	0	0	18	29	62	0	0	26	9	0	66	54	16
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.6	7.8	7.8	8.6
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	59%	17%	48%
Vol Thru, %	75%	41%	27%	40%
Vol Right, %	25%	0%	56%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	32	130	101	126
LT Vol	0	77	17	61
Through Vol	24	53	27	50
RT Vol	8	0	57	15
Lane Flow Rate	35	141	110	137
Geometry Grp	1	1	1	1
Degree of Util (X)	0.044	0.18	0.128	0.174
Departure Headway (Hd)	4.516	4.574	4.196	4.568
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	793	786	855	786
Service Time	2.543	2.595	2.218	2.591
HCM Lane V/C Ratio	0.044	0.179	0.129	0.174
HCM Control Delay	7.8	8.6	7.8	8.6
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0.7	0.4	0.6

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	6	104	12	3	79	3	12	0	2	1	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	113	13	3	86	3	13	0	2	1	0	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	89	0	0	126	0	0	232	229	120	228	233	88
Stage 1	-	-	-	-	-	-	133	133	-	94	94	-
Stage 2	-	-	-	-	-	-	99	96	-	134	139	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1506	-	-	1460	-	-	723	671	931	727	667	970
Stage 1	-	-	-	-	-	-	870	786	-	913	817	-
Stage 2	-	-	-	-	-	-	907	815	-	869	782	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1506	-	-	1460	-	-	711	666	931	721	662	970
Mov Cap-2 Maneuver	-	-	-	-	-	-	711	666	-	721	662	-
Stage 1	-	-	-	-	-	-	866	782	-	908	815	-
Stage 2	-	-	-	-	-	-	895	813	-	863	778	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.3	10	8.9
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	736	1506	-	-	1460	-	-	940
HCM Lane V/C Ratio	0.021	0.004	-	-	0.002	-	-	0.013
HCM Control Delay (s)	10	7.4	0	-	7.5	0	-	8.9
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Intersection	
Intersection Delay, s/veh	10.8
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	181	103	17	0	13	14	8	0	12	51	31
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	197	112	18	0	14	15	9	0	13	55	34
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	12	8.6	8.9
HCM LOS	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	13%	60%	37%	10%
Vol Thru, %	54%	34%	40%	55%
Vol Right, %	33%	6%	23%	35%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	94	301	35	235
LT Vol	12	181	13	24
Through Vol	51	103	14	129
RT Vol	31	17	8	82
Lane Flow Rate	102	327	38	255
Geometry Grp	1	1	1	1
Degree of Util (X)	0.142	0.448	0.055	0.34
Departure Headway (Hd)	5.01	4.924	5.173	4.797
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	708	726	684	743
Service Time	3.095	2.993	3.27	2.865
HCM Lane V/C Ratio	0.144	0.45	0.056	0.343
HCM Control Delay	8.9	12	8.6	10.4
HCM Lane LOS	A	B	A	B
HCM 95th-tile Q	0.5	2.3	0.2	1.5

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	24	129	82
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	26	140	89
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	10.4
HCM LOS	B

Lane

Intersection	
Intersection Delay, s/veh	8.9
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Vol, veh/h	0	61	44	2	0	29	72	87	0	2	47	12	0	65	76	23
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	66	48	2	0	32	78	95	0	2	51	13	0	71	83	25
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.8	8.9	8.3	9.3
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	3%	57%	15%	40%
Vol Thru, %	77%	41%	38%	46%
Vol Right, %	20%	2%	46%	14%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	61	107	188	164
LT Vol	2	61	29	65
Through Vol	47	44	72	76
RT Vol	12	2	87	23
Lane Flow Rate	66	116	204	178
Geometry Grp	1	1	1	1
Degree of Util (X)	0.088	0.157	0.251	0.235
Departure Headway (Hd)	4.788	4.861	4.421	4.749
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	745	735	811	754
Service Time	2.841	2.906	2.46	2.794
HCM Lane V/C Ratio	0.089	0.158	0.252	0.236
HCM Control Delay	8.3	8.8	8.9	9.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	0.6	1	0.9

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	8	63	33	5	126	1	35	0	3	0	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	68	36	5	137	1	38	0	3	0	0	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	138	0	0	104	0	0	256	253	86	253	270	138
Stage 1	-	-	-	-	-	-	104	104	-	148	148	-
Stage 2	-	-	-	-	-	-	152	149	-	105	122	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1446	-	-	1488	-	-	697	650	973	700	636	910
Stage 1	-	-	-	-	-	-	902	809	-	855	775	-
Stage 2	-	-	-	-	-	-	850	774	-	901	795	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1446	-	-	1488	-	-	686	643	973	692	629	910
Mov Cap-2 Maneuver	-	-	-	-	-	-	686	643	-	692	629	-
Stage 1	-	-	-	-	-	-	896	803	-	849	772	-
Stage 2	-	-	-	-	-	-	841	771	-	892	789	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0.3	10.4	9
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	702	1446	-	-	1488	-	-	910
HCM Lane V/C Ratio	0.059	0.006	-	-	0.004	-	-	0.007
HCM Control Delay (s)	10.4	7.5	0	-	7.4	0	-	9
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0

Intersection	
Intersection Delay, s/veh	8.6
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	25	71	29	0	44	51	21	0	22	70	65
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	27	77	32	0	48	55	23	0	24	76	71
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	8.6	8.7	8.7
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	20%	38%	7%
Vol Thru, %	45%	57%	44%	56%
Vol Right, %	41%	23%	18%	36%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	157	125	116	96
LT Vol	22	25	44	7
Through Vol	70	71	51	54
RT Vol	65	29	21	35
Lane Flow Rate	171	136	126	104
Geometry Grp	1	1	1	1
Degree of Util (X)	0.211	0.174	0.164	0.132
Departure Headway (Hd)	4.454	4.613	4.69	4.546
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	805	776	763	787
Service Time	2.488	2.653	2.73	2.584
HCM Lane V/C Ratio	0.212	0.175	0.165	0.132
HCM Control Delay	8.7	8.6	8.7	8.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.8	0.6	0.6	0.5

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	7	54	35
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	8	59	38
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	8.3
HCM LOS	A

Lane

Intersection	
Intersection Delay, s/veh	8.3
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Vol, veh/h	0	77	54	0	0	17	28	61	0	0	24	8	0	63	50	15
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	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	84	59	0	0	18	30	66	0	0	26	9	0	68	54	16
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.6	7.9	7.8	8.6
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	59%	16%	49%
Vol Thru, %	75%	41%	26%	39%
Vol Right, %	25%	0%	58%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	32	131	106	128
LT Vol	0	77	17	63
Through Vol	24	54	28	50
RT Vol	8	0	61	15
Lane Flow Rate	35	142	115	139
Geometry Grp	1	1	1	1
Degree of Util (X)	0.044	0.181	0.134	0.177
Departure Headway (Hd)	4.534	4.585	4.196	4.586
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	790	783	856	783
Service Time	2.56	2.606	2.216	2.607
HCM Lane V/C Ratio	0.044	0.181	0.134	0.178
HCM Control Delay	7.8	8.6	7.9	8.6
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0.7	0.5	0.6

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	6	104	15	4	79	3	17	0	3	1	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	113	16	4	86	3	18	0	3	1	0	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	89	0	0	129	0	0	236	232	121	232	238	88
Stage 1	-	-	-	-	-	-	134	134	-	96	96	-
Stage 2	-	-	-	-	-	-	102	98	-	136	142	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1506	-	-	1457	-	-	718	668	930	723	663	970
Stage 1	-	-	-	-	-	-	869	785	-	911	815	-
Stage 2	-	-	-	-	-	-	904	814	-	867	779	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1506	-	-	1457	-	-	706	663	930	716	658	970
Mov Cap-2 Maneuver	-	-	-	-	-	-	706	663	-	716	658	-
Stage 1	-	-	-	-	-	-	865	781	-	906	813	-
Stage 2	-	-	-	-	-	-	891	812	-	860	775	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.3	10.1	8.9
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	732	1506	-	-	1457	-	-	940
HCM Lane V/C Ratio	0.03	0.004	-	-	0.003	-	-	0.013
HCM Control Delay (s)	10.1	7.4	0	-	7.5	0	-	8.9
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	6	0	0	15	11	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	0	0	16	12	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	28	12	12	0	-	0
Stage 1	12	-	-	-	-	-
Stage 2	16	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	987	1069	1607	-	-	-
Stage 1	1011	-	-	-	-	-
Stage 2	1007	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	987	1069	1607	-	-	-
Mov Cap-2 Maneuver	987	-	-	-	-	-
Stage 1	1011	-	-	-	-	-
Stage 2	1007	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1607	-	987	-	-
HCM Lane V/C Ratio	-	-	0.007	-	-
HCM Control Delay (s)	0	-	8.7	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	74	14	3	162	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	80	15	3	176	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	96	0	271	88
Stage 1	-	-	-	-	88	-
Stage 2	-	-	-	-	183	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1498	-	718	970
Stage 1	-	-	-	-	935	-
Stage 2	-	-	-	-	848	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1498	-	717	970
Mov Cap-2 Maneuver	-	-	-	-	717	-
Stage 1	-	-	-	-	935	-
Stage 2	-	-	-	-	846	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1498	-
HCM Lane V/C Ratio	-	-	-	0.002	-
HCM Control Delay (s)	0	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	5	0	0	13	14	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	0	0	14	15	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	29	15	15	0	-	0
Stage 1	15	-	-	-	-	-
Stage 2	14	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	986	1065	1603	-	-	-
Stage 1	1008	-	-	-	-	-
Stage 2	1009	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	986	1065	1603	-	-	-
Mov Cap-2 Maneuver	986	-	-	-	-	-
Stage 1	1008	-	-	-	-	-
Stage 2	1009	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1603	-	986	-	-
HCM Lane V/C Ratio	-	-	0.006	-	-
HCM Control Delay (s)	0	-	8.7	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	112	11	2	95	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	122	12	2	103	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	134	0	236	128
Stage 1	-	-	-	-	128	-
Stage 2	-	-	-	-	108	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1451	-	752	922
Stage 1	-	-	-	-	898	-
Stage 2	-	-	-	-	916	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1451	-	751	922
Mov Cap-2 Maneuver	-	-	-	-	751	-
Stage 1	-	-	-	-	898	-
Stage 2	-	-	-	-	915	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1451	-
HCM Lane V/C Ratio	-	-	-	0.001	-
HCM Control Delay (s)	0	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	22	0	0	15	11	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	0	0	16	12	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	28	12	12	0	-	0
Stage 1	12	-	-	-	-	-
Stage 2	16	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	987	1069	1607	-	-	-
Stage 1	1011	-	-	-	-	-
Stage 2	1007	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	987	1069	1607	-	-	-
Mov Cap-2 Maneuver	987	-	-	-	-	-
Stage 1	1011	-	-	-	-	-
Stage 2	1007	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1607	-	987	-	-
HCM Lane V/C Ratio	-	-	0.024	-	-
HCM Control Delay (s)	0	-	8.7	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	74	40	3	162	14	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	80	43	3	176	15	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	124	0	285	102
Stage 1	-	-	-	-	102	-
Stage 2	-	-	-	-	183	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1463	-	705	953
Stage 1	-	-	-	-	922	-
Stage 2	-	-	-	-	848	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1463	-	704	953
Mov Cap-2 Maneuver	-	-	-	-	704	-
Stage 1	-	-	-	-	922	-
Stage 2	-	-	-	-	846	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	10.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	728	-	-	1463	-
HCM Lane V/C Ratio	0.024	-	-	0.002	-
HCM Control Delay (s)	10.1	-	-	7.5	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	22	0	0	15	11	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	0	0	16	12	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	28	12	12	0	-	0
Stage 1	12	-	-	-	-	-
Stage 2	16	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	987	1069	1607	-	-	-
Stage 1	1011	-	-	-	-	-
Stage 2	1007	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	987	1069	1607	-	-	-
Mov Cap-2 Maneuver	987	-	-	-	-	-
Stage 1	1011	-	-	-	-	-
Stage 2	1007	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1607	-	987	-	-
HCM Lane V/C Ratio	-	-	0.024	-	-
HCM Control Delay (s)	0	-	8.7	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	74	40	3	162	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	80	43	3	176	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	124	0	285	102
Stage 1	-	-	-	-	102	-
Stage 2	-	-	-	-	183	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1463	-	705	953
Stage 1	-	-	-	-	922	-
Stage 2	-	-	-	-	848	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1463	-	704	953
Mov Cap-2 Maneuver	-	-	-	-	704	-
Stage 1	-	-	-	-	922	-
Stage 2	-	-	-	-	846	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1463	-
HCM Lane V/C Ratio	-	-	-	0.002	-
HCM Control Delay (s)	0	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	7	0	0	17	12	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	0	0	18	13	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	31	13	13	0	-	0
Stage 1	13	-	-	-	-	-
Stage 2	18	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	983	1067	1606	-	-	-
Stage 1	1010	-	-	-	-	-
Stage 2	1005	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	983	1067	1606	-	-	-
Mov Cap-2 Maneuver	983	-	-	-	-	-
Stage 1	1010	-	-	-	-	-
Stage 2	1005	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1606	-	983	-	-
HCM Lane V/C Ratio	-	-	0.008	-	-
HCM Control Delay (s)	0	-	8.7	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	83	16	3	183	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	90	17	3	199	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	108	0	304	99
Stage 1	-	-	-	-	99	-
Stage 2	-	-	-	-	205	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1483	-	688	957
Stage 1	-	-	-	-	925	-
Stage 2	-	-	-	-	829	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1483	-	687	957
Mov Cap-2 Maneuver	-	-	-	-	687	-
Stage 1	-	-	-	-	925	-
Stage 2	-	-	-	-	827	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1483	-
HCM Lane V/C Ratio	-	-	-	0.002	-
HCM Control Delay (s)	0	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	6	0	0	15	16	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	0	0	16	17	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	33	17	17	0	-	0
Stage 1	17	-	-	-	-	-
Stage 2	16	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	980	1062	1600	-	-	-
Stage 1	1006	-	-	-	-	-
Stage 2	1007	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	980	1062	1600	-	-	-
Mov Cap-2 Maneuver	980	-	-	-	-	-
Stage 1	1006	-	-	-	-	-
Stage 2	1007	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1600	-	980	-	-
HCM Lane V/C Ratio	-	-	0.007	-	-
HCM Control Delay (s)	0	-	8.7	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	126	12	2	107	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	137	13	2	116	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	150	0	264	143
Stage 1	-	-	-	-	143	-
Stage 2	-	-	-	-	121	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1431	-	725	905
Stage 1	-	-	-	-	884	-
Stage 2	-	-	-	-	904	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1431	-	724	905
Mov Cap-2 Maneuver	-	-	-	-	724	-
Stage 1	-	-	-	-	884	-
Stage 2	-	-	-	-	903	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1431	-
HCM Lane V/C Ratio	-	-	-	0.002	-
HCM Control Delay (s)	0	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	23	0	0	17	12	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	25	0	0	18	13	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	31	13	13	0	-	0
Stage 1	13	-	-	-	-	-
Stage 2	18	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	983	1067	1606	-	-	-
Stage 1	1010	-	-	-	-	-
Stage 2	1005	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	983	1067	1606	-	-	-
Mov Cap-2 Maneuver	983	-	-	-	-	-
Stage 1	1010	-	-	-	-	-
Stage 2	1005	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.8	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1606	-	983	-	-
HCM Lane V/C Ratio	-	-	0.025	-	-
HCM Control Delay (s)	0	-	8.8	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	83	42	3	183	14	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	90	46	3	199	15	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	136	0	318	113
Stage 1	-	-	-	-	113	-
Stage 2	-	-	-	-	205	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1448	-	675	940
Stage 1	-	-	-	-	912	-
Stage 2	-	-	-	-	829	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1448	-	674	940
Mov Cap-2 Maneuver	-	-	-	-	674	-
Stage 1	-	-	-	-	912	-
Stage 2	-	-	-	-	827	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	10.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	699	-	-	1448	-
HCM Lane V/C Ratio	0.025	-	-	0.002	-
HCM Control Delay (s)	10.3	-	-	7.5	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	23	0	0	17	12	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	25	0	0	18	13	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	31	13	13	0	-	0
Stage 1	13	-	-	-	-	-
Stage 2	18	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	983	1067	1606	-	-	-
Stage 1	1010	-	-	-	-	-
Stage 2	1005	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	983	1067	1606	-	-	-
Mov Cap-2 Maneuver	983	-	-	-	-	-
Stage 1	1010	-	-	-	-	-
Stage 2	1005	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.8	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1606	-	983	-	-
HCM Lane V/C Ratio	-	-	0.025	-	-
HCM Control Delay (s)	0	-	8.8	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	83	42	3	183	14	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	90	46	3	199	15	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	136	0	318	113
Stage 1	-	-	-	-	113	-
Stage 2	-	-	-	-	205	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1448	-	675	940
Stage 1	-	-	-	-	912	-
Stage 2	-	-	-	-	829	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1448	-	674	940
Mov Cap-2 Maneuver	-	-	-	-	674	-
Stage 1	-	-	-	-	912	-
Stage 2	-	-	-	-	827	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	10.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	699	-	-	1448	-
HCM Lane V/C Ratio	0.025	-	-	0.002	-
HCM Control Delay (s)	10.3	-	-	7.5	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

TRAFFIC DATA

Intersection	
Intersection Delay, s/veh	9.9
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	161	91	12	0	8	12	7	0	9	41	25
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	175	99	13	0	9	13	8	0	10	45	27
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	10.7	8.2	8.5
HCM LOS	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	12%	61%	30%	10%
Vol Thru, %	55%	34%	44%	53%
Vol Right, %	33%	5%	26%	36%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	75	264	27	201
LT Vol	9	161	8	21
Through Vol	41	91	12	107
RT Vol	25	12	7	73
Lane Flow Rate	82	287	29	218
Geometry Grp	1	1	1	1
Degree of Util (X)	0.109	0.38	0.04	0.28
Departure Headway (Hd)	4.803	4.766	4.906	4.616
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	743	752	725	776
Service Time	2.858	2.812	2.97	2.661
HCM Lane V/C Ratio	0.11	0.382	0.04	0.281
HCM Control Delay	8.5	10.7	8.2	9.5
HCM Lane LOS	A	B	A	A
HCM 95th-tile Q	0.4	1.8	0.1	1.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	21	107	73
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	23	116	79
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	9.5
HCM LOS	A

Lane

Intersection	
Intersection Delay, s/veh	8.4
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Vol, veh/h	0	54	35	2	0	25	61	68	0	2	42	9	0	44	67	20
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	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	59	38	2	0	27	66	74	0	2	46	10	0	48	73	22
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.4	8.4	8	8.6
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	59%	16%	34%
Vol Thru, %	79%	38%	40%	51%
Vol Right, %	17%	2%	44%	15%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	53	91	154	131
LT Vol	2	54	25	44
Through Vol	42	35	61	67
RT Vol	9	2	68	20
Lane Flow Rate	58	99	167	142
Geometry Grp	1	1	1	1
Degree of Util (X)	0.074	0.129	0.2	0.181
Departure Headway (Hd)	4.616	4.697	4.292	4.583
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	775	764	837	783
Service Time	2.647	2.722	2.314	2.611
HCM Lane V/C Ratio	0.075	0.13	0.2	0.181
HCM Control Delay	8	8.4	8.4	8.6
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.4	0.7	0.7

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	7	56	10	1	112	1	19	0	1	0	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	61	11	1	122	1	21	0	1	0	0	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	123	0	0	72	0	0	209	207	66	206	211	122
Stage 1	-	-	-	-	-	-	82	82	-	124	124	-
Stage 2	-	-	-	-	-	-	127	125	-	82	87	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1464	-	-	1528	-	-	748	690	998	752	686	929
Stage 1	-	-	-	-	-	-	926	827	-	880	793	-
Stage 2	-	-	-	-	-	-	877	792	-	926	823	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1464	-	-	1528	-	-	740	685	998	747	681	929
Mov Cap-2 Maneuver	-	-	-	-	-	-	740	685	-	747	681	-
Stage 1	-	-	-	-	-	-	920	822	-	875	792	-
Stage 2	-	-	-	-	-	-	871	791	-	919	818	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	0.1	9.9	8.9
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	750	1464	-	-	1528	-	-	929
HCM Lane V/C Ratio	0.029	0.005	-	-	0.001	-	-	0.006
HCM Control Delay (s)	9.9	7.5	0	-	7.4	0	-	8.9
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Intersection	
Intersection Delay, s/veh	8.3
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	22	63	26	0	38	45	19	0	19	60	57
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	24	68	28	0	41	49	21	0	21	65	62
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	8.3	8.4	8.3
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	20%	37%	7%
Vol Thru, %	44%	57%	44%	56%
Vol Right, %	42%	23%	19%	37%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	136	111	102	84
LT Vol	19	22	38	6
Through Vol	60	63	45	47
RT Vol	57	26	19	31
Lane Flow Rate	148	121	111	91
Geometry Grp	1	1	1	1
Degree of Util (X)	0.179	0.151	0.141	0.112
Departure Headway (Hd)	4.352	4.501	4.574	4.43
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	825	798	784	809
Service Time	2.377	2.527	2.601	2.459
HCM Lane V/C Ratio	0.179	0.152	0.142	0.112
HCM Control Delay	8.3	8.3	8.4	8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.6	0.5	0.5	0.4

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	6	47	31
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	7	51	34
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	8
HCM LOS	A

Lane

Intersection	
Intersection Delay, s/veh	8.1
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Vol, veh/h	0	68	47	0	0	15	24	51	0	0	21	7	0	54	44	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	74	51	0	0	16	26	55	0	0	23	8	0	59	48	14
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.4	7.7	7.6	8.3
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	59%	17%	49%
Vol Thru, %	75%	41%	27%	40%
Vol Right, %	25%	0%	57%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	28	115	90	111
LT Vol	0	68	15	54
Through Vol	21	47	24	44
RT Vol	7	0	51	13
Lane Flow Rate	30	125	98	121
Geometry Grp	1	1	1	1
Degree of Util (X)	0.037	0.156	0.112	0.151
Departure Headway (Hd)	4.422	4.505	4.119	4.494
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	811	799	873	800
Service Time	2.442	2.521	2.134	2.51
HCM Lane V/C Ratio	0.037	0.156	0.112	0.151
HCM Control Delay	7.6	8.4	7.7	8.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0.6	0.4	0.5

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	5	92	11	3	70	3	11	0	2	1	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	100	12	3	76	3	12	0	2	1	0	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	79	0	0	112	0	0	206	203	106	202	207	78
Stage 1	-	-	-	-	-	-	117	117	-	84	84	-
Stage 2	-	-	-	-	-	-	89	86	-	118	123	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1519	-	-	1478	-	-	752	693	948	756	690	983
Stage 1	-	-	-	-	-	-	888	799	-	924	825	-
Stage 2	-	-	-	-	-	-	918	824	-	887	794	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1519	-	-	1478	-	-	741	689	948	751	686	983
Mov Cap-2 Maneuver	-	-	-	-	-	-	741	689	-	751	686	-
Stage 1	-	-	-	-	-	-	884	796	-	920	823	-
Stage 2	-	-	-	-	-	-	907	822	-	881	791	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.3	9.8	8.8
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	767	1519	-	-	1478	-	-	954
HCM Lane V/C Ratio	0.018	0.004	-	-	0.002	-	-	0.011
HCM Control Delay (s)	9.8	7.4	0	-	7.4	0	-	8.8
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Prepared by NDS/ATD

VOLUME

Moraga Blvd Bet. 3rd St & 4th St

Day: Thursday
Date: 9/14/2017

City: Lafayette
Project #: CA17_7739_001

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,050	1,314	2,364

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			1		0		1		12:00			18		18		36	
00:15			0		0		0		12:15			11		19		30	
00:30			0		0		0		12:30			18		23		41	
00:45			0	1	1	1	1	2	12:45			11	58	18	78	29	136
01:00			1		0		1		13:00			12		15		27	
01:15			0		1		1		13:15			13		14		27	
01:30			0		0		0		13:30			15		17		32	
01:45			0	1	0	1	0	2	13:45			14	54	12	58	26	112
02:00			0		0		0		14:00			16		17		33	
02:15			0		0		0		14:15			11		23		34	
02:30			0		0		0		14:30			18		36		54	
02:45			0		0		0		14:45			40	85	22	98	62	183
03:00			0		0		0		15:00			31		33		64	
03:15			0		0		0		15:15			19		20		39	
03:30			0		0		0		15:30			25		22		47	
03:45			1	1	0		1	1	15:45			29	104	23	98	52	202
04:00			0		1		1		16:00			10		24		34	
04:15			0		1		1		16:15			21		23		44	
04:30			0		1		1		16:30			23		20		43	
04:45			0		1	4	1	4	16:45			30	84	25	92	55	176
05:00			0		1		1		17:00			27		15		42	
05:15			0		4		4		17:15			42		20		62	
05:30			0		1		1		17:30			24		19		43	
05:45			0		7	13	7	13	17:45			27	120	21	75	48	195
06:00			1		6		7		18:00			25		20		45	
06:15			0		11		11		18:15			25		26		51	
06:30			1		7		8		18:30			25		26		51	
06:45			5	7	9	33	14	40	18:45			22	97	21	93	43	190
07:00			5		11		16		19:00			18		13		31	
07:15			1		16		17		19:15			17		15		32	
07:30			12		44		56		19:30			19		10		29	
07:45			14	32	38	109	52	141	19:45			8	62	8	46	16	108
08:00			22		56		78		20:00			19		9		28	
08:15			20		44		64		20:15			25		13		38	
08:30			24		29		53		20:30			18		7		25	
08:45			14	80	39	168	53	248	20:45			11	73	2	31	13	104
09:00			17		27		44		21:00			7		3		10	
09:15			15		32		47		21:15			7		3		10	
09:30			7		28		35		21:30			5		3		8	
09:45			11	50	26	113	37	163	21:45			4	23	2	11	6	34
10:00			12		22		34		22:00			1		3		4	
10:15			13		21		34		22:15			4		4		8	
10:30			9		18		27		22:30			10		2		12	
10:45			10	44	21	82	31	126	22:45			2	17	6	15	8	32
11:00			12		22		34		23:00			1		1		2	
11:15			12		24		36		23:15			3		1		4	
11:30			13		20		33		23:30			4		0		4	
11:45			10	47	27	93	37	140	23:45			2	10	0	2	2	12
TOTALS				263		617		**880**	**TOTALS**				787		697		**1484**
SPLIT %				29.9%		70.1%		**37.2%**	**SPLIT %**				53.0%		47.0%		**62.8%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,050	1,314	2,364

AM Peak Hour				07:45		07:30		**07:30**	**PM Peak Hour**				16:45		14:15		**14:30**
AM Pk Volume				80		182		**250**	**PM Pk Volume**				123		114		**219**
Pk Hr Factor				0.833		0.813		**0.801**	**Pk Hr Factor**				0.732		0.792		**0.855**
7 - 9 Volume	0	0		112		277		**389**	**4 - 6 Volume**	0	0		204		167		**371**
7 - 9 Peak Hour				07:45		07:30		**07:30**	**4 - 6 Peak Hour**				16:45		16:00		**16:30**
7 - 9 Pk Volume	0	0		80		182		**250**	**4 - 6 Pk Volume**	0	0		123		92		**202**
Pk Hr Factor	0.000	0.000		0.833		0.813		**0.801**	**Pk Hr Factor**	0.000	0.000		0.732		0.920		**0.815**

Prepared by NDS/ATD

VOLUME

Moraga Blvd Bet. 3rd St & 4th St

Day: Friday
Date: 9/15/2017

City: Lafayette
Project #: CA17_7739_001

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,085	1,267	2,352

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			0		0		0		12:00			17		22		39	
00:15			0		0		0		12:15			8		15		23	
00:30			1		1		2		12:30			16		24		40	
00:45			0	1	1	2	1	3	12:45			18	59	20	81	38	140
01:00			1		0		1		13:00			16		24		40	
01:15			0		0		0		13:15			20		11		31	
01:30			0		0		0		13:30			16		20		36	
01:45			0	1	1	1	1	2	13:45			13	65	12	67	25	132
02:00			0		0		0		14:00			23		12		35	
02:15			0		0		0		14:15			8		23		31	
02:30			0		0		0		14:30			13		40		53	
02:45			0		0		0		14:45			29	73	36	111	65	184
03:00			0		0		0		15:00			31		31		62	
03:15			1		0		1		15:15			29		26		55	
03:30			0		1		1		15:30			29		34		63	
03:45			0	1	0	1	0	2	15:45			21	110	27	118	48	228
04:00			1		0		1		16:00			32		21		53	
04:15			0		2		2		16:15			28		22		50	
04:30			0		2		2		16:30			27		27		54	
04:45			0	1	3	7	3	8	16:45			28	115	12	82	40	197
05:00			0		1		1		17:00			30		21		51	
05:15			0		0		0		17:15			16		20		36	
05:30			0		0		0		17:30			26		18		44	
05:45			0		4	5	4	5	17:45			31	103	27	86	58	189
06:00			3		7		10		18:00			29		29		58	
06:15			1		9		10		18:15			19		15		34	
06:30			2		4		6		18:30			21		14		35	
06:45			3	9	9	29	12	38	18:45			18	87	13	71	31	158
07:00			8		14		22		19:00			15		8		23	
07:15			3		18		21		19:15			12		10		22	
07:30			12		27		39		19:30			15		9		24	
07:45			23	46	34	93	57	139	19:45			18	60	8	35	26	95
08:00			17		53		70		20:00			12		12		24	
08:15			26		48		74		20:15			13		7		20	
08:30			24		27		51		20:30			3		8		11	
08:45			8	75	26	154	34	229	20:45			10	38	6	33	16	71
09:00			7		17		24		21:00			13		9		22	
09:15			13		28		41		21:15			5		5		10	
09:30			9		23		32		21:30			12		2		14	
09:45			13	42	19	87	32	129	21:45			14	44	5	21	19	65
10:00			11		17		28		22:00			11		9		20	
10:15			12		21		33		22:15			5		4		9	
10:30			17		24		41		22:30			9		1		10	
10:45			17	57	19	81	36	138	22:45			3	28	2	16	5	44
11:00			7		18		25		23:00			3		3		6	
11:15			12		21		33		23:15			3		1		4	
11:30			19		19		38		23:30			3		1		4	
11:45			19	57	22	80	41	137	23:45			4	13	1	6	5	19
TOTALS				290		540		830	TOTALS				795		727		1522
SPLIT %				34.9%		65.1%		35.3%	SPLIT %				52.2%		47.8%		64.7%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,085	1,267	2,352

AM Peak Hour			07:45	07:30	07:45				PM Peak Hour			14:45	14:30	14:45			
AM Pk Volume			90	162	252				PM Pk Volume			118	133	245			
Pk Hr Factor			0.865	0.764	0.851				Pk Hr Factor			0.952	0.831	0.942			
7 - 9 Volume	0	0	121	247	368				4 - 6 Volume	0	0	218	168	386			
7 - 9 Peak Hour			07:45	07:30	07:45				4 - 6 Peak Hour			16:00	17:00	16:00			
7 - 9 Pk Volume	0	0	90	162	252				4 - 6 Pk Volume	0	0	115	86	197			
Pk Hr Factor	0.000	0.000	0.865	0.764	0.851				Pk Hr Factor	0.000	0.000	0.898	0.796	0.912			

Prepared by NDS/ATD

VOLUME

Moraga Blvd Bet. 3rd St & 4th St

Day: Saturday
Date: 9/23/2017

City: Lafayette
Project #: CA17_7739_001

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	926	960	1,886

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			2		1		3		12:00			23		22		45	
00:15			3		3		6		12:15			17		24		41	
00:30			1		2		3		12:30			18		17		35	
00:45			1	7	2	8	3	15	12:45			14	72	29	92	43	164
01:00			3		0		3		13:00			20		18		38	
01:15			0		0		0		13:15			19		15		34	
01:30			0		1		1		13:30			10		14		24	
01:45			0	3	0	1	0	4	13:45			19	68	18	65	37	133
02:00			1		0		1		14:00			13		18		31	
02:15			0		0		0		14:15			19		23		42	
02:30			1		0		1		14:30			21		23		44	
02:45			1	3	0		1	3	14:45			14	67	21	85	35	152
03:00			1		0		1		15:00			18		19		37	
03:15			0		0		0		15:15			28		22		50	
03:30			0		0		0		15:30			19		15		34	
03:45			0	1	0		0	1	15:45			11	76	12	68	23	144
04:00			0		0		0		16:00			17		15		32	
04:15			0		0		0		16:15			18		14		32	
04:30			1		1		2		16:30			19		16		35	
04:45			0	1	1	2	1	3	16:45			18	72	20	65	38	137
05:00			0		0		0		17:00			23		14		37	
05:15			0		0		0		17:15			20		13		33	
05:30			0		0		0		17:30			19		18		37	
05:45			1	1	1	1	2	2	17:45			16	78	17	62	33	140
06:00			0		2		2		18:00			17		14		31	
06:15			0		3		3		18:15			16		12		28	
06:30			5		4		9		18:30			16		13		29	
06:45			2	7	5	14	7	21	18:45			15	64	10	49	25	113
07:00			0		0		0		19:00			13		14		27	
07:15			4		6		10		19:15			11		8		19	
07:30			3		11		14		19:30			5		15		20	
07:45			7	14	17	34	24	48	19:45			6	35	6	43	12	78
08:00			6		16		22		20:00			11		10		21	
08:15			8		11		19		20:15			8		3		11	
08:30			11		15		26		20:30			9		7		16	
08:45			16	41	14	56	30	97	20:45			8	36	7	27	15	63
09:00			14		16		30		21:00			6		10		16	
09:15			20		16		36		21:15			6		2		8	
09:30			10		14		24		21:30			12		3		15	
09:45			20	64	18	64	38	128	21:45			10	34	4	19	14	53
10:00			17		19		36		22:00			6		2		8	
10:15			19		18		37		22:15			8		3		11	
10:30			15		25		40		22:30			4		2		6	
10:45			18	69	28	90	46	159	22:45			0	18	2	9	2	27
11:00			26		23		49		23:00			6		1		7	
11:15			19		31		50		23:15			4		2		6	
11:30			16		25		41		23:30			3		0		3	
11:45			19	80	22	101	41	181	23:45			2	15	2	5	4	20
TOTALS				291		371		662	TOTALS				635		589		1224
SPLIT %				44.0%		56.0%		35.1%	SPLIT %				51.9%		48.1%		64.9%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	926	960	1,886

AM Peak Hour				11:00	10:30	10:45	PM Peak Hour				14:30	12:00	14:30
AM Pk Volume				80	107	186	PM Pk Volume				81	92	166
Pk Hr Factor				0.769	0.863	0.930	Pk Hr Factor				0.723	0.793	0.830
7 - 9 Volume	0	0		55	90	145	4 - 6 Volume	0	0		150	127	277
7 - 9 Peak Hour				08:00	07:45	08:00	4 - 6 Peak Hour				16:30	16:00	16:45
7 - 9 Pk Volume	0	0		41	59	97	4 - 6 Pk Volume	0	0		80	65	145
Pk Hr Factor	0.000	0.000		0.641	0.868	0.808	Pk Hr Factor	0.000	0.000		0.870	0.813	0.954

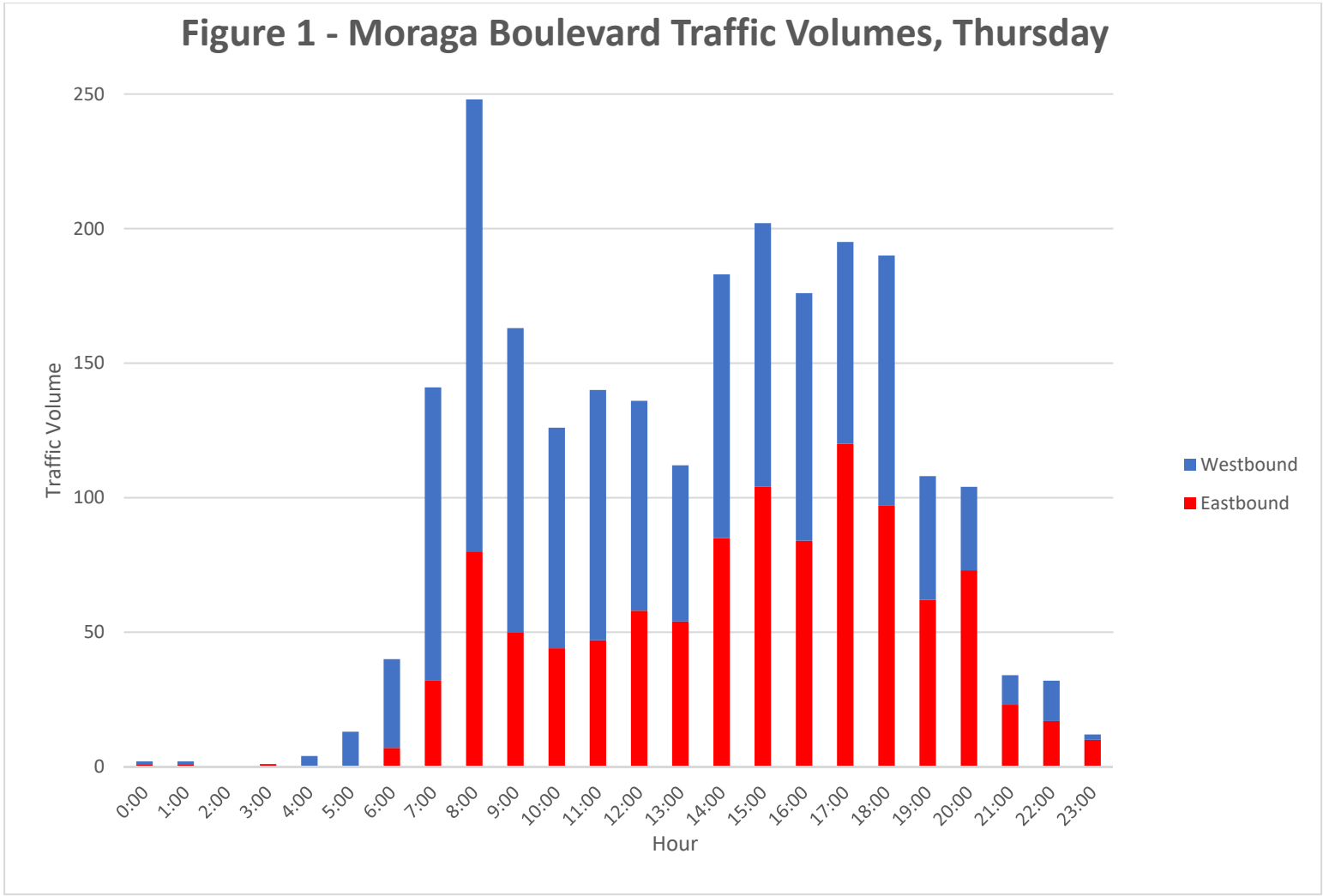


Figure 1 - Moraga Boulevard Traffic Volumes, Thursday
Traffic Volume
250
200
150
100
50
0
0:00
1:00
2:00
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
Hour
Westbound
Eastbound

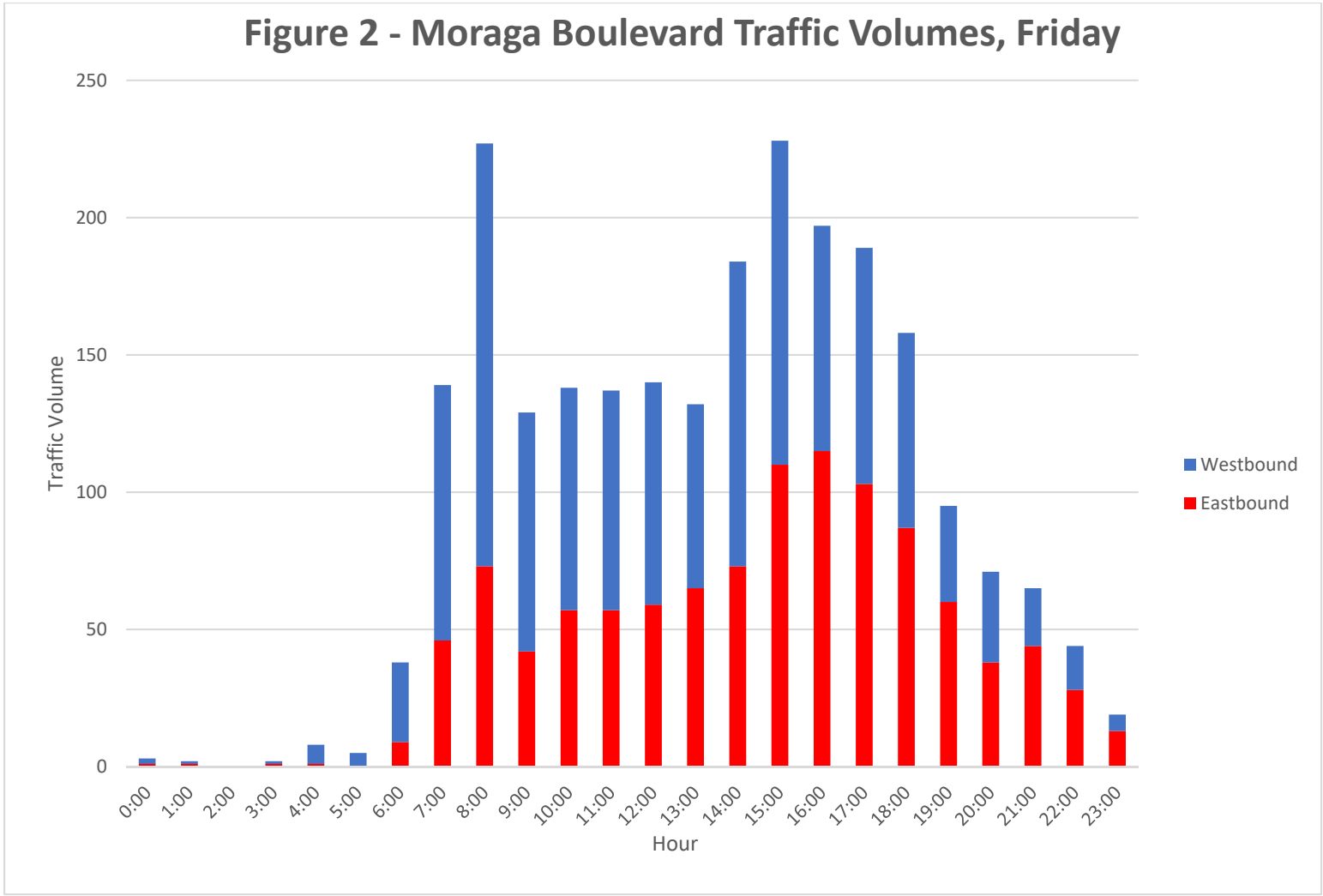


Figure 2 - Moraga Boulevard Traffic Volumes, Friday
250
200
150
100
50
0
Traffic Volume
0:00
1:00
2:00
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
Hour
Westbound
Eastbound

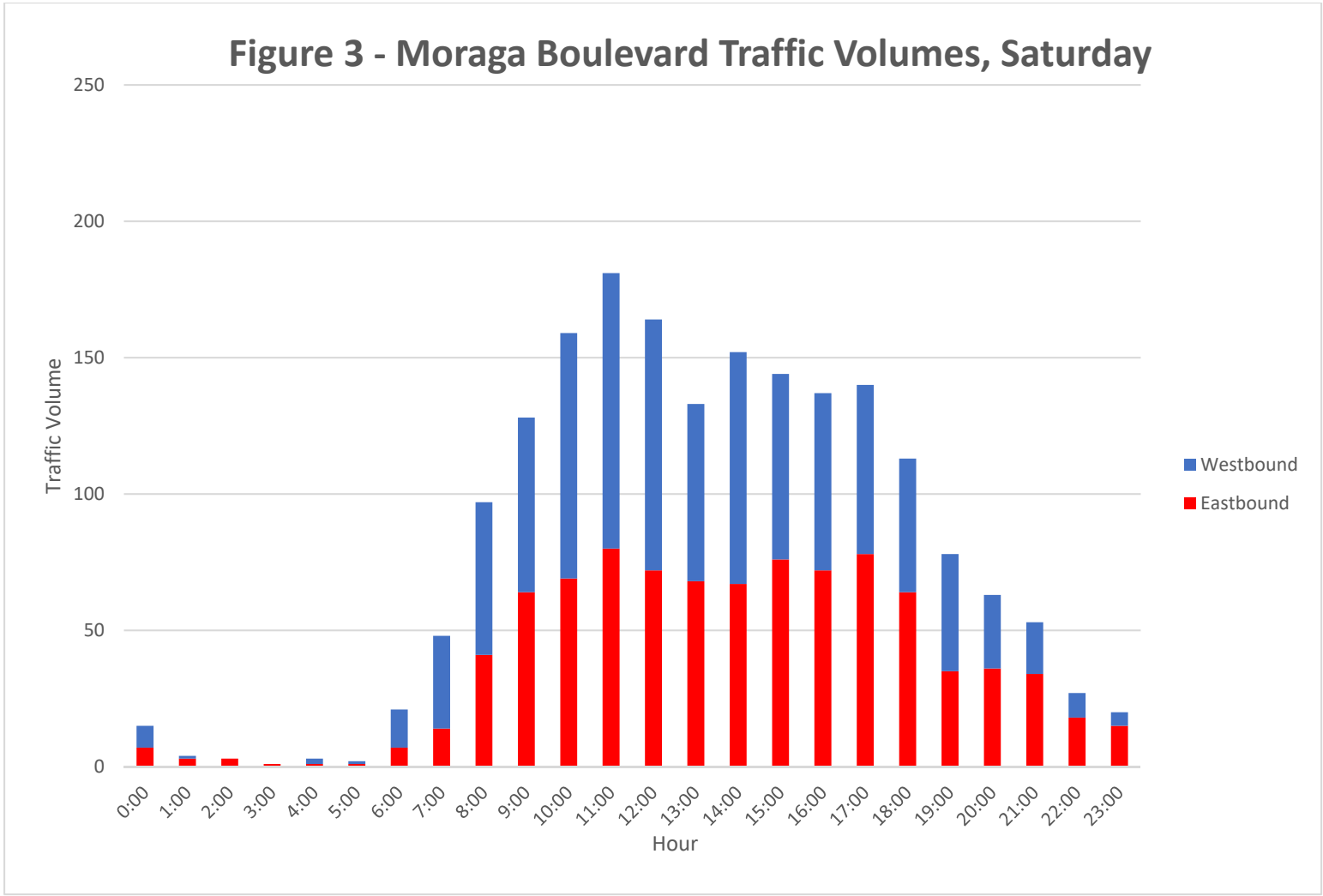


Figure 3 - Moraga Boulevard Traffic Volumes, Saturday
250
200
150
100
50
0
Traffic Volume
0:00
1:00
2:00
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
Hour
Westbound
Eastbound

Prepared by National Data & Surveying Services

Parking Study

Locations: 17-7738
City: Lafayette,CA

Day: Thursday
Date: 9/14/2017

Lot #	Roadway	Segment	Inventory	Occupancy				
				5:00 PM	5:30 PM	6:00 PM	6:30 PM	7:00 PM
A	Moraga Blvd	Bend (3483 Moraga Blvd) to Monroe Ave/2nd St	17	6	8	7	7	10
B	Monroe Ave	Bend (3478 Monroe Ave) to Moraga Blvd	35	13	13	11	11	15
C	2nd St	Golden Gate Way to Moraga Blvd	21	4	3	3	1	1
D	Moraga Blvd	Monroe Ave/2nd St to 3rd St	20	5	4	6	4	4
E	3rd St	Moraga Blvd to End	19	2	3	3	3	3
F	Moraga Blvd	3rd St to 4th St/Foye Dr	23	3	2	2	3	4
G	4th St	Moraga Blvd to End	40	8	9	10	12	12
H	Foye Dr	Moraga Blvd to Lana Ln	4	0	0	0	0	0
I	Lana Ln	Foye Dr to End	16	5	5	5	5	5
J	Foye Dr	Lana Ln to Little Ln	9	3	3	2	3	3
K	Little Ln	Foye Dr to End	18	3	3	5	4	4
L	Foye Dr	Little Ln to End	14	1	3	3	4	4
M	Moraga Blvd	4th St/Foye Dr to Victoria Ave	68	16	16	16	17	14
		Total	**304**	**69**	**72**	**73**	**74**	**79**

Prepared by National Data & Surveying Services

Parking Study

Locations: 17-7738
City: Lafayette,CA

Day: Saturday
Date: 9/23/2017

Lot #	Roadway	Segment	Inventory	Occupancy				
				1:00 PM	1:30 PM	2:00 PM	2:30 PM	3:00 PM
A	Moraga Blvd	Bend (3483 Moraga Blvd) to Monroe Ave/2nd St	17	13	12	12	13	11
B	Monroe Ave	Bend (3478 Monroe Ave) to Moraga Blvd	35	9	11	10	9	9
C	2nd St	Golden Gate Way to Moraga Blvd	21	1	1	1	2	2
D	Moraga Blvd	Monroe Ave/2nd St to 3rd St	20	4	3	3	3	4
E	3rd St	Moraga Blvd to End	19	1	1	1	1	1
F	Moraga Blvd	3rd St to 4th St/Foye Dr	23	4	4	3	1	3
G	4th St	Moraga Blvd to End	40	7	6	7	6	9
H	Foye Dr	Moraga Blvd to Lana Ln	4	0	0	0	0	0
I	Lana Ln	Foye Dr to End	16	5	5	4	4	4
J	Foye Dr	Lana Ln to Little Ln	9	1	1	1	1	1
K	Little Ln	Foye Dr to End	18	6	6	7	6	7
L	Foye Dr	Little Ln to End	14	2	2	2	1	1
M	Moraga Blvd	4th St/Foye Dr to Victoria Ave	68	13	14	14	15	14
		Total	**304**	**66**	**66**	**65**	**62**	**66**

Leigh Creekside Park

Vistro File: L:\...\Leigh Creekside Park.vistro
Report File: L:\...\Existing AM.pdf

Scenario 1 Existing AM
9/29/2017

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Foye Drive/4th Street at Moraga Boulevard	Two-way stop	HCM 2010	NB Thru	0.000	10.4	B
2	Monroe Avenue/2nd Street at Moraga Boulevard	All-way stop	HCM 2010	SB Thru	0.202	8.4	A
3	2nd Street at Golden Gate Way	All-way stop	HCM 2010	EB Left	0.387	9.9	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. for all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Foye Drive/4th Street at Moraga Boulevard

Control Type:	Two-way stop	Delay (sec / veh):	10.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	19	0	1	0	0	5	7	57	10	1	113	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	19	0	1	0	0	5	7	57	10	1	113	1
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	0	0	0	0	1	2	15	3	0	31	0
Total Analysis Volume [veh/h]	21	0	1	0	0	5	8	62	11	1	123	1
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	10.03	10.42	8.76	9.86	10.32	8.90	7.47	0.00	0.00	7.36	0.00	0.00
Movement LOS	B	B	A	A	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.09	0.09	0.09	0.02	0.02	0.02	0.18	0.18	0.18	0.27	0.27	0.27
95th-Percentile Queue Length [ft]	2.27	2.27	2.27	0.41	0.41	0.41	4.39	4.39	4.39	6.68	6.68	6.68
d_A, Approach Delay [s/veh]	9.97			8.90			0.74			0.06		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	1.42											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 2: Monroe Avenue/2nd Street at Moraga Boulevard

Control Type:	All-way stop	Delay (sec / veh):	8.4
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.202

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	2	42	9	44	68	20	55	35	2	25	62	69
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	42	9	44	68	20	55	35	2	25	62	69
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	11	2	12	18	5	15	10	1	7	17	19
Total Analysis Volume [veh/h]	2	46	10	48	74	22	60	38	2	27	67	75
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	775	781	762	835
Degree of Utilization, x	0.07	0.18	0.13	0.20

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.24	0.67	0.45	0.75
95th-Percentile Queue Length [ft]	6.05	16.81	11.27	18.87
Approach Delay [s/veh]	8.02	8.65	8.44	8.40
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	8.44			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 3: 2nd Street at Golden Gate Way

Control Type:	All-way stop	Delay (sec / veh):	9.9
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.387

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	9	41	25	21	108	74	163	92	12	8	12	7
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	9	41	25	21	108	74	163	92	12	8	12	7
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	11	7	6	29	20	44	25	3	2	3	2
Total Analysis Volume [veh/h]	10	45	27	23	117	80	177	100	13	9	13	8
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

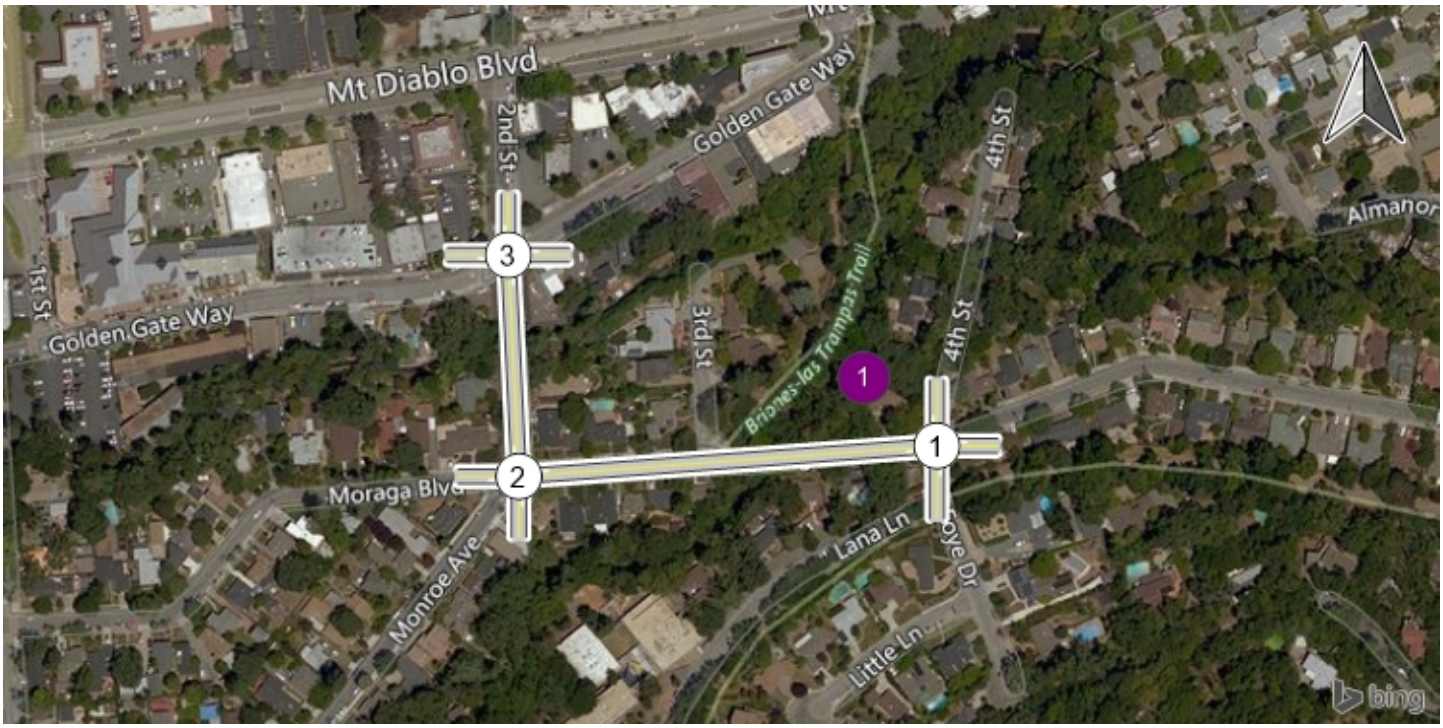
Lanes

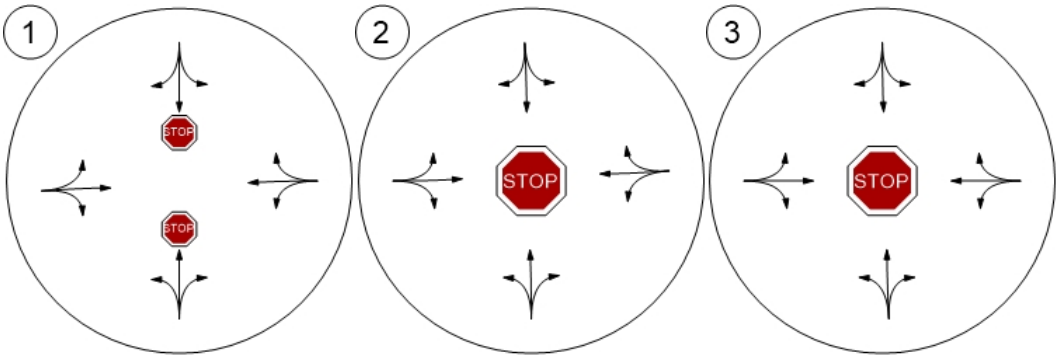
Capacity per Entry Lane [veh/h]	741	773	748	724
Degree of Utilization, x	0.11	0.28	0.39	0.04

Movement, Approach, & Intersection Results

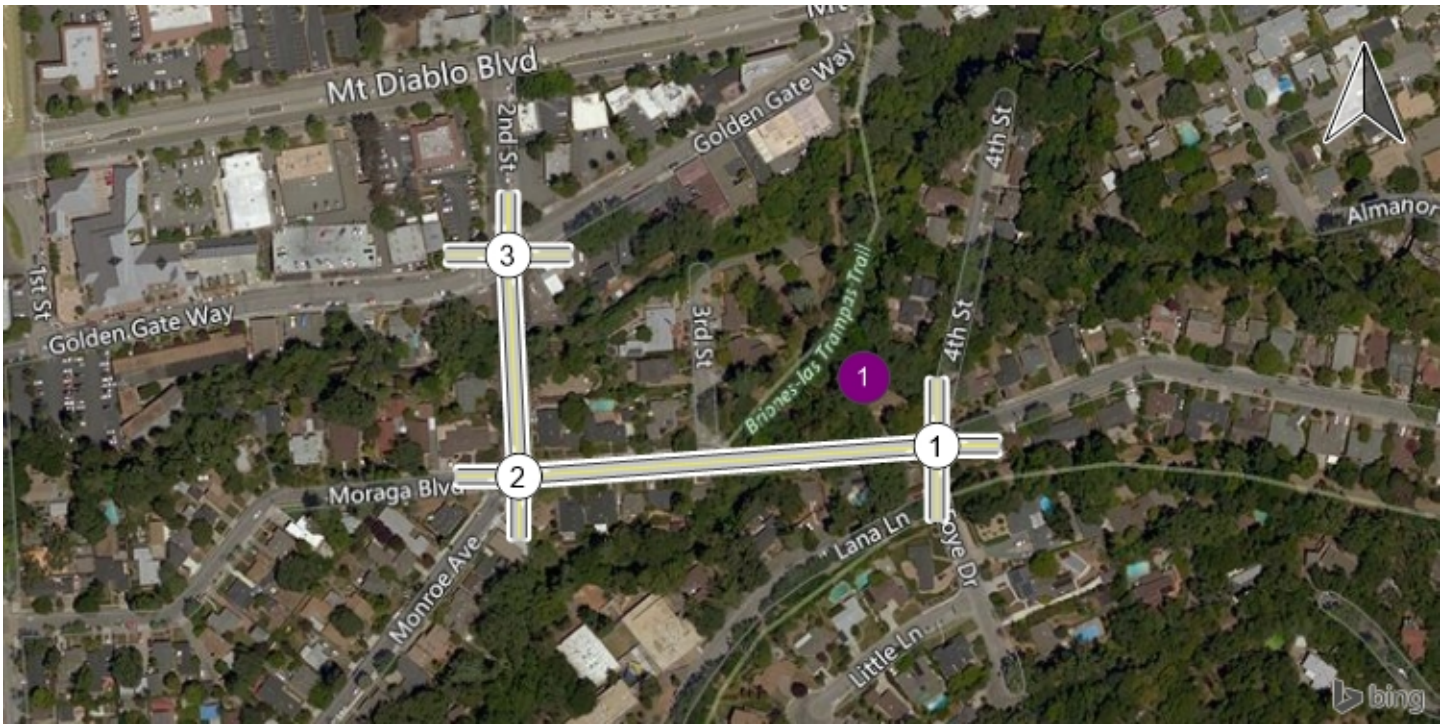
95th-Percentile Queue Length [veh]	0.37	1.17	1.84	0.13
95th-Percentile Queue Length [ft]	9.30	29.37	45.97	3.23
Approach Delay [s/veh]	8.47	9.51	10.82	8.18
Approach LOS	A	A	B	A
Intersection Delay [s/veh]	9.92			
Intersection LOS	A			

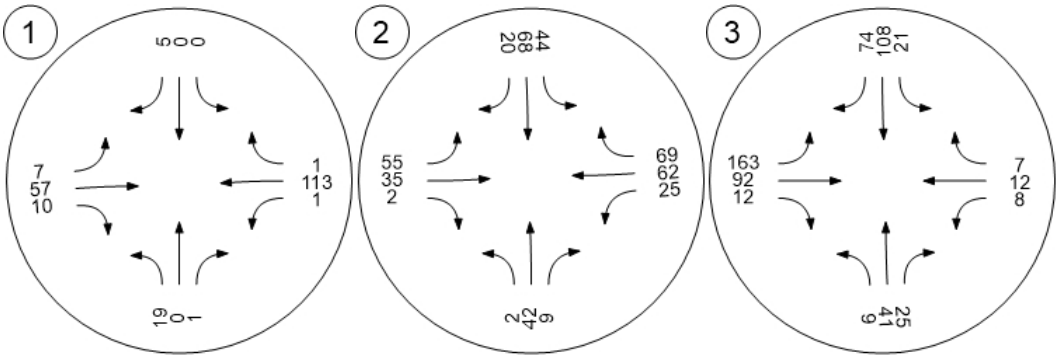
Lane Configuration and Traffic Control





Traffic Volume - Future Total Volume





Leigh Creekside Park

Vistro File: L:\...\Leigh Creekside Park.vistro
Report File: L:\...\Existing PM.pdf

Scenario 2 Existing PM
9/29/2017

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Foye Drive/4th Street at Moraga Boulevard	Two-way stop	HCM 2010	NB Thru	0.000	10.3	B
2	Monroe Avenue/2nd Street at Moraga Boulevard	All-way stop	HCM 2010	EB Left	0.158	8.1	A
3	2nd Street at Golden Gate Way	All-way stop	HCM 2010	WB Thru	0.182	8.3	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. for all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Foye Drive/4th Street at Moraga Boulevard

Control Type:	Two-way stop	Delay (sec / veh):	10.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	11	0	2	1	0	9	5	93	11	3	71	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	11	0	2	1	0	9	5	93	11	3	71	3
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	0	1	0	0	2	1	25	3	1	19	1
Total Analysis Volume [veh/h]	12	0	2	1	0	10	5	101	12	3	77	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop			Stop			Free			Free		
Flared Lane	No			No								
Storage Area [veh]	0			0			0			0		
Two-Stage Gap Acceptance	No			No								
Number of Storage Spaces in Median	0			0			0			0		

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	9.95	10.31	8.89	9.84	10.30	8.71	7.38	0.00	0.00	7.44	0.00	0.00
Movement LOS	A	B	A	A	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.06	0.06	0.06	0.03	0.03	0.03	0.25	0.25	0.25	0.18	0.18	0.18
95th-Percentile Queue Length [ft]	1.40	1.40	1.40	0.87	0.87	0.87	6.31	6.31	6.31	4.46	4.46	4.46
d_A, Approach Delay [s/veh]	9.80			8.81			0.31			0.27		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	1.30											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 2: Monroe Avenue/2nd Street at Moraga Boulevard

Control Type:	All-way stop	Delay (sec / veh):	8.1
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.158

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	21	7	55	44	13	69	47	0	15	24	52
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	21	7	55	44	13	69	47	0	15	24	52
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	6	2	15	12	4	19	13	0	4	7	14
Total Analysis Volume [veh/h]	0	23	8	60	48	14	75	51	0	16	26	57
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	811	798	796	872
Degree of Utilization, x	0.04	0.15	0.16	0.11

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.12	0.54	0.56	0.38
95th-Percentile Queue Length [ft]	2.98	13.46	14.01	9.57
Approach Delay [s/veh]	7.61	8.33	8.37	7.66
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	8.11			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 3: 2nd Street at Golden Gate Way

Control Type:	All-way stop	Delay (sec / veh):	8.3
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.182

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	19	61	58	6	47	31	22	64	26	38	45	19
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	19	61	58	6	47	31	22	64	26	38	45	19
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	17	16	2	13	8	6	17	7	10	12	5
Total Analysis Volume [veh/h]	21	66	63	7	51	34	24	70	28	41	49	21
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

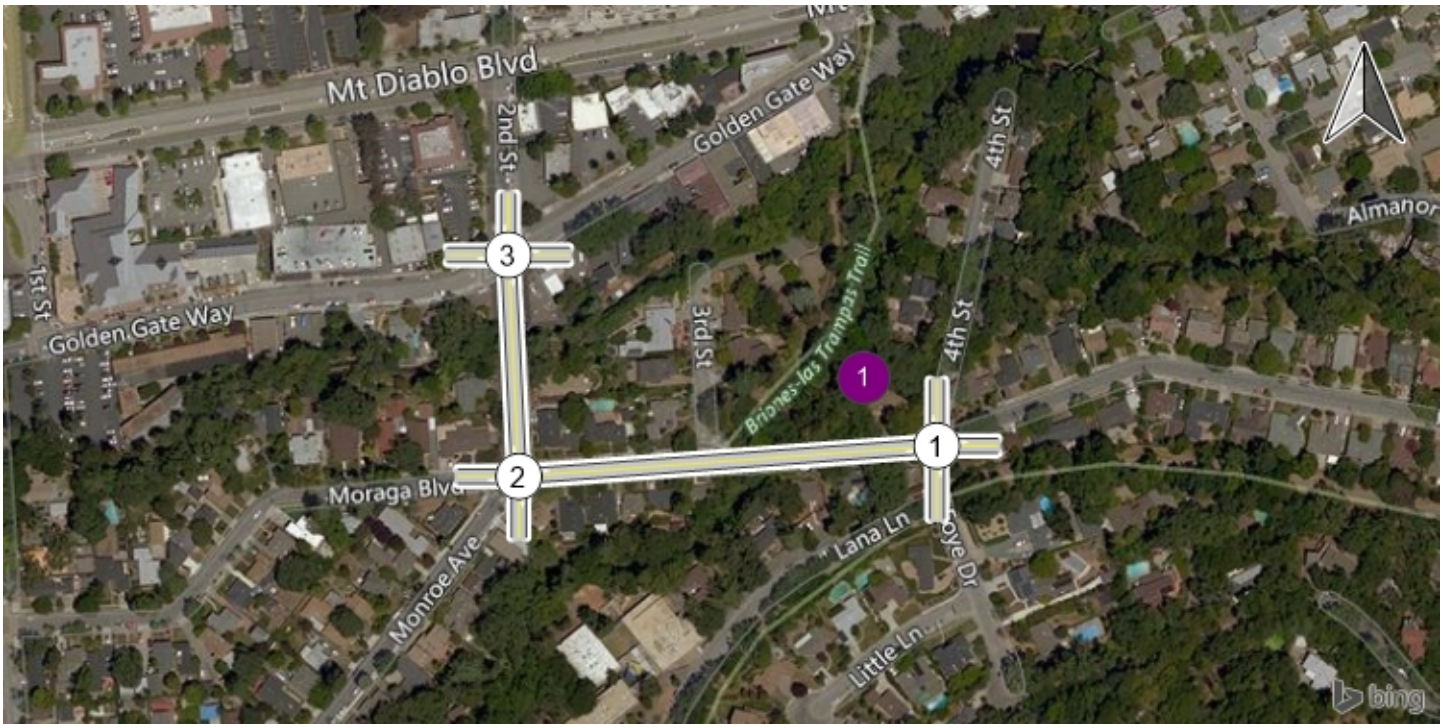
Lanes

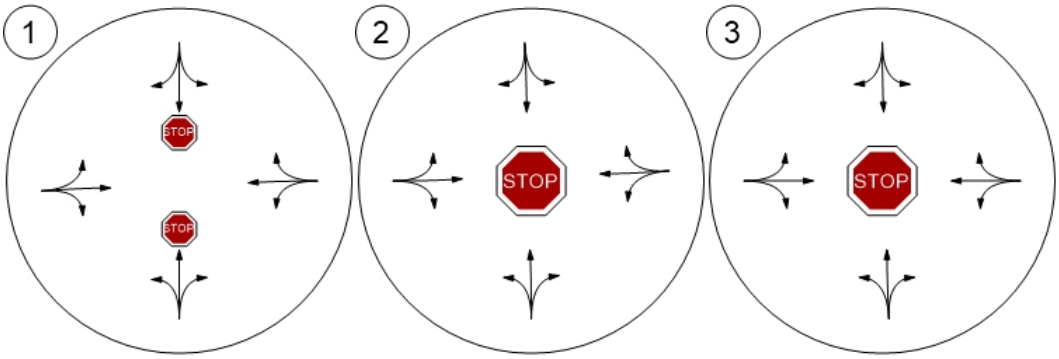
Capacity per Entry Lane [veh/h]	823	807	795	783
Degree of Utilization, x	0.18	0.11	0.15	0.14

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.66	0.38	0.54	0.49
95th-Percentile Queue Length [ft]	16.58	9.60	13.51	12.32
Approach Delay [s/veh]	8.35	8.03	8.35	8.36
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	8.29			
Intersection LOS	A			

Lane Configuration and Traffic Control





Traffic Volume - Future Total Volume