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# APPENDIX F

## TRAFFIC IMPACT ANALYSIS

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# HEXAGON TRANSPORTATION CONSULTANTS, INC.



## 355 First Street

### Transportation Impact Analysis



Prepared for:

**EMC Planning Group**



August 6, 2021



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## Executive Summary

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This study was conducted for the purpose of identifying the potential transportation impacts related to the proposed residential development at 355 First Street in Los Altos, California. The project site consists of four lots and is located on the southwest corner of First Street and Whitney Street. The project proposes to replace the existing buildings on-site with a 50-unit, four story residential building. Vehicular access to the project site would be provided via a driveway to an underground parking garage located along the alley behind First Street.

The potential impacts of the project were evaluated in accordance with the standards set forth by the City of Los Altos and the Santa Clara Valley Transportation Authority (VTA). The transportation study includes an analysis of AM and PM peak hour traffic conditions for five (5) signalized intersections and two (2) unsignalized intersections in the vicinity of the project site. Vehicle Miles Traveled (VMT) per capita was reported and compared to the citywide average. Potential impacts to pedestrians, bicycles, and transit were also considered.

Based on trip generation rates recommended by the Institute of Transportation Engineers (ITE), it is estimated that the proposed project would generate 196 net new daily trips, with 9 trips (-3 inbound, 12 outbound) during the AM peak hour and 12 trips (12 inbound, 0 outbound) during the PM peak hour. Trip credits were taken for the existing uses on-site. No trip credits were taken for the vacant uses on site.

The results of the intersection level of service analysis under existing conditions, with and without the project, are summarized in Table ES-1. The results determined that most study intersections would operate in accordance with local standards during both AM and PM peak hours. The intersection of Foothill Expressway & San Antonio Road would operate at an unacceptable level of service during the PM peak hour. The addition of project trips would not adversely affect traffic operations at the intersection because these trips would not increase the average delay at the intersection by more than 4 seconds. The eastbound movement at the San Antonio Road & Whitney Street/Pepper Drive intersection would also operate at an unacceptable level of service during the PM peak hour. Similarly, the addition of project generated trips would not adversely affect traffic operations at the intersection.

The VTA VMT Evaluation Tool indicates that residential projects located within the project's transportation analysis zone (TAZ) would generate 7.08 VMT/capita. Similarly, the tool finds that the proposed project is projected to generate 6.37 VMT per capita. Since the proposed project's estimated VMT per capita of 6.37 is lower than the significance threshold of 10.39 VMT per capita, the project would have a less than significant impact of vehicle miles traveled.

This report also makes the following conclusions and recommendations for the project:

- The project site plan should be revised to show a transition slope at the top and bottom of the garage ramps.
- The planters along the alley frontage should be maintained so that they do not impede the vision of exiting drivers.
- Bicycle storage rooms should be relocated to ground level so that residents could easily access bicycle parking.

**Table ES-1  
Intersection Level of Service Summary**

#	Intersection	Peak Hour	Existing					
			No Project		with Project			
			Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS	Incr. in Critical Delay (sec)	Incr. in Critical V/C
1	Foothill Expressway & Main Street	AM	21.0	C+	21.1	C+	0.1	0.001
		PM	22.9	C+	23.0	C+	0.1	0.003
2	First St & Main Avenue	AM	19.2	B-	19.3	B-	0.0	0.000
		PM	20.0	B-	20.0	B-	0.0	0.001
3	First Street & Whitney Street <sup>1</sup>	AM	9.3	A	9.3	A	0.2	0.007
		PM	9.7	A	9.8	A	0.1	0.004
4	San Antonio Road & Main Street/Edith Avenue	AM	19.0	B-	19.1	B-	0.1	0.001
		PM	27.8	C	27.8	C	0.0	0.002
5	San Antonio Road and First Street/Cuesta Drive	AM	23.8	C	23.8	C	0.0	0.001
		PM	20.3	C+	20.4	C+	0.1	0.002
6	Foothill Expressway and San Antonio Road	AM	10.6	B+	10.6	B+	0.0	0.002
		PM	<b>90.2</b>	<b>F</b>	<b>90.6</b>	<b>F</b>	0.7	0.001
7	San Antonio Road and Whitney Street/Pepper Drive <sup>1</sup>	AM	29.6	D	29.8	D	0.1	0.006
		PM	<b>40.4</b>	<b>E</b>	<b>41.7</b>	<b>E</b>	0.2	0.012

**Bold** indicates a substandard level of service.

Note:  
<sup>1</sup> Denotes a one-way or two-way stop-controlled intersection. Worst leg delay is reported.

# 1. Introduction

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This report presents the results of the Transportation Impact Analysis (TIA) conducted for the proposed residential development located at 355 First Street in Los Altos, California. The project site consists of four lots and is located on the southwest corner of First Street and Whitney Street. The project proposes to replace the existing buildings on-site with a 50-unit, four story residential building. Vehicular access to the project site would be provided via a driveway to an underground parking garage located along the alley behind First Street.

## Scope of Study

This study was conducted for the purpose of identifying the potential transportation impacts related to the proposed development. The potential impacts of the project were evaluated in accordance with the standards set forth by the City of Los Altos and the Santa Clara Valley Transportation Authority (VTA).

The estimated Vehicle Miles Traveled (VMT) from the proposed development was compared to the citywide average. In addition, the traffic study includes an analysis of AM and PM peak hour traffic conditions for five (5) signalized intersections and two (2) unsignalized intersections in the vicinity of the project site. Since the project is expected to generate fewer than 100 net PM peak hour trips, a CMP roadway segment analysis is not required. An analysis of site access and on-site circulation, and transit, bicycle, and pedestrian access is also included.

## Study Intersections

1. Foothill Expressway & Main Street (CMP intersection)
2. First Street & Main Street
3. First Street & Whitney Street (unsignalized)
4. San Antonio Road & Edith Avenue/Main Street
5. San Antonio Road & First Street/Cuesta Drive
6. San Antonio Road & Foothill Expressway (CMP intersection)
7. San Antonio Road & Whitney Street/Pepper Drive (unsignalized)

Traffic conditions at the study intersections were analyzed for both the weekday AM and PM peak hours of adjacent street traffic. The AM peak hour typically occurs between 7:00 AM and 9:00 AM and the PM peak hour typically occurs between 4:00 PM and 6:00 PM on a regular weekday. These are the peak commute hours during which most traffic congestion occurs on the roadways.

Traffic conditions were evaluated for the following scenarios:

**Scenario 1:** *Existing Conditions.* Existing traffic volumes at study intersections were based on traffic counts conducted in April 2021 and by escalating the most recent pre-pandemic traffic counts, where available. A 1% compounded annual growth factor was used to escalate

pre-pandemic traffic volumes. New counts were factored by comparing new counts to available existing counts. The study intersections were evaluated with a level of service analysis using TRAFFIX software in accordance with the *2000 Highway Capacity Manual* methodology.

**Scenario 2: Existing plus Project Conditions.** Existing traffic volumes with the project were estimated by adding to existing traffic volumes the additional traffic generated by the project. Existing plus project conditions were evaluated relative to existing conditions in order to determine the effects the project would have on the existing roadway network.

## Methodology

This section presents the methods used to determine the traffic conditions for each scenario described above. It includes descriptions of the data requirements, the analysis methodologies, and the applicable level of service standards.

### Data Requirements

The data required for the analysis were obtained from new traffic counts, driveway counts, local traffic studies and EIRs, and field observations. The following data were collected from these sources:

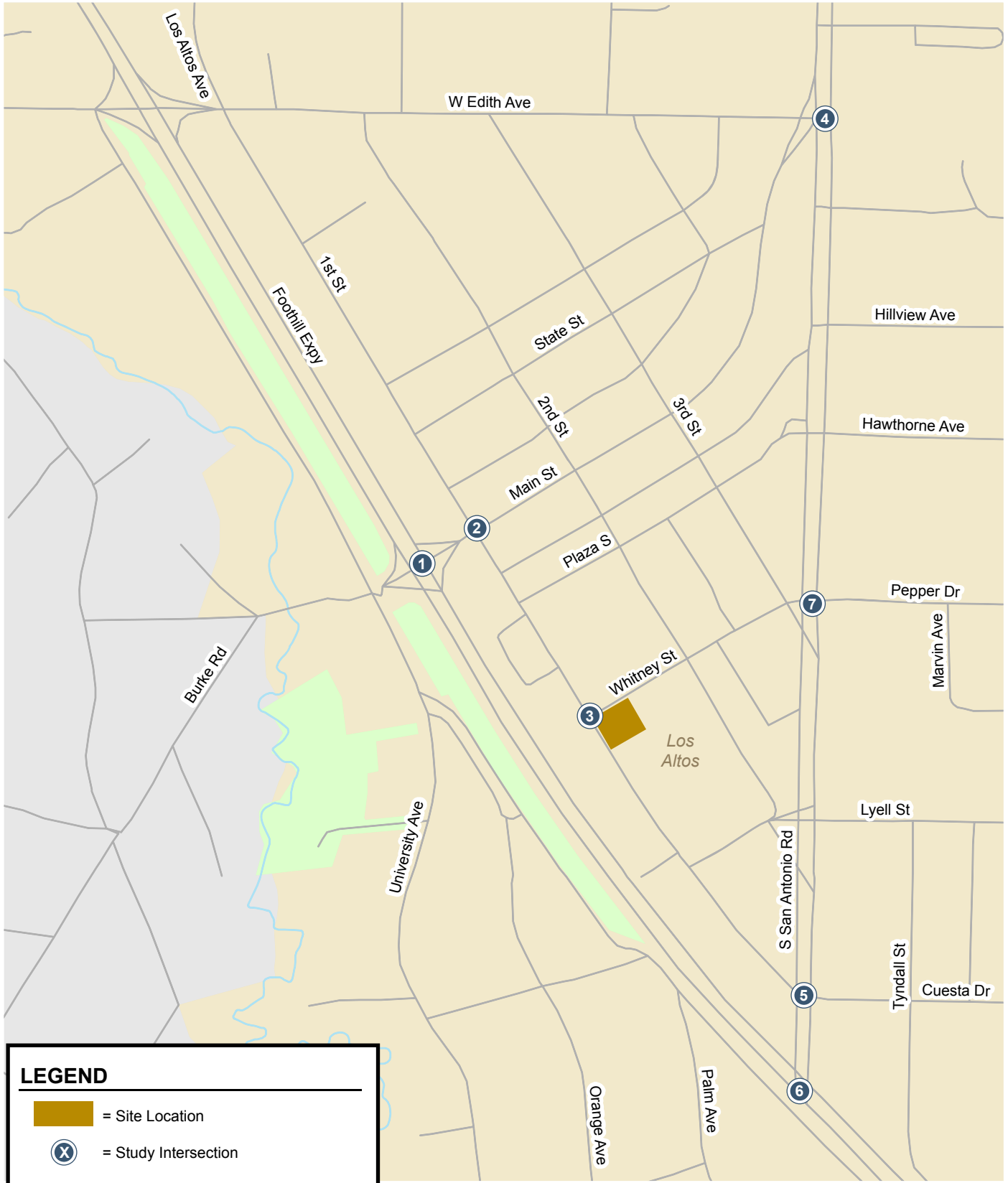
- existing peak-hour intersection turning-movement volumes
- lane configurations
- intersection signal timing and phasing

### Vehicle Miles Traveled Standard and Analysis Methodology

Senate Bill 743 (SB 743) was signed in 2013 and requires that, for land use projects, vehicle miles traveled (VMT) per capita, employee, or net VMT are to be used as metrics for transportation analysis. SB 743 requires lead agencies to implement its guidelines, requiring them to select a VMT methodology, choose significance thresholds, and determine feasible mitigation measures. VMT should be reduced to minimize the transportation impact a development has on a community. The goal of SB 743 is to encourage development that reduces VMT.

To determine whether a project would result in CEQA transportation impacts related to VMT, the Valley Transportation Authority (VTA) has developed the VTA VMT evaluation tool to streamline the analysis for residential, office, and industrial projects. The analysis in this report describes the daily VMT per capita for the project and compares it to significance thresholds for the City of Los Altos.

Per Office of Planning and Research (OPR) guidelines, when there is a change in land use, VMT for a proposed project should be compared to thresholds set by lead agencies without regard to the VMT generated by the previous existing use.



**Figure 1**  
Site Location and Study Intersections

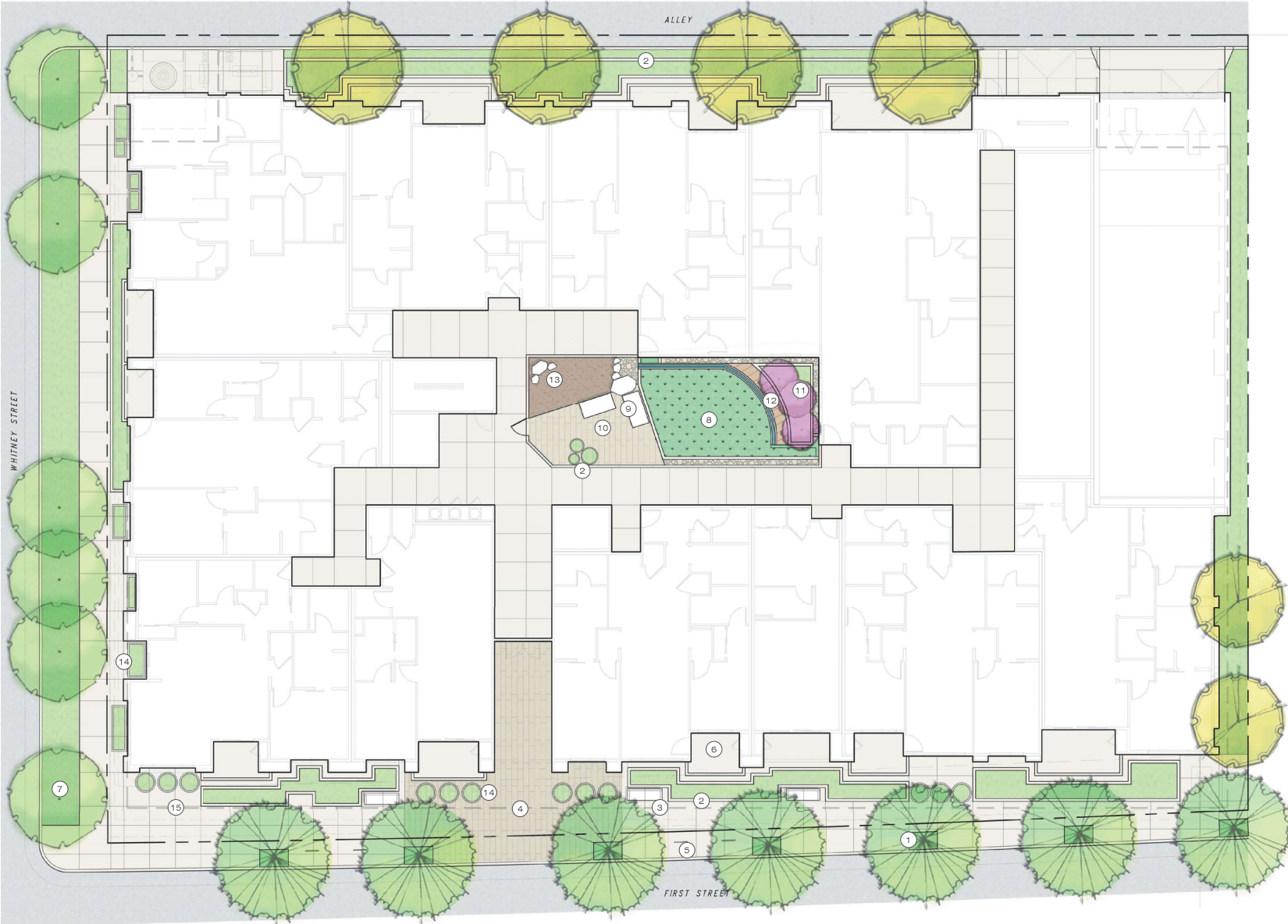


Figure 2  
Site Plan



## Level of Service Standards and Analysis Methodologies

Traffic conditions at the study intersections were evaluated using level of service (LOS). *Level of Service* is a qualitative description of operating conditions ranging from LOS A, or free-flow conditions with little or no delay, to LOS F, or jammed conditions with excessive delays. The various analysis methods are described below.

### Signalized Intersections

The City of Los Altos utilizes TRAFFIX software and the *Highway Capacity Manual* (HCM) methodology to evaluate intersection operations. The HCM method evaluates signalized intersection operations on the basis of average control delay time for all vehicles at the intersection. Control delay is the amount of delay that is attributed to the particular traffic control device at the intersection, and includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The correlation between average delay and level of service is shown in Table 1. In the city of Los Altos, the level of service standard for signalized intersections is LOS D. The level of service standard for CMP signalized intersections is LOS E or better.

**Table 1**  
**Signalized Intersection Level of Service Definitions Based on Control Delay**

Level of Service	Description	Average Control Delay Per Vehicle (sec.)
A	Signal progression is extremely favorable. Most vehicles arrive during the green phase and do not stop at all. Short cycle lengths may also contribute to the very low vehicle delay.	10.0 or less
B	Operations characterized by good signal progression and/or short cycle lengths. More vehicles stop than with LOS A, causing higher levels of average vehicle delay.	10.1 to 20.0
C	Higher delays may result from fair signal progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant, though some vehicles may still pass through the intersection without stopping.	20.1 to 35.0
D	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable signal progression, long cycle lengths, or high volume-to-capacity (V/C) ratios. Many vehicles stop and individual cycle failures are noticeable.	35.1 to 55.0
E	This is considered to be the limit of acceptable delay. These high delay values generally indicate poor signal progression, long cycle lengths, and high volume-to-capacity (V/C) ratios. Individual cycle failures occur frequently.	55.1 to 80.0
F	This level of delay is considered unacceptable by most drivers. This condition often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of the intersection. Poor progression and long cycle lengths may also be major contributing causes of such delay levels.	greater than 80.0

Source: Transportation Research Board, *2000 Highway Capacity Manual* (Washington, D.C., 2000), p.10-16.

## **Unsignalized Intersections**

Level of service analysis at unsignalized intersections is generally used to determine the need for modification in the type of intersection control (i.e., all-way stop or signalization). As part of the evaluation, traffic volumes, delays and traffic signal warrants are evaluated to determine if the existing intersection control is appropriate.

For unsignalized intersections, level of service depends on the average delay experienced by vehicles on the stop-controlled approaches. Thus, for all-way stop controlled intersections, level of service is determined by the average delay for all movements through the intersection. For side street stop-controlled intersections (two-way or T-intersections), operations are defined by the average control delay experienced by vehicles entering the intersection from the stop-controlled approaches on minor streets or from left-turn approaches on major streets. For two-way or T-intersections, the level of service is reported based on the average delay for the worst approach. The level of service definitions for unsignalized intersections is shown in Table 2. The City of Los Altos does not have an adopted level of service standard for unsignalized intersections. For the purpose of this study, the minimum acceptable level of service for unsignalized intersections is LOS D.

**Table 2**  
**Unsignalized Intersection Level of Service Definitions Based on Control Delay**

Level of Service	Description	Average Delay Per Vehicle (Sec.)
A	Little or no traffic delay	10.0 or less
B	Short traffic delays	10.1 to 15.0
C	Average traffic delays	15.1 to 25.0
D	Long traffic delays	25.1 to 35.0
E	Very long traffic delays	35.1 to 50.0
F	Extreme traffic delays	greater than 50.0

Source: Transportation Research Board, *2000 Highway Capacity Manual* (Washington, D.C., 2000) p17-2.

## **Significant Impact Criteria**

Significance criteria are used to establish what constitutes a significant impact. The City of Los Altos VMT Policy establishes screening criteria for projects that are expected to cause a less-than-significant transportation impact under CEQA based on the land use and/or location. Projects that meet the screening criteria are not required to prepare further VMT analysis. For a project that does not meet the screening criteria, a project's VMT impact is determined by comparing the project VMT to the appropriate thresholds of significance based on the type of development. For residential developments, the threshold of significance is 15 percent below the citywide average daily VMT per capita.



## Adverse Operational Effects on Nearby Intersections

For this analysis, the criteria used to determine an adverse effect on signalized intersections are based on City of Los Altos Level of Service standards. Adverse effects to the unsignalized study intersections were identified based on engineering judgment. Adverse effects to pedestrian and bicycle facilities and transit services were evaluated based on the VTA Transportation Impact Analysis (TIA) Guidelines (October 2014) and professional judgment.

### City of Los Altos Signalized Intersections

According to City of Los Altos level of service standard, a development is said to create a adverse operational effect on traffic conditions at a signalized intersection if for either peak hour, either of the following conditions occurs:

1. The level of service at the intersection drops below its respective level of service standard (LOS D or better for local intersections) when project traffic is added, or
2. An intersection that operates below its level of service standard under no-project conditions experiences an increase in critical-movement delay of four (4) or more seconds, and the volume-to-capacity ratio (v/c) is increased by one percent (0.01) or more when project traffic is added.

An adverse operational effect at a signalized intersection is said to be satisfactorily mitigated when measures are implemented that would restore intersection operations back to background (without the project) conditions or better.

### CMP Signalized Intersections

The definition of an adverse operational effect at a CMP intersection is the same as for the City of Los Altos, except that the CMP standard for acceptable level of service at a CMP intersection is LOS E or better. An adverse operational impact by CMP standards is said to be satisfactorily mitigated when measures are implemented that would restore intersection conditions to background conditions or better.

### Unsignalized Intersections

The City of Los Altos has not established operational effect criteria for unsignalized intersections. Unlike signalized intersections, which typically represent constraint points for the roadway network, unsignalized intersections rarely limit the potential capacity of a roadway. The determination of appropriate improvements to unsignalized intersections typically includes a qualitative and quantitative analysis of movement delay, movement traffic volumes, intersection safety, and need for signalization. For this reason, adverse effects and the associated improvements to unsignalized intersections are frequently determined on the basis of professional judgment.

## Report Organization

This report is divided into four chapters. Chapter 2 describes the existing roadway network, transit services, and pedestrian facilities. Chapter 3 presents a discussion on Vehicle Miles Traveled. Chapter 4 describes project conditions and includes the analysis of other transportation issues including site access, on-site circulation, and pedestrian, bicycle, and transit facilities.

## 2. Existing Conditions

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This chapter describes the existing conditions for transportation facilities in the vicinity of the site, including the roadway network, transit service, and pedestrian and bicycle facilities.

### Existing Roadway Network

Regional access to the project is provided via Interstate 280 (I-280) and Foothill Expressway. Local access to the project site is provided via San Antonio Road, Main Street, First Street, Whitney Street, and the alley. These facilities are described below.

**I-280** is an eight-lane freeway in the study area. It is considered to run north-south between San Francisco and San Jose, although in the project area it runs east-west. In the project vicinity, I-280 has an interchange serving Los Altos at El Monte Avenue.

**Foothill Expressway** is a four-lane divided expressway that extends between Cupertino and Palo Alto through Los Altos. The City of Los Altos considers Foothill Expressway to be north-south because it is parallel to US 101. It has eight points of access within the Los Altos city limits including an interchange at I-280. The access to the project site from Foothill Expressway is via San Antonio Road or Main Street. The speed limit on Foothill Expressway is 45 mph.

**San Antonio Road** is a north-south arterial that extends northward from Foothill Expressway to US 101. For the purpose of this study, San Antonio Road is treated as east-west since it intersects with Foothill Expressway, which is considered north-south by the City of Los Altos. In the project vicinity, it is four lanes wide and has landscaped medians with left-turn pockets at intersections and bike lanes and sidewalks on both sides of the street. San Antonio Road provides access to the project site via First Street and Whitney Street. The speed limit on San Antonio Road is 35 mph.

**Main Street** is a two-lane local street that runs from San Antonio Road to Foothill Expressway, where it becomes Burke Road. Main Street provides access to the project site via First Street. On-street parking is available on both sides of Main Street. The speed limit on Main Street is 25 mph.

**First Street** is a two-lane local street that runs parallel to and east of Foothill Expressway between San Antonio Road and Edith Avenue. East of San Antonio Road it becomes Cuesta Drive, and north of Edith Avenue it becomes Los Altos Avenue. First Street provides access to the project site via Whitney Street. First Street provides direct pedestrian access to the project site. On-street parking is available on both sides of First Street. A sidewalk is present along the east side of First Street but is discontinuous on the west side. The speed limit on First Street is 25 mph.

**Whitney Street** is an east-west local street that extends eastward from First Street to San Antonio Road, where it becomes Pepper Drive. It is two lanes wide and has discontinuous sidewalks. The project frontage has a sidewalk with on-street parking allowed. The speed limit on Whitney Street is 25 mph.

**Alley.** There is a two-way alley behind the project site that runs between Whitney Street and Lyell Street. The alley is approximately 16 feet wide and provides access to the backs of the buildings along First and Second Streets. The project is shown to have its driveway on the alley.

## Existing Pedestrian and Bicycle Facilities

### Existing Pedestrian Facilities

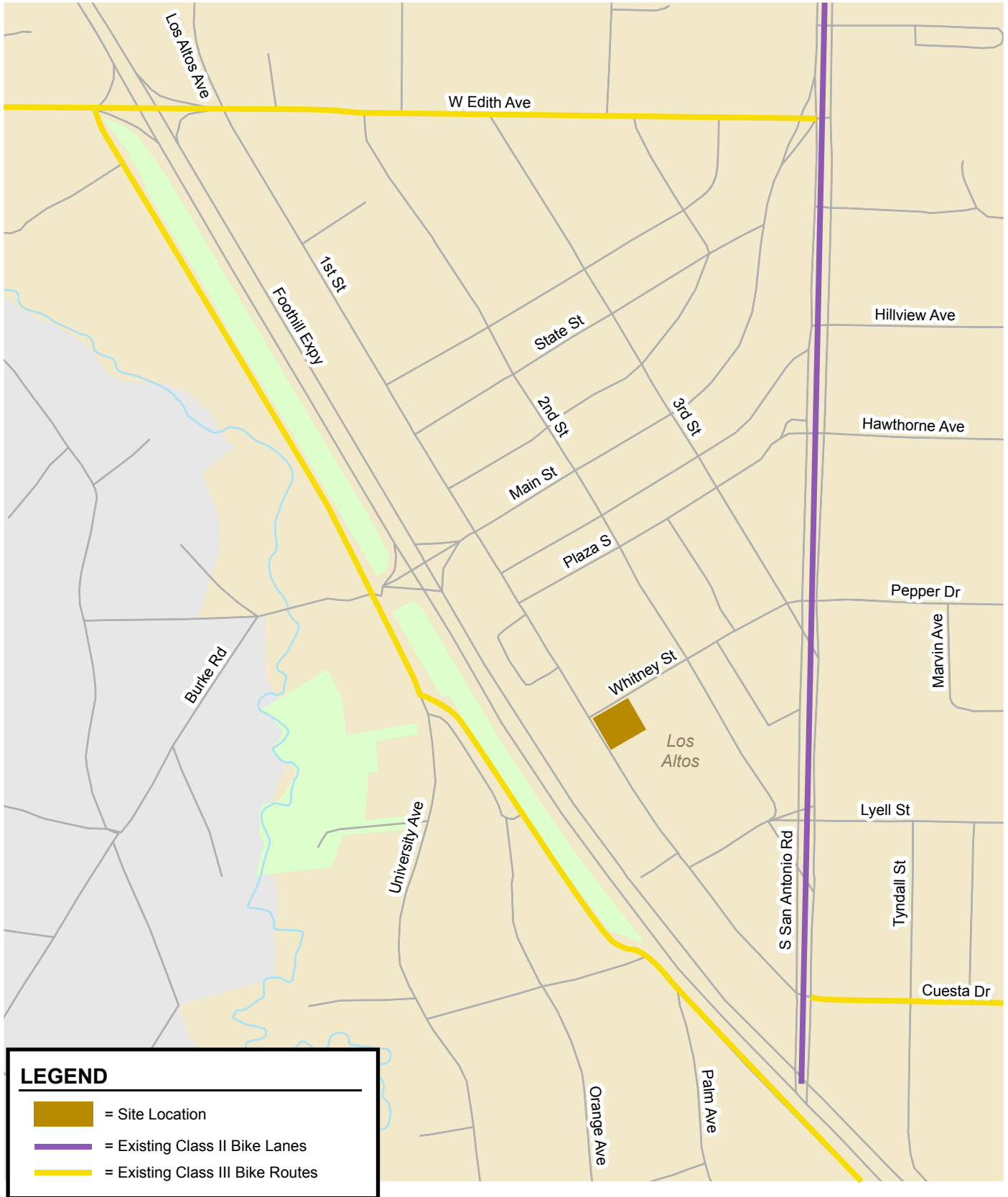
Pedestrian facilities consist of sidewalks, crosswalks, and pedestrian signals at signalized intersections. In the vicinity of the project site, continuous sidewalks exist along the east side of First Street. Discontinuous sidewalks are present along the west side of First Street and on Whitney Street. Near the project site, marked crosswalks are present along the north and east legs at the intersection of First Street & Whitney Street. Crosswalks with pedestrian signal heads are present at the intersection of First Street & Main Street. Crosswalks with pedestrian signal heads and push buttons are provided at the remaining signalized study intersections, with the exception of the south leg of the San Antonio Road & First Street/Cuesta Drive intersection.

### Existing Bicycle Facilities

Bicycle facilities in the vicinity of the project site include bike lanes and bike routes. Bike lanes (Class II facilities) are lanes on roadways designated for use by bicycles with special lane markings, pavement legends, and signage. Bike routes (Class III facilities) are roadways shared between bicycles and vehicles. Bike routes are often designated for use by bicycles with “sharrow” pavement markings and signage. The existing bicycle facilities within the study area are described below and are shown on Figure 3. While most streets in the downtown area lack bicycle facilities, they have slow traffic speeds and are conducive to bicycling.

**North-South bicycle connections** in the study area consist of a Class II bike lane along San Antonio Road, connecting the project site to Mountain View.

**East-West bicycle connections** in the study area consist of a Class III bike route along Cuesta Drive, connecting the project site to other bicycle facilities and nearby points of interests.



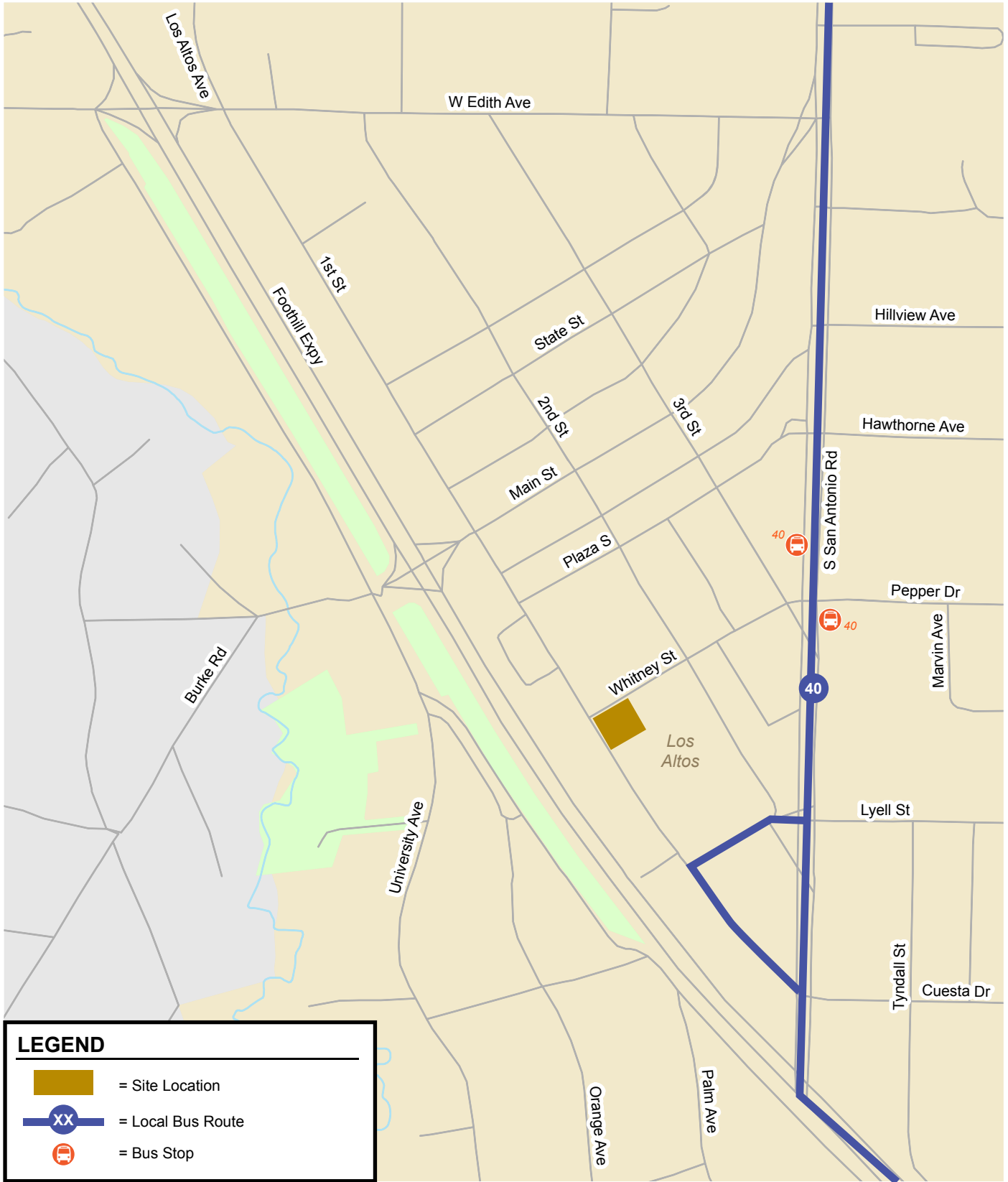
**Figure 3**  
**Existing Bicycle Facilities**

## Existing Transit Service

Existing transit services in the study area are provided by the VTA and are shown on Figure 4. The project site is primarily served by one VTA bus route (Frequent Route 40). The nearest bus stops to the project site are located along both sides of San Antonio Road (near Whitney Street), approximately 800 feet from the project site.

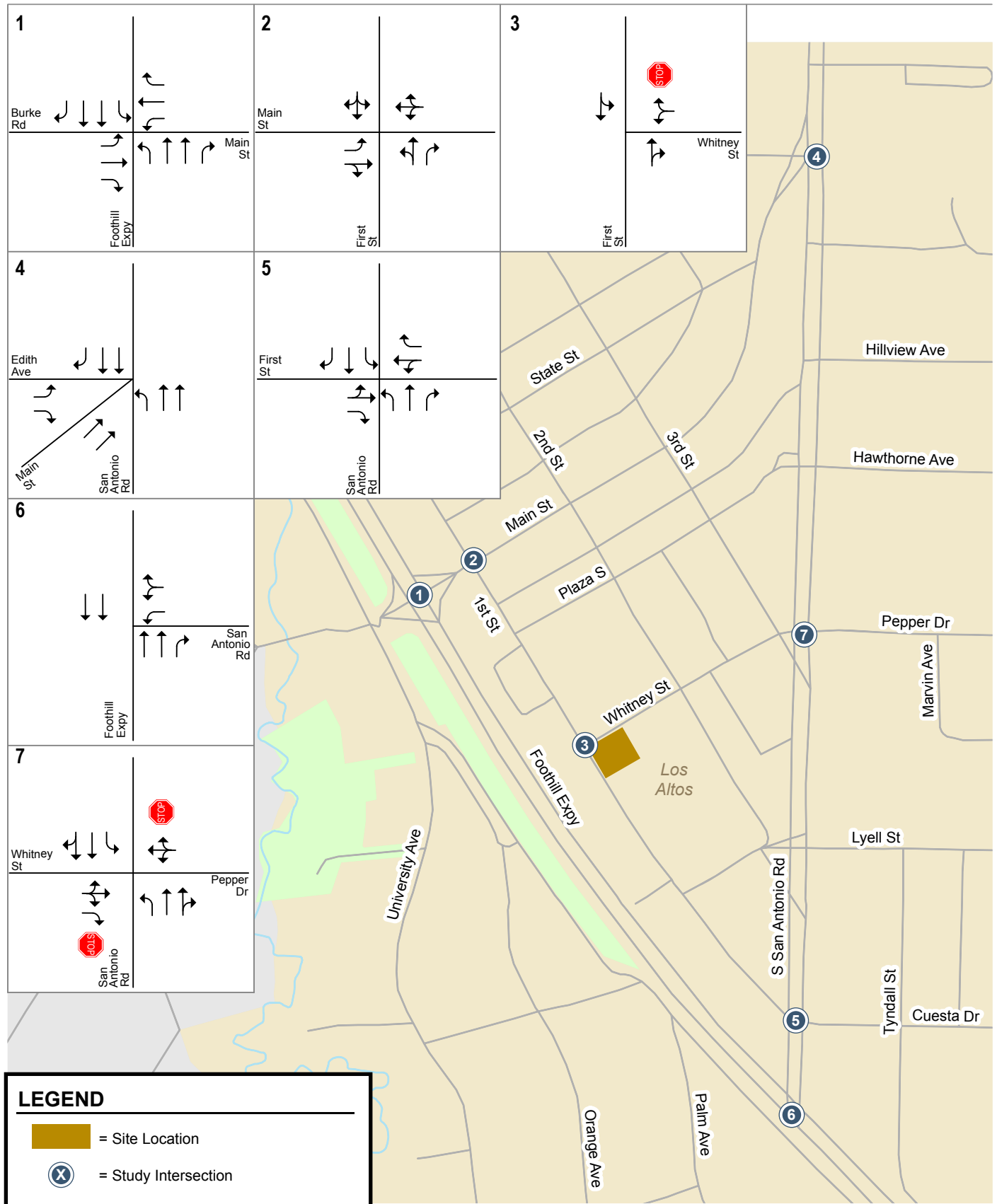
## Existing Intersection Lane Configurations and Traffic Volumes

The existing lane configurations at the study intersections were determined by observations in the field and are shown on Figure 5. Existing traffic volumes were obtained by escalating the most recent pre-pandemic traffic counts, where available, and factoring peak hour counts collected in April 2021. A 1% compounded annual growth factor was used to escalate pre-pandemic traffic volumes to existing conditions. Pre-pandemic traffic volumes were taken from previous traffic studies completed in the area. New traffic counts were taken at the unsignalized intersections of First Street & Whitney Street, San Antonio Road & Whitney Street, and First Street & Main Street. The traffic volumes were then compared to adjusted traffic counts at First Street & Main Street. The adjusted traffic counts at First Street & Main Street are greater than new counts by a factor of 1.40 and 1.46 in the AM and PM peak hours, respectively. Therefore, new counts at the unsignalized intersections of First Street & Whitney Street and San Antonio Road & Whitney Street were adjusted accordingly. The existing peak-hour intersection volumes are shown on Figure 6. Intersection turning-movement counts conducted for this analysis are presented in Appendix A.



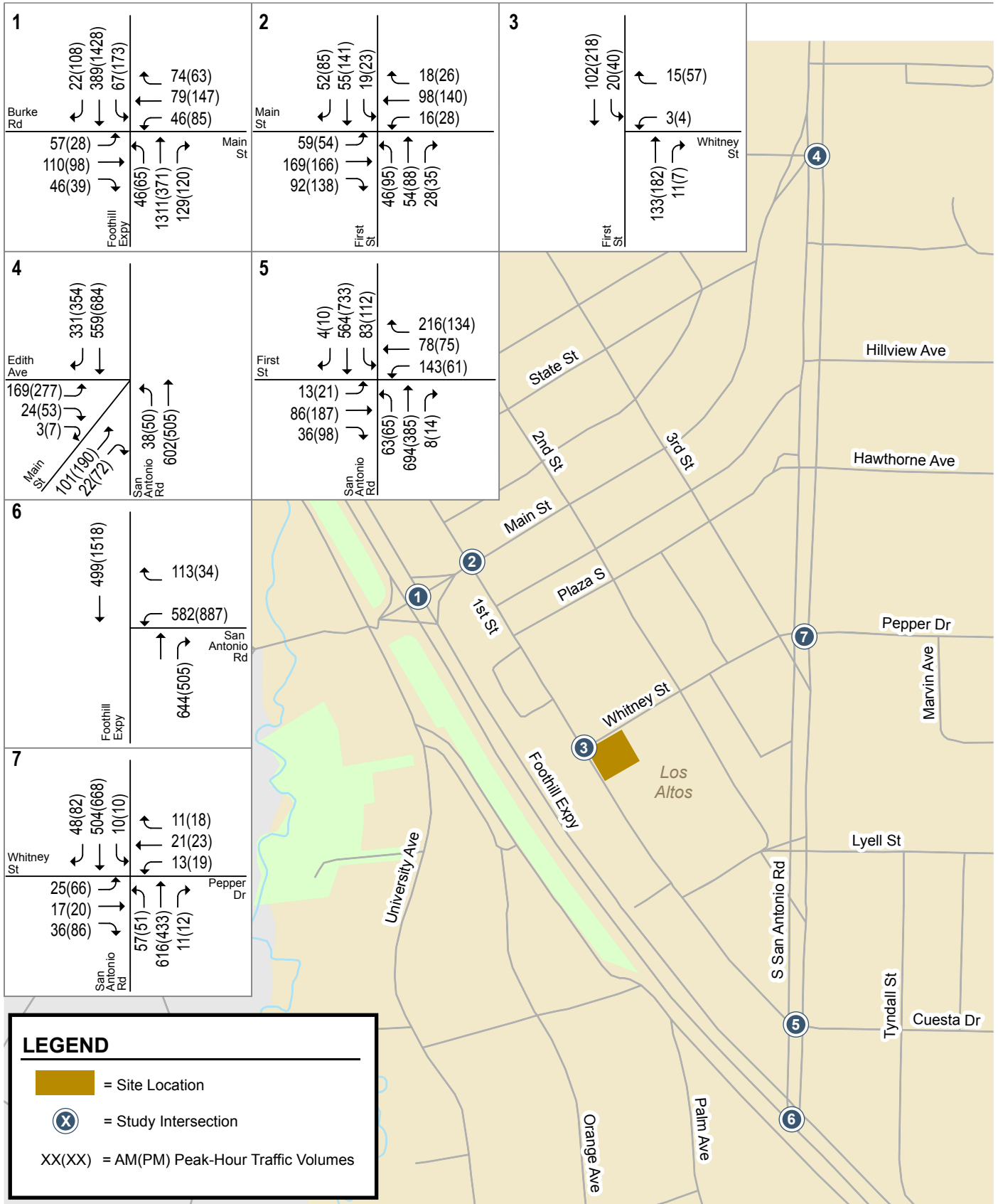
**Figure 4**  
**Existing Transit Services**

355 First Street



**Figure 5**  
Existing Lane Configurations

355 First Street



**Figure 6**  
Existing Traffic Volumes



### 3. Vehicle Miles Traveled

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Senate Bill 743 (SB 743) was signed in 2013 and requires that, for land use projects, vehicle miles traveled (VMT) per capita, employee, or net VMT are to be used as metrics for transportation analysis. SB 743 requires lead agencies to implement its guidelines, requiring them to select a VMT methodology, choose significance thresholds, and determine feasible mitigation measures. VMT should be reduced to minimize the transportation impact a development has on a community. The goal of SB 743 is to encourage development that reduces VMT. SB 743 required VMT to be used as metrics for transportation analysis by July 2020.

The Los Altos VMT Policy establishes screening criteria for developments that are expected to cause a less-than-significant transportation impact under CEQA and are not required to prepare further VMT analysis.

- Small Project Screening: Any development that would generate fewer than 110 daily vehicle trips shall be presumed to have a less-than-significant transportation impact.
- Map-Based Screening: Residential and employment land use projects located in areas of low VMT, defined as exhibiting VMT that is 15 percent or more below the existing citywide average VMT, shall be presumed to have a less-than-significant transportation impact. Citywide average VMT per capita or per employee baseline values are obtained from VTA and may be amended periodically to reflect the best available data and most relevant base year.
- Local-Serving Retail Screening: Retail commercial projects comprised of stores of up to 60,000 gross square feet shall be presumed to have a less-than-significant transportation impact.
- Local-Serving Public Facilities Screening: Local-serving public facilities (publicly owned or controlled), excluding private schools, high schools and middle schools, shall be presumed to have a less than significant VMT impact. Examples of these projects include a branch library, community or senior center, fire station, and public elementary school.
- Affordable Housing Screening: Projects with 100 percent affordable housing shall be presumed to have a less-than-significant transportation impact on VMT.
- Screening based on Existing Use: Redevelopment projects that replace existing VMT-generating uses and result in a net decrease in total VMT shall be presumed to cause a less than significant impact. For redevelopment projects that result in a net increase in total VMT, the screening criteria for each land use will be based on the size of the proposed development without any credit for the existing use.
- Transportation Project Screening: Transportation projects that reduce or do not increase VMT shall be presumed to have a less than significant VMT impact. Examples include transportation projects that enhance pedestrian, bike, or transit infrastructure, and

transportation projects that maintain current infrastructure, without adding new automobile capacity.

### Thresholds of Significance

For a project that does not meet the screening criteria, a project's VMT impact is determined by comparing the project VMT to the appropriate thresholds of significance based on the type of development. The VMT thresholds of significance are established based on the existing citywide average VMT level for residential and employment uses.

For residential developments, the threshold of significance is the city average VMT per capita minus 15 percent, which calculates to 10.39 daily vehicle miles traveled per resident.

If a project is found to have a significant impact on VMT, the impact must be reduced by modifying the project to reduce its VMT to an acceptable level (below the established thresholds of significance applicable to the project) and/or mitigating the impact through multimodal transportation improvements or establishing a trip cap.

### Project-Level VMT Impact Analysis

The City's VMT threshold of significance is the city average VMT per capita minus 15 percent, which calculates to 10.39 daily vehicle miles traveled per resident. Thus, the proposed project would result in a significant impact if it results in a project VMT of 10.39 VMT per capita or more.

The results of the VMT evaluation, using the VTA VMT Evaluation Tool, indicates that residential projects located within the project's transportation analysis zone (TAZ) would generate 7.08 VMT/capita. Similarly, the tool finds that the proposed project is projected to generate 6.37 VMT per capita. The results of the VTA VMT Evaluation Tool can be found in Appendix B. Since the proposed project's estimated VMT per capita of 6.37 is lower than the significance threshold of 10.39 VMT per capita, the project would have a less than significant impact on vehicle miles traveled.

## 4. Local Transportation Analysis

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This chapter describes the local transportation analysis including the method by which project traffic is estimated, intersection operations analysis for existing and existing plus project scenarios, any adverse effects on study intersections caused by the project, site access and on-site circulation review, effects on bicycle, pedestrian, and transit facilities, and parking. The LTA supplements the CEQA VMT analysis and identifies transportation and traffic operational issues that may arise due to a development project.

### Project Description

The project site consists of four lots and is located on the southwest corner of First Street and Whitney Street. The project proposes to replace the existing buildings on-site with a 50-unit, four story residential building. Vehicular access to the project site would be provided via a driveway to an underground parking garage located along the alley behind First Street.

### Pedestrian, Bicycle, and Transit Analysis

#### Pedestrian Facilities

Pedestrian facilities in the study area consist of sidewalks, crosswalks, and pedestrian signals at signalized intersections (see Chapter 2 for details). The project proposes to construct a new 5-foot-wide sidewalk and 7-foot wide planting strip along its frontage on Whitney Street and an 8 to 12-foot-wide sidewalk along its frontage on First Street. Trees would be planted along the sidewalk on the First Street frontage. The existing sidewalks and crosswalks provide adequate access to transit along San Antonio Road (approximately 700 feet to the east) and nearby points of interest, including restaurants and stores in nearby downtown Los Altos (approximately 700 feet to the north).

City staff have indicated that additional lighting should be considered along the project frontages. Since the primary entrance is along First Street, providing pedestrian scale lighting along First Street would increase pedestrian safety and comfort. However, there would be little benefit to adding pedestrian lighting for just one project. The city should study pedestrian improvements along the length of First Street and develop an improvement plan, to which the project could make a fair-share contribution.

The closest intersection at First Street & Whitney Street has an uncontrolled crosswalk across First Street. Improvements such as bulb-outs or pedestrian-activated flashing beacons would be beneficial to the comfort and safety of future residents at the proposed project and nearby developments. The city should consider improvements such as bulb-outs and pedestrian-activated flashing beacons. The

project should make a fair-share contribution to the cost of these improvements if they will be implemented.

### **Bicycle Facilities**

There are some bicycle facilities in the immediate vicinity of the project site (see Chapter 2 for details). The project would not remove any bicycle facilities, nor would it conflict with any adopted plans or policies for new bicycle facilities.

The project proposes to provide 56 long term bicycle parking spaces located in bicycle lockers in the underground garage area. The project also proposes 6 short term bicycle parking spaces on two bicycle racks located along the project frontage on First Street. Residents who wish to store their bicycles would have to carry their bikes to the basement levels or take the elevator. Since this may deter future residents from utilizing bicycles as a form of alternative transportation, it is recommended that the bicycle storage rooms on the basement levels be relocated to ground level so that residents could easily access bicycle parking.

**Recommendation:** Bicycle storage rooms should be relocated to ground level so that residents could easily access bicycle parking.

### **Transit Services**

The project site is served by one local bus route (see Chapter 2 for details). The existing bus service is expected to have sufficient capacity to accommodate new riders as a result of the project. The project would not remove any transit facilities, nor would it conflict with any adopted plans or policies associated with new transit facilities.

## **Project Trip Estimates**

The magnitude of traffic produced by a new development and the locations where that traffic would appear were estimated using a three-step process: (1) trip generation, (2) trip distribution, and (3) trip assignment. In determining project trip generation, the magnitude of traffic traveling to and from the proposed mixed-use development was estimated for the AM and PM peak hours. As part of the project trip distribution, the directions to and from which the project trips would travel were estimated. In the project trip assignment, the project trips were assigned to specific streets and intersections. These procedures are described below.

### **Trip Generation**

Through empirical research, data have been collected that indicate the amount of traffic that can be expected to be generated by many types of land uses. The standard trip generation rates can be applied to predict the future traffic increases that would result from a new development. The standard trip generation rates come from the publication titled Institute of Transportation Engineers (ITE) *Trip Generation, 10<sup>th</sup> Edition*.

Project trip generation was estimated by applying to the size and uses of the development by the appropriate trip generation rates obtained from the ITE *Trip Generation Manual, 10<sup>th</sup> Edition* (2017). The average trip generation rates for Multi-Family Housing (Mid-Rise) (ITE Land Use 221) were applied to the project. ITE defines Multi-Family Housing (Mid-Rise) as housing between three and ten stories. Since the project consists of a four-story apartment building, it is the most appropriate category.

The project would replace the existing buildings on-site. The existing buildings consist of a 1,250 s.f. hair salon, 2,050 s.f. of retail space, a 1,500 s.f. chiropractor practice, and a 2,450 s.f. office building. No trip credits were taken for the retail space, as it is currently vacant.

**Net Project Trips**

Table 3 shows the trip generation estimates. After accounting for trip credits, the project is estimated to generate 196 new daily trips, with 9 net new trips (-3 inbound and 12 outbound) during the AM peak hour and 12 net new trips (12 inbound and 0 outbound) during the PM peak hour.

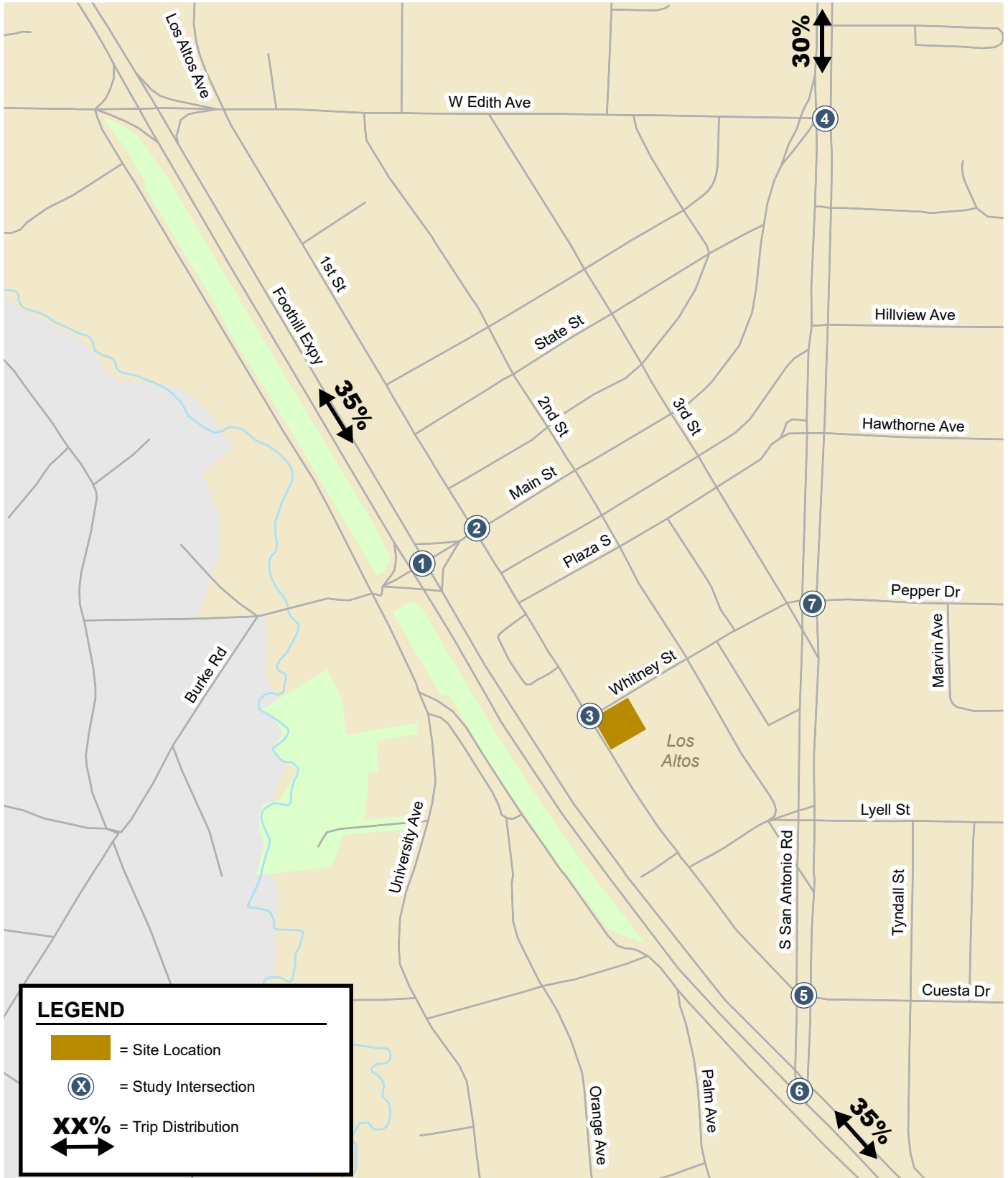
**Table 3  
Project Trip Generation Estimates**

Land Use	ITE Land Use Code	Size	Daily		AM Peak Hour						PM Peak Hour					
			Rate	Trip	Split		Trip			Split		Trip				
					In	Out	In	Out	Total	In	Out	Total				
<b>Proposed Land Uses</b>																
Multifamily Housing (Mid-Rise)	221	50 Dwelling Units	5.440	272	0.360	26%	74%	5	13	18	0.440	61%	39%	13	9	22
<b>Total Project Trips</b>			<b>272</b>					<b>5</b>	<b>13</b>	<b>18</b>				<b>13</b>	<b>9</b>	<b>22</b>
<b>Existing Land Uses</b>																
Hair Salon <sup>1</sup>	918	1,250 Square Feet			1.210			2	0	2	1.450	17%	83%	0	2	2
Medical-Dental Office Building	720	1,500 Square Feet	34.800	52	2.780	78%	22%	3	1	4	3.460	28%	72%	1	4	5
General Office Building	710	2,450 Square Feet	9.740	24	1.160	86%	14%	3	0	3	1.150	16%	84%	0	3	3
<b>Total Existing Trips</b>			<b>76</b>					<b>8</b>	<b>1</b>	<b>9</b>				<b>1</b>	<b>9</b>	<b>10</b>
<b>Net Project Trips</b>			<b>196</b>					<b>-3</b>	<b>12</b>	<b>9</b>				<b>12</b>	<b>0</b>	<b>12</b>

Source: ITE Trip Generation Manual, 10<sup>th</sup> Edition 2017  
 Notes:  
 1. No data is available for AM Peak Hour split. It is assumed that the generated trips would be 2 inbound trips.

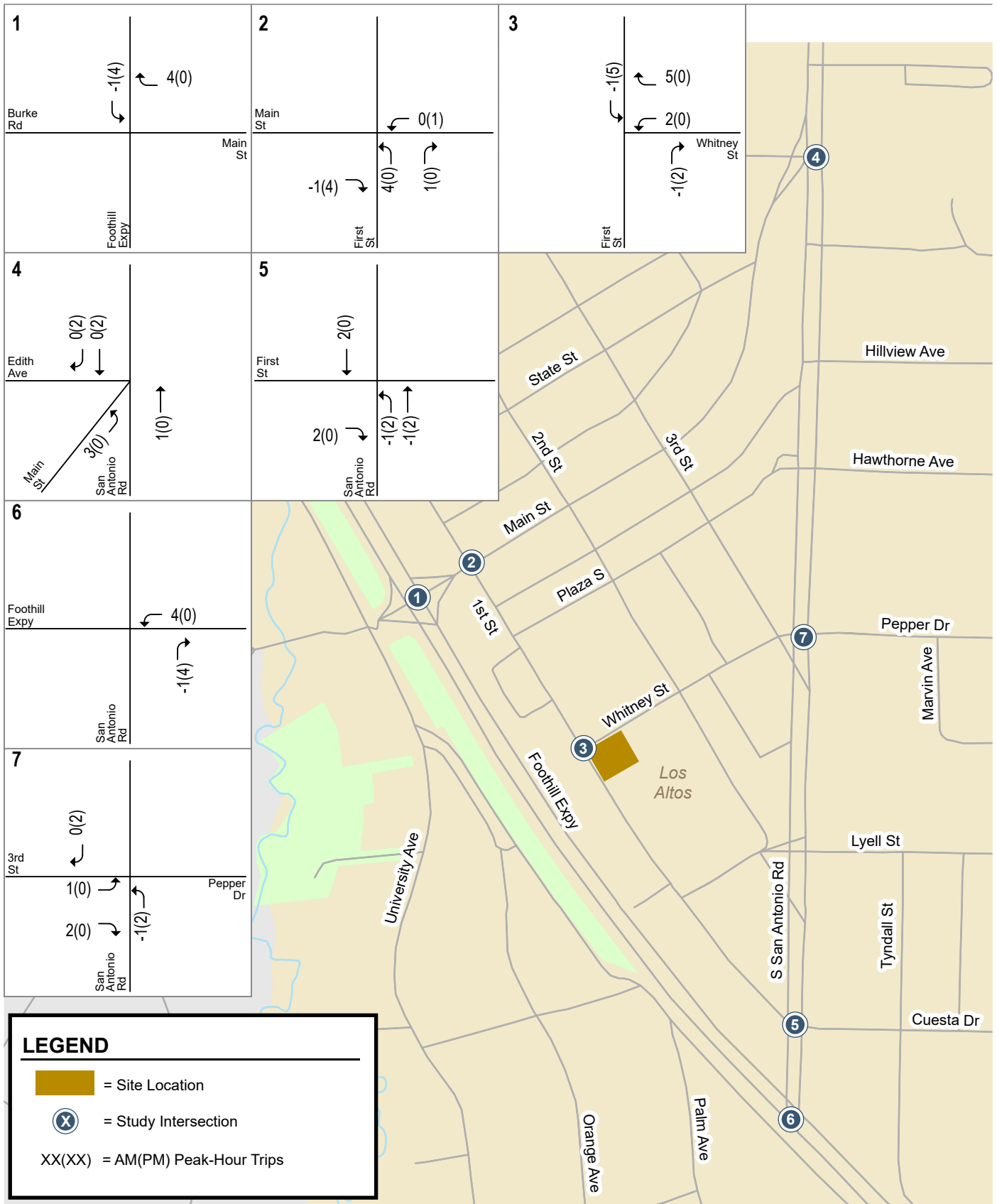
**Trip Distribution and Trip Assignment**

The trip distribution pattern for the project was estimated based on existing travel patterns on the surrounding roadway system and the locations of complementary land uses. The peak hour vehicle trips generated by the project were assigned to the roadway network in accordance with the trip distribution pattern. Since vehicular traffic would access the site via Whitney Street and the alley, it is assumed approximately 50% of traffic heading to and from north along San Antonio Road would use Whitney Street, which is not signalized, and 50% would use Main Street, which is signalized. Similarly, it is assumed approximately 50% of traffic heading to and from south along Foothill Expressway would use Whitney Street and 50% would use First Street. Figure 7 shows the trip distribution pattern for the project site. Figure 8 shows the trip assignment.



**Figure 7**  
**Trip Distribution**

355 First Street



**Figure 8**  
**Trip Assignment**



## Existing Plus Project Traffic Volumes

Project trips, as represented in the above project trip assignment, were added to existing traffic volumes to obtain existing plus project traffic volumes. The existing plus project traffic volumes are shown on Figure 9.

## Intersection Analysis

Table 4 shows that most study intersections would continue to operate at an acceptable level of service during both AM and PM peak hours. Since the project would add trips to existing low-delay movements, there would be a decrease in overall average delay at some intersections. The intersection levels of service calculation sheets are included in Appendix C.

The intersection of Foothill Expressway & San Antonio Road operates at an unacceptable level of service during the PM peak hour. The addition of project trips would not adversely affect traffic operations at the intersection because these trips would not increase the average delay at the intersection by more than 4 seconds.

The San Antonio Road & Whitney Street/Pepper Drive intersection operates at an unacceptable level of service during the PM peak hour. The eastbound movement at the intersection would operate at an unacceptable LOS E during the PM peak hour. The addition of project generated trips would not adversely affect traffic operations at the intersection.

Since the unsignalized intersection of San Antonio Road & Whitney Street/Pepper Drive operates at LOS E, a signal warrant check (*MUTCD 2010 edition, Part 4, Warrant 3*) was conducted for the intersection based on the peak-hour traffic warrant.

For the signal warrant check, San Antonio Road was considered the major street, while Whitney Street/Pepper Drive was considered the minor road. The analysis shows that the signal warrant is not met with or without the project. The signal warrant calculation sheets can be found in Appendix D.

**Table 4**  
**Intersection Level of Service Summary**

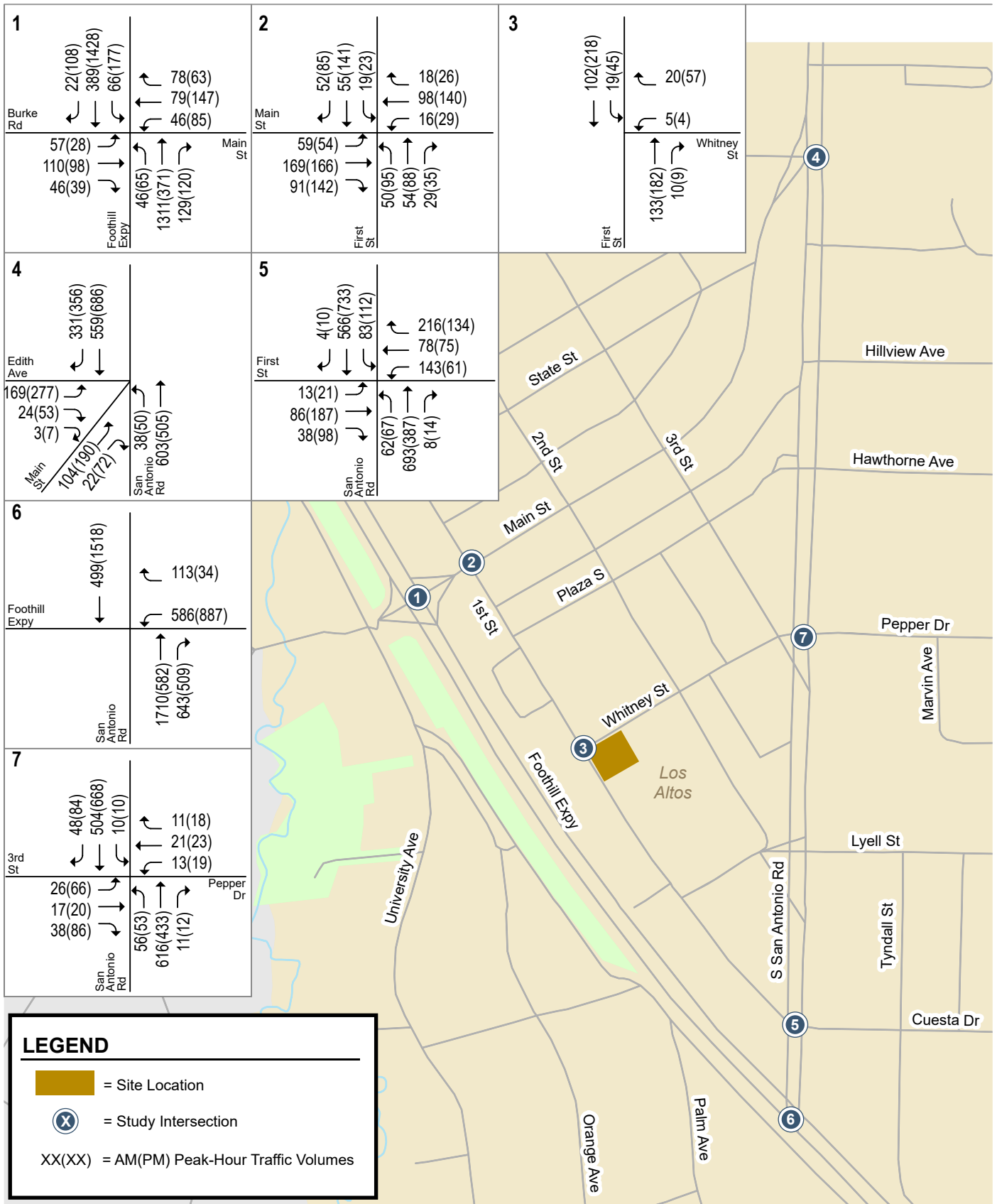
#	Intersection	Peak Hour	No Project		Existing with Project			
			Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS	Incr. in Critical Delay (sec)	Incr. in Critical V/C
1	Foothill Expressway & Main Street	AM	21.0	C+	21.0	C+	-0.1	-0.001
		PM	22.9	C+	22.9	C+	0.1	0.003
2	First St & Main Avenue	AM	19.2	B-	19.3	B-	0.0	0.000
		PM	20.0	B-	20.0	B-	0.0	0.001
3	First Street & Whitney Street <sup>1</sup>	AM	9.2	A	9.3	A	0.2	0.005
		PM	9.7	A	9.7	A	0.1	0.000
4	San Antonio Road & Main Street/Edith Avenue	AM	19.0	B-	19.1	B-	0.1	0.001
		PM	27.8	C	27.8	C	0.0	0.001
5	San Antonio Road and First Street/Cuesta Drive	AM	23.8	C	23.8	C	0.0	0.000
		PM	20.3	C+	20.4	C+	0.1	0.001
6	Foothill Expressway and San Antonio Road	AM	10.6	B+	10.6	B+	0.0	0.001
		PM	<b>90.2</b>	<b>F</b>	<b>90.1</b>	<b>F</b>	0.0	0.000
7	San Antonio Road and Whitney Street/Pepper Drive <sup>1</sup>	AM	29.6	D	29.7	D	0.0	0.005
		PM	<b>40.4</b>	<b>E</b>	<b>40.8</b>	<b>E</b>	0.1	0.005

**Bold** indicates a substandard level of service.

Note:  
<sup>1</sup> Denotes a one-way or two-way stop-controlled intersection. Worst leg delay is reported.



355 First Street



**Figure 9**  
Existing Plus Project Traffic Volumes

## Site Access and Circulation

The site access and on-site circulation evaluation is based on the March 31, 2021 site plan prepared by SDG Architects Inc. Site access was evaluated to determine the adequacy of the site's driveway with regard to the following: traffic volume, delays, vehicle queues, geometric design, and sight distance. On-site vehicular circulation was reviewed in accordance with generally accepted traffic engineering standards and transportation planning principles. The site plans for the underground parking garage are shown on Figures 10 and 11.

### Project Driveway Design

The site plan shows the driveway to the underground garage ramp measuring 24 feet in width, which is adequate width for a two-way driveway. Typical engineering standards require garage ramps to have no greater than a 20 percent grade, and slopes over 10% requires transition slopes so that vehicles do not "bottom out". The project site plan does indicate an approximate 15-17% slope. The site plan is unclear on whether a transition slope is provided. The project plans do not show any entry control device. Therefore, it is unlikely there will be any queuing for inbound traffic. Since the driveway ramp is accessed from an alley carrying low traffic volume, vehicle queuing for exiting vehicles is not expected.

### Sight Distance

Sight distance was checked for the proposed driveway. Sight distance requirements vary depending on the roadway speeds. Vehicles are expected to drive slowly in the alley. However, for the purposes of analysis it is assumed that the speed limit of the alley is 25 mph. Therefore, the Caltrans stopping sight distance for both driveways is 200 feet (based on a design speed of 30 mph). Drivers will be able to see at least 200 feet towards the south when exiting. Similarly, drivers will be able to see vehicles turning from Whitney Street into the alley from the north. The project site plan shows planters along the back of the project, adjacent to the traveled way in the alley. The planters should be maintained so that the vision of exiting drivers is not impeded.

**Recommendation:** The project site plan should be revised to show a transition slope at the top and bottom of the garage ramps.

**Recommendation:** The planters along the alley frontage should be maintained so that they do not impede the vision of exiting drivers.

### Project Driveway Operations

The project-generated gross trips that are estimated to occur at the project driveways are 5 inbound, 13 outbound during the AM peak hour and 13 inbound, 9 outbound during the PM peak hour. This equates to approximately one vehicle exiting every 4 ½ minutes. Since the alley would carry few vehicles, project traffic would easily be able to exit the project driveways. Similarly, only one vehicle would enter every 4 ½ minutes. Therefore, no inbound queuing is expected.

### Parking

The City of Los Altos Zoning Code (Chapter 14.74) requires multifamily dwellings to provide 1.5 parking spaces per studio or one bedroom unit and 2 parking spaces for units with two or more bedrooms. Additionally, 1 parking space per 4 units is required for guest parking. Therefore, the project would be required to provide 109 parking spaces. The site plan indicates that the project would provide 115 parking spaces in the underground garage, meeting the requirements of the zoning code.

## On-Site Circulation

On-site vehicular circulation was reviewed in accordance with generally accepted traffic engineering standards. The proposed site plan would provide vehicle traffic with good connectivity through the parking areas. The preliminary site plan shows 26-foot drive aisles throughout the project site. The ramps accessing the underground levels are shown to be approximately 24 feet in width. The site plan provides adequate pedestrian circulation throughout the parking area.

The site plan does not show a passenger loading area for the project. With the increasing popularity of ride-sharing and food delivery services, a loading area along the Second Avenue frontage would be beneficial. A loading area would allow for residents or visitors to be picked up or dropped off.

**Recommendation:** The project should coordinate with City Staff to provide a loading area along the First Street frontage.

## Truck Access and Circulation

The site plan shows a trash room on the first level of the underground garage. The plans indicate that the garage would be able to accommodate vehicles and trucks up to 8.5 feet in height. The project should coordinate with trash pickup services to confirm whether trash pickup vehicles will be able to access the garage. If trash pickup vehicles cannot access the garage, trash bins would need to be wheeled out to the street level on trash pickup days. The Los Altos Zoning Code does not specify whether residential uses in the CD/R3 district would be required to provide any off-street loading areas for trucks. Moving trucks could park on the street.

## Planned Off-Site Transportation Improvements

The City of Los Altos is currently working with developers to determine whether traffic control at the intersection of First Street & Lyell Street should be converted to a new all-way stop-controlled intersection. While it is possible that future residents of this project may benefit from the conversion, this project is located closer to Whitney Street, and it is not likely residents would utilize the narrow alley to reach Lyell Street.

The Los Altos Complete Streets Master Plan identifies future transportation improvements that aim to prioritize walking, biking, and other travel modes. The master plan includes an update to the Bicycle and Pedestrian Transportation Plan and identifies bicycle and pedestrian facility improvements in the project's vicinity that would benefit future residents. Additionally, these improvements would also contribute to the Safe Routes to School Plan, which encourages students and parents to walk and bike to school.

Bicycle improvements identified in the Bicycle and Pedestrian Transportation Plan update within the project vicinity include Class III bike routes located along Whitney Street, First Street, Second Street, and Third Street. The bike routes would provide connections to existing bicycle facilities along Edith Avenue, San Antonio Road, and Cuesta Drive. Pedestrian improvements identified in the Bicycle and Pedestrian Transportation Plan update within the project vicinity include intersection improvements at First Street/Main Street and San Antonio Road/Cuesta Drive.

The project site is located near routes identified in the City's Safe Routes to School Plan. The City has released draft Walk n Roll maps for each school that services the Los Altos community. The Walk n Roll maps designate pedestrian and bicycle-friendly routes that students and parents can use to walk and bike to school. The project site is located near San Antonio Road and Cuesta Drive, which are both identified in numerous Walk n Roll maps. Draft Walk n Roll maps that are within walking/biking distance of the project site are included in Appendix E.

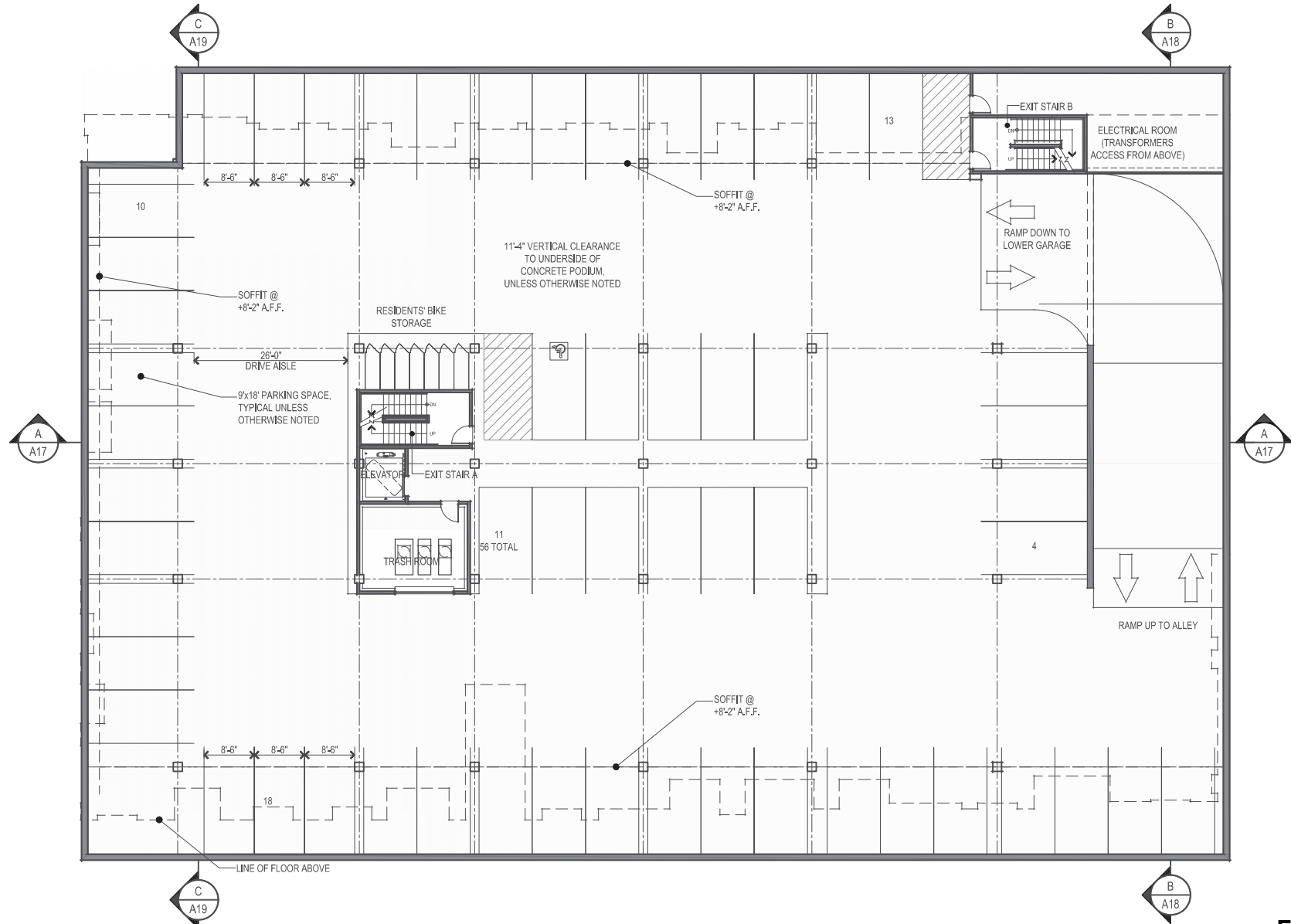


Figure 10  
Underground Upper Parking Garage

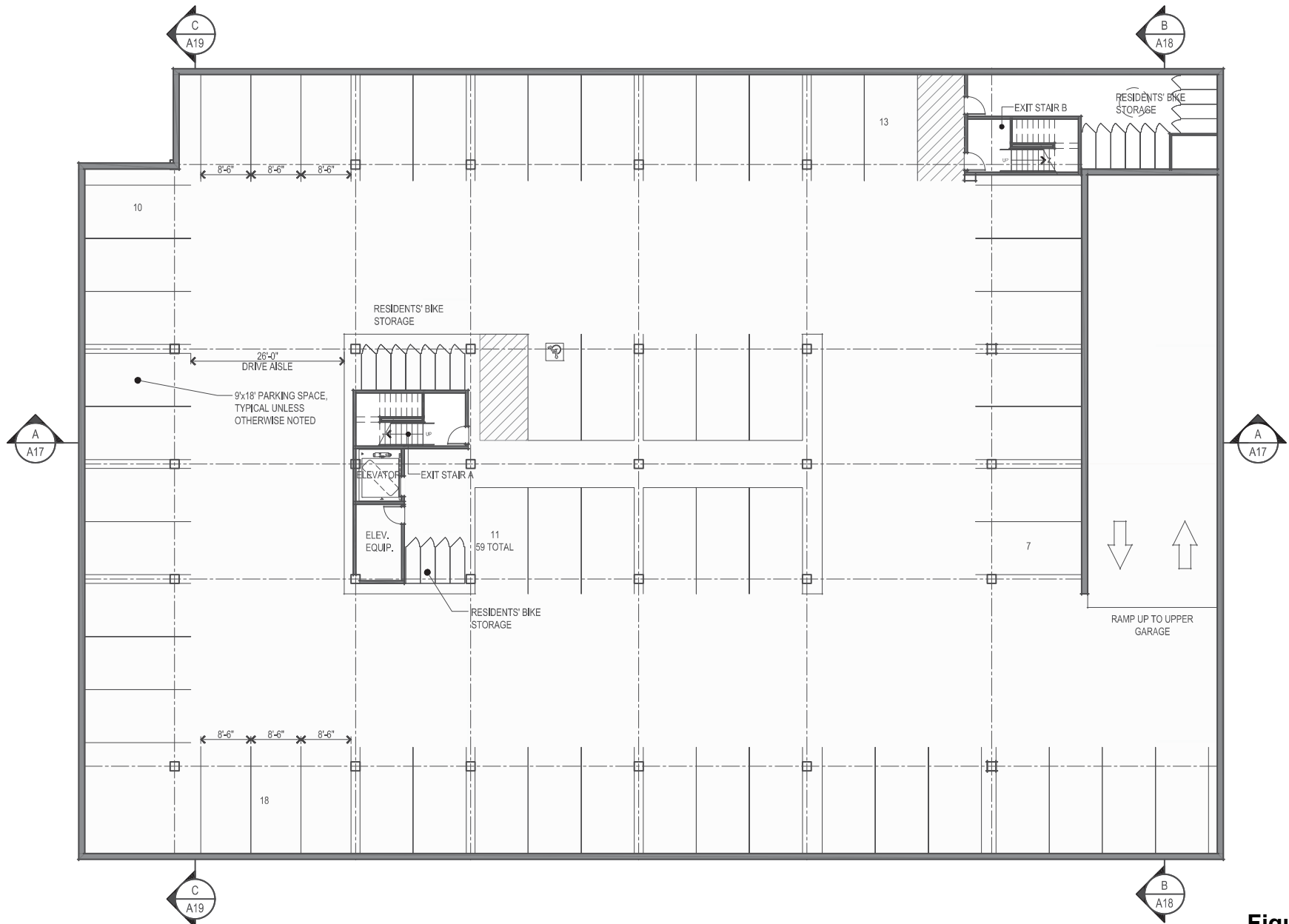


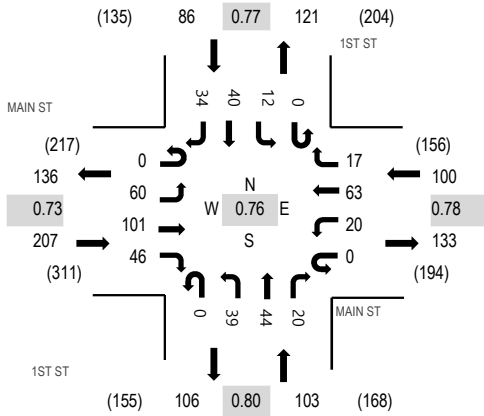
Figure 11  
Underground Lower Parking Garage

**355 First Street**  
**Technical Appendices**

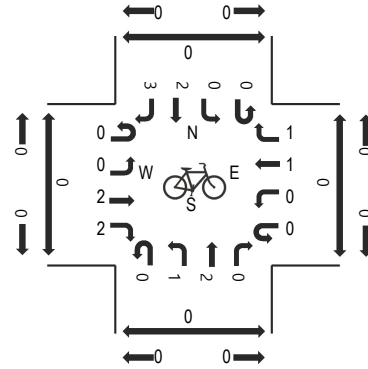
# **Appendix A**

## **Traffic Counts**

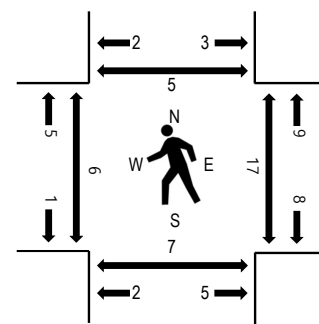
### Peak Hour - Motorized Vehicles



### Peak Hour - Bicycles



### Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

### Traffic Counts - Motorized Vehicles

Interval Start Time	MAIN ST Eastbound				MAIN ST Westbound				1ST ST Northbound				1ST ST Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	5	15	7	0	3	8	1	0	4	8	3	0	0	0	4	58	274	1	1	0	2
7:15 AM	0	5	10	1	0	0	9	5	0	3	7	1	0	2	5	6	54	295	3	2	2	2
7:30 AM	0	13	10	7	0	5	9	5	0	11	10	2	0	1	8	6	87	353	0	4	2	3
7:45 AM	0	13	14	4	0	2	9	0	0	3	11	2	0	1	7	9	75	408	0	7	2	2
8:00 AM	0	9	15	8	0	5	11	3	0	9	3	3	0	2	7	4	79	496	3	7	4	2
8:15 AM	0	10	21	13	0	1	18	2	0	8	9	7	0	1	13	9	112		0	1	0	0
8:30 AM	0	13	39	8	0	5	16	7	0	11	16	5	0	7	8	7	142		3	2	1	2
8:45 AM	0	28	26	17	0	9	18	5	0	11	16	5	0	2	12	14	163		0	7	2	1

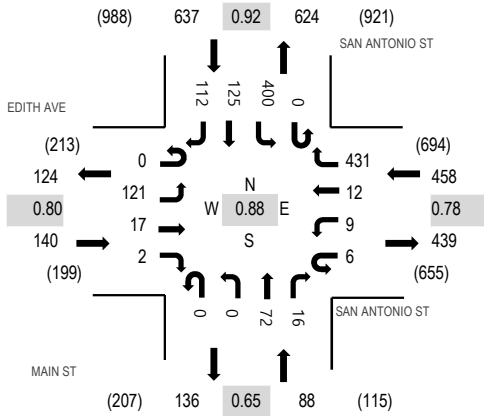
### Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	60	100	46	0	19	62	17	0	38	44	20	0	11	37	34	488
Mediums	0	0	1	0	0	1	1	0	0	1	0	0	0	1	3	0	8
Total	0	60	101	46	0	20	63	17	0	39	44	20	0	12	40	34	496

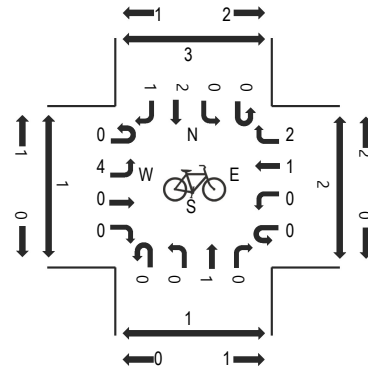




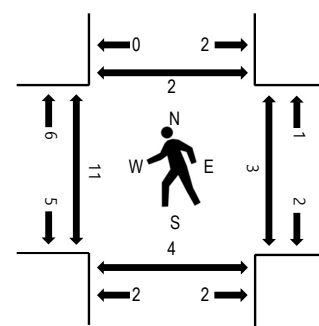
### Peak Hour - Motorized Vehicles



### Peak Hour - Bicycles



### Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

### Traffic Counts - Motorized Vehicles

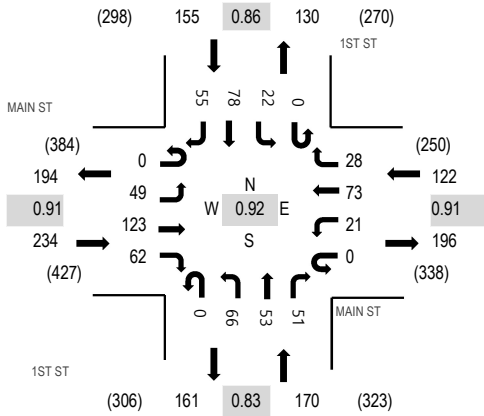
Interval Start Time	EDITH AVE Eastbound				SAN ANTONIO ST Westbound				MAIN ST Northbound				SAN ANTONIO ST Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	8	2	0	0	1	2	35	0	0	4	2	0	39	22	8	123	673	0	4	1	1
7:15 AM	0	15	0	0	0	0	3	50	0	0	6	2	0	41	11	16	144	824	1	1	0	0
7:30 AM	0	14	1	0	0	1	1	58	0	0	7	1	0	53	17	23	176	1,055	2	0	0	0
7:45 AM	0	16	3	0	0	0	6	79	0	0	5	0	0	72	19	30	230	1,201	1	2	3	2
8:00 AM	0	22	3	0	1	2	3	93	0	0	7	3	0	89	21	30	274	1,323	5	0	1	1
8:15 AM	0	36	8	0	1	2	2	142	0	0	11	2	0	108	37	26	375		2	1	1	1
8:30 AM	0	31	3	1	1	3	4	95	0	0	27	4	0	92	33	28	322		3	1	1	0
8:45 AM	0	32	3	1	3	2	3	101	0	0	27	7	0	111	34	28	352		1	1	1	0

### Peak Rolling Hour Flow Rates

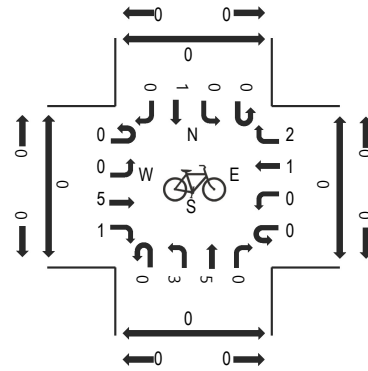
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Lights	0	121	17	2	6	9	11	417	0	0	72	14	0	388	123	109	1,289
Mediums	0	0	0	0	0	0	1	13	0	0	0	2	0	12	2	3	33
Total	0	121	17	2	6	9	12	431	0	0	72	16	0	400	125	112	1,323



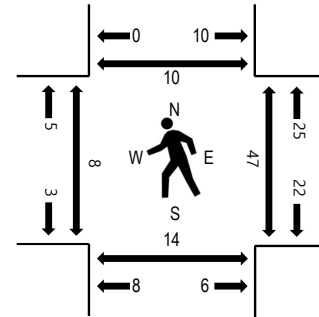
### Peak Hour - Motorized Vehicles



### Peak Hour - Bicycles



### Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

### Traffic Counts - Motorized Vehicles

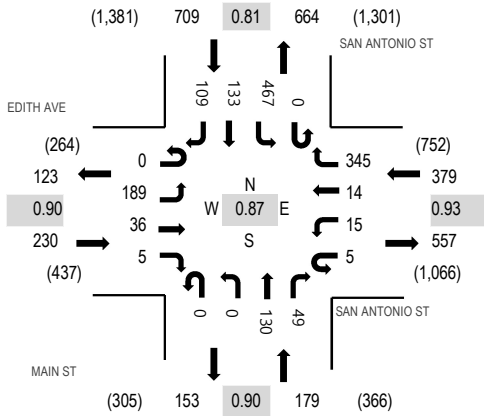
Interval Start Time	MAIN ST Eastbound				MAIN ST Westbound				1ST ST Northbound				1ST ST Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	13	27	14	0	3	23	5	0	16	13	14	0	6	22	17	173	681	5	7	4	1
4:15 PM	0	11	27	21	0	6	18	10	0	18	13	9	0	4	17	11	165	676	2	13	1	2
4:30 PM	0	11	36	9	0	10	10	8	0	14	13	9	0	8	19	10	157	661	0	14	7	3
4:45 PM	0	14	33	18	0	2	22	5	0	18	14	19	0	4	20	17	186	658	1	13	2	4
5:00 PM	0	16	27	13	0	3	24	8	0	14	20	6	0	7	15	15	168	617	4	14	4	2
5:15 PM	0	8	23	14	0	6	15	5	0	15	14	10	0	5	22	13	150		2	10	5	2
5:30 PM	0	16	20	9	0	5	22	6	0	14	15	10	0	3	18	16	154		5	7	4	3
5:45 PM	0	9	24	14	0	8	24	2	0	10	21	4	0	3	18	8	145		1	9	0	2

### Peak Rolling Hour Flow Rates

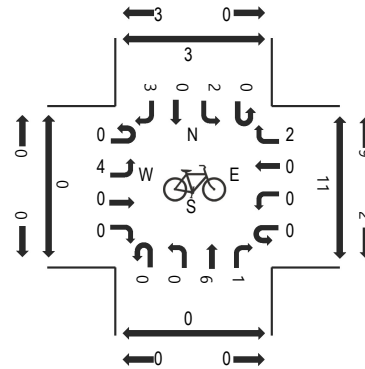
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	49	123	62	0	21	72	28	0	66	53	51	0	22	77	55	679
Mediums	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	2
Total	0	49	123	62	0	21	73	28	0	66	53	51	0	22	78	55	681



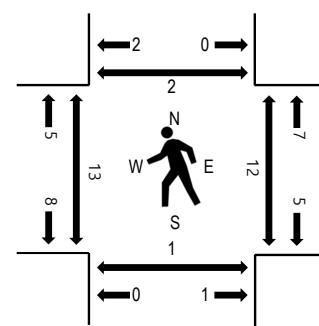
### Peak Hour - Motorized Vehicles



### Peak Hour - Bicycles



### Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

### Traffic Counts - Motorized Vehicles

Interval Start Time	EDITH AVE Eastbound				SAN ANTONIO ST Westbound				MAIN ST Northbound				SAN ANTONIO ST Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	51	6	1	1	2	3	93	0	0	26	16	0	133	30	30	392	1,497	4	4	0	0
4:15 PM	0	49	10	1	2	3	3	94	0	0	36	11	0	148	40	32	429	1,446	6	4	0	2
4:30 PM	0	50	11	3	2	8	7	85	0	0	38	8	0	96	31	16	355	1,396	3	1	1	0
4:45 PM	0	39	9	0	0	2	1	73	0	0	30	14	0	90	32	31	321	1,421	0	3	0	0
5:00 PM	0	40	6	0	0	4	5	87	0	0	38	8	0	101	26	26	341	1,439	1	8	4	0
5:15 PM	0	41	9	1	3	1	7	81	0	0	30	11	0	124	40	31	379		4	3	0	0
5:30 PM	0	55	4	3	2	6	4	89	0	0	35	13	0	105	29	35	380		8	5	2	0
5:45 PM	0	34	13	1	1	5	5	73	0	0	34	18	0	91	36	28	339		6	1	0	1

### Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
Lights	0	188	36	5	5	15	14	342	0	0	129	48	0	462	133	108	1,485
Mediums	0	1	0	0	0	0	0	3	0	0	1	1	0	3	0	1	10
Total	0	189	36	5	5	15	14	345	0	0	130	49	0	467	133	109	1,497

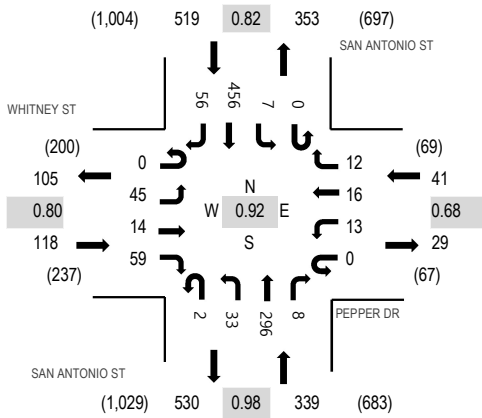
Location: 4 SAN ANTONIO ST & PEPPER DR PM

Date: Wednesday, April 21, 2021

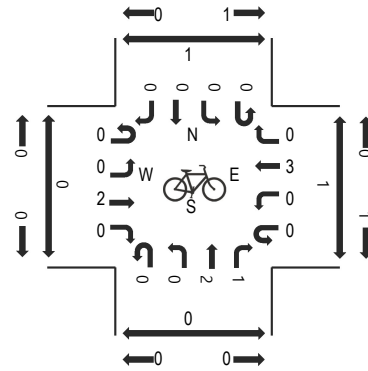
Peak Hour: 04:00 PM - 05:00 PM

Peak 15-Minutes: 04:15 PM - 04:30 PM

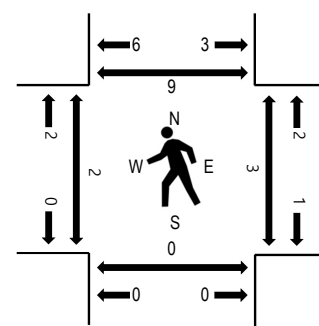
### Peak Hour - Motorized Vehicles



### Peak Hour - Bicycles



### Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

### Traffic Counts - Motorized Vehicles

Interval Start Time	WHITNEY ST Eastbound				PEPPER DR Westbound				SAN ANTONIO ST Northbound				SAN ANTONIO ST Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	18	4	13	0	5	6	4	1	5	63	2	0	3	134	16	274	1,017	0	1	0	2
4:15 PM	0	12	3	9	0	2	4	4	0	10	73	1	0	1	137	20	276	1,011	2	0	0	4
4:30 PM	0	10	3	24	0	5	3	1	0	8	80	3	0	2	94	11	244	978	0	1	0	2
4:45 PM	0	5	4	13	0	1	3	3	1	10	80	2	0	1	91	9	223	976	0	1	0	1
5:00 PM	0	9	4	23	0	3	2	4	1	13	79	0	1	6	111	12	268	976	0	1	0	2
5:15 PM	0	7	5	8	0	4	0	2	1	8	83	3	0	1	106	15	243		0	0	0	2
5:30 PM	0	9	3	22	0	1	3	3	0	10	68	1	1	2	111	8	242		2	0	0	2
5:45 PM	0	10	8	11	0	3	1	2	1	8	66	2	0	3	93	15	223		0	7	0	5

### Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
Lights	0	45	14	58	0	13	16	12	2	33	294	8	0	7	451	56	1,009
Mediums	0	0	0	1	0	0	0	0	0	0	2	0	0	0	3	0	6
Total	0	45	14	59	0	13	16	12	2	33	296	8	0	7	456	56	1,017

## **Appendix B**

### **VTA VMT Evaluation Tool Output**



## Project Details

Timestamp of Analysis: August 03, 2021, 12:10:34 PM  
 Project Name: 355 First Street  
 Project Description: 50-unit multi-family residential

## Project Location

Jurisdiction:  
 Los Altos

APN	TAZ
16741028	194
16741026	194
16741027	194
16741029	194

Inside Transit Priority Area (TPA)?  
**No (Fail)**

## Analysis Details

Santa Clara Countywide VMT Evaluation Tool Version: 1  
 Data Version: VTA Countywide Model December 2019  
 Analysis Methodology: TAZ  
 Baseline Year: 2015

## Project Land Use

Residential:  
 Single Family DU:  
 Multifamily DU: 50  


---

 Total DUs: 50

### Non-Residential:

Office KSF:  
 Local Serving Retail KSF:  
 Industrial KSF:

### Residential Affordability (percent of all units):

Extremely Low Income: 0 %  
 Very Low Income: 0 %  
 Low Income: 0 %

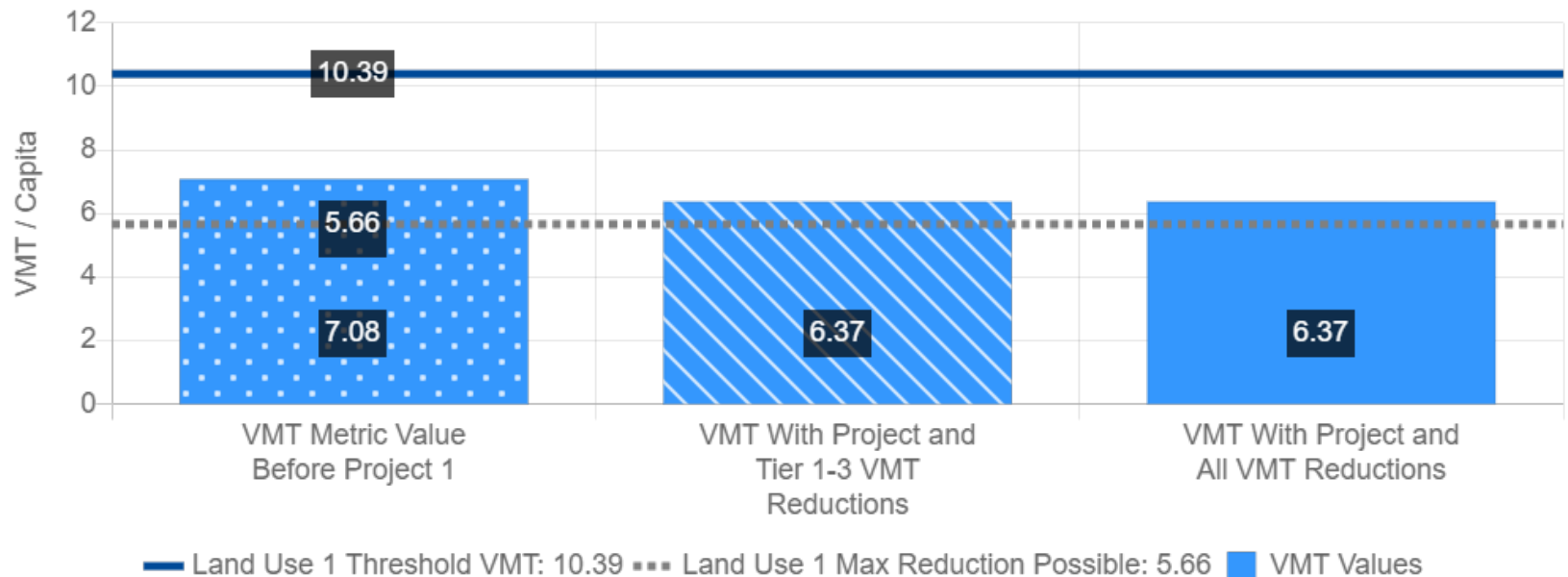
### Parking:

Motor Vehicle Parking: 115  
 Bicycle Parking: 62

## Residential Vehicle Miles Traveled (VMT) Screening Results

Land Use Type 1:	Residential
VMT Without Project:	Home-based VMT per Capita
VMT Baseline Description 1:	City Average
VMT Baseline Value 1:	12.22
VMT Threshold Description 1:	-15%
Land Use 1 has been Pre-Screened by the Local Jurisdiction:	N/A

	Without Project	With Project & Tier 1-3 VMT Reductions	With Project & All VMT Reductions
Project Generated Vehicle Miles Traveled (VMT) Rate	7.08	6.37	6.37
Low VMT Screening Analysis	Yes (Pass)	Yes (Pass)	Yes (Pass)



## Tier 1 Project Characteristics

### PC01 Increase Residential Density

Existing Residential Density:	1.74
With Project Residential Density:	23.48

### PC02 Increase Residential Diversity

Existing Residential Diversity Index:	0.73
With Project Residential Diversity Index:	0.82

### PC03 Affordable Housing

## Tier 2 Multimodal Infrastructure

## Tier 3 Parking

## Tier 4 TDM Programs

## **Appendix C**

### **Level of Service Calculations**

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-----

Scenario Report

Scenario: Existing AM  
Command: Default Command  
Volume: Existing AM  
Geometry: Existing AM  
Impact Fee: Default Impact Fee  
Trip Generation: No Trip Gen  
Trip Distribution: Dist  
Paths: Default Path  
Routes: Default Route  
Configuration: Default Configuration



Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #1 Foothill Expwy & Main St

\*\*\*\*\*

Cycle (sec): 110 Critical Vol./Cap.(X): 0.220
Loss Time (sec): 12 Average Delay (sec/veh): 21.0
Optimal Cycle: 122 Level Of Service: C+

\*\*\*\*\*

Table with columns for Street Name (Foothill Expwy, Main St), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, Y+R, and Lanes.

Table for Volume Module showing Count Date: 12 Mar 2019 << 8:00 AM - 9:00 AM AM. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Table for Saturation Flow Module showing Sat/Lane, Adjustment, Lanes, and Final Sat. values for each approach.

Table for Capacity Analysis Module showing Vol/Sat, Crit Moves, Green Time, Volume/Cap, Uniform Del, IncrementDel, InitQueueDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

-----  
\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #2 1st St & Main Ave

\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.199
Loss Time (sec): 9 Average Delay (sec/veh): 19.2
Optimal Cycle: 36 Level Of Service: B-

\*\*\*\*\*

Table with columns for Street Name (1st St, Main Ave), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, Y+R, Lanes.

Table for Volume Module: >> Count Date: 12 Mar 2019 << 7:45 AM - 8:45 AM. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Table for Saturation Flow Module: Rows include Sat/Lane, Adjustment, Lanes, Final Sat.

Table for Capacity Analysis Module: Rows include Vol/Sat, Crit Moves, Green Time, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

-----  
\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

Level of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

\*\*\*\*\*
Intersection #3 1st Street & Whitney Street
\*\*\*\*\*

Average Delay (sec/veh): 1.1 Worst Case Level Of Service: A[ 9.2]
\*\*\*\*\*

Table with 4 columns: Approach: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, and Lanes.

Volume Module: Table with 12 columns representing different volume categories and 12 rows of data including Base Vol, Growth Adj, Initial Bse, etc.

Critical Gap Module: Table with 12 columns for gap and follow-up times across different approaches.

Capacity Module: Table with 12 columns for capacity metrics and 4 rows of data including Conflict Vol, Potent Cap., etc.

Level of Service Module: Table with 12 columns for LOS metrics and 10 rows of data including 2Way95thQ, Control Del, etc.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*
Intersection #4 San Antonio Road & Main Street/Edith Avenue
\*\*\*\*\*

Cycle (sec): 120 Critical Vol./Cap.(X): 0.355
Loss Time (sec): 0 Average Delay (sec/veh): 19.0
Optimal Cycle: 35 Level Of Service: B-

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Protected), Rights (Include), Min. Green, Y+R, and Lanes.

Volume Module: Table with 13 columns representing different volume types and 13 rows of adjustment factors like Growth Adj, Initial Bse, Added Vol, etc.

Saturation Flow Module: Table with 13 columns for saturation flow and 4 rows for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns for capacity metrics and 13 rows for Vol/Sat, Crit Moves, Green Time, Volume/Cap, etc.

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Note: Queue reported is the number of cars per lane.

\*\*\*\*\*

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #5 San Antonio Road and First Street/Cuesta Drive

\*\*\*\*\*

Cycle (sec): 116 Critical Vol./Cap.(X): 0.339
Loss Time (sec): 9 Average Delay (sec/veh): 23.8
Optimal Cycle: 116 Level Of Service: C

\*\*\*\*\*

Street Name: San Antonio Road First Street/Cuesta Drive
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Permitted Permitted
Rights: Include Include Include Include
Min. Green: 21 70 70 12 61 61 25 25 25 25 25 25
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 1 0 1 0 1 1 0 0 1 0 0 0 1

Volume Module: >> Count Date: 12 Mar 2019 << 7:34 AM - 8:45 AM
Base Vol: 63 694 8 83 564 4 13 86 36 143 78 216
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 63 694 8 83 564 4 13 86 36 143 78 216
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 63 694 8 83 564 4 13 86 36 143 78 216
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 63 694 8 83 564 4 13 86 36 143 78 216
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 63 694 8 83 564 4 13 86 36 143 78 216
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 63 694 8 83 564 4 13 86 36 143 78 216

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.92 0.97 0.95 0.92 0.97 0.95 0.95 0.95 0.92 0.95 0.95 0.92
Lanes: 1.00 1.98 0.02 1.00 1.99 0.01 0.13 0.87 1.00 0.65 0.35 1.00
Final Sat.: 1750 3658 42 1750 3674 26 236 1564 1750 1165 635 1750

Capacity Analysis Module:
Vol/Sat: 0.04 0.19 0.19 0.05 0.15 0.15 0.06 0.06 0.02 0.12 0.12 0.12
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*
Green Time: 21.0 70.0 70.0 12.0 61.0 61.0 25.0 25.0 25.0 25.0 25.0 25.0
Volume/Cap: 0.20 0.31 0.31 0.46 0.29 0.29 0.26 0.26 0.10 0.57 0.57 0.57
Uniform Del: 40.4 11.3 11.3 48.9 15.4 15.4 37.8 37.8 36.4 40.7 40.7 40.7
IncrementDel: 0.3 0.1 0.1 1.8 0.1 0.1 0.3 0.3 0.1 2.0 2.0 2.1
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Delay/Veh: 40.7 11.3 11.3 50.8 15.5 15.5 38.1 38.1 36.6 42.7 42.7 42.8
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 40.7 11.3 11.3 50.8 15.5 15.5 38.1 38.1 36.6 42.7 42.7 42.8
LOS by Move: D B+ B+ D B B D+ D+ D+ D D D
HCM2kAvgQ: 2 6 6 3 6 6 3 3 1 8 8 8



-----  
\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #6 Foothill Expressway and San Antonio Road

\*\*\*\*\*

Cycle (sec): 120 Critical Vol./Cap.(X): 0.697
Loss Time (sec): 6 Average Delay (sec/veh): 10.6
Optimal Cycle: 120 Level Of Service: B+

\*\*\*\*\*

Street Name: Foothill Expressway San Antonio Road
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Split Phase Split Phase
Rights: Ovl Include Include Ovl
Min. Green: 0 77 77 0 77 0 0 0 0 37 0 37
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 0 2 0 1 0 0 2 0 0 0 0 0 0 0 1 0 1! 0 0

Volume Module: >> Count Date: 18 Apr 2017 << 8:00 to 9:00 AM
Base Vol: 0 1710 644 0 499 0 0 0 0 582 0 113
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 1710 644 0 499 0 0 0 0 582 0 113
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 1710 644 0 499 0 0 0 0 582 0 113
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 0 1710 644 0 499 0 0 0 0 582 0 113
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 1710 644 0 499 0 0 0 0 582 0 113
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 0 1710 644 0 499 0 0 0 0 582 0 113

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.92 1.00 0.92 0.92 1.00 0.92 0.92 1.00 0.92 0.83 1.00 0.92
Lanes: 0.00 2.00 1.00 0.00 2.00 0.00 0.00 0.00 0.00 1.74 0.00 0.26
Final Sat.: 0 3800 1750 0 3800 0 0 0 0 2739 0 453

Capacity Analysis Module:
Vol/Sat: 0.00 0.45 0.37 0.00 0.13 0.00 0.00 0.00 0.00 0.21 0.00 0.25
Crit Moves: \*\*\*\*
Green Time: 0.0 77.0 119.9 0.0 77.0 0.0 0.0 0.0 0.0 42.9 0.0 42.9
Volume/Cap: 0.00 0.70 0.37 0.00 0.20 0.00 0.00 0.00 0.00 0.59 0.00 0.70
Uniform Del: 0.0 14.0 0.0 0.0 8.9 0.0 0.0 0.0 0.0 31.4 0.0 33.0
IncrementDel: 0.0 0.9 0.1 0.0 0.0 0.0 0.0 0.0 0.0 0.8 0.0 2.2
InitQueueDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 0.00 0.46 0.00 0.00 0.46 0.00 0.00 0.00 0.00 1.00 0.00 1.00
Delay/Veh: 0.0 7.4 0.1 0.0 4.2 0.0 0.0 0.0 0.0 32.2 0.0 35.2
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 7.4 0.1 0.0 4.2 0.0 0.0 0.0 0.0 32.2 0.0 35.2
LOS by Move: A A A A A A A A A C- A D+
HCM2kAvgQ: 0 13 1 0 2 0 0 0 0 11 0 15

-----  
\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

Level of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

\*\*\*\*\*
Intersection #7 San Antonio Road and Whitney Street/Pepper Drive
\*\*\*\*\*

Average Delay (sec/veh): 2.8 Worst Case Level Of Service: D[ 29.6]
\*\*\*\*\*

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes. Rows include San Antonio Road and Whitney Street with various approach and movement details.

Volume Module table with columns: >> Count Date: 12 Mar 2019 << 7:45 AM - 8:45 AM. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume.

Critical Gap Module table with columns: Critical Gp, FollowUpTim. Rows show values for different approaches and movements.

Capacity Module table with columns: Cnflct Vol, Potent Cap., Move Cap., Volume/Cap. Rows show capacity values for different approaches and movements.

Level of Service Module table with columns: 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS. Rows show LOS values and related metrics.

Note: Queue reported is the number of cars per lane.
\*\*\*\*\*

-----

Scenario Report

Scenario: Existing PM  
Command: Default Command  
Volume: Existing PM  
Geometry: Existing PM  
Impact Fee: Default Impact Fee  
Trip Generation: No Trip Gen  
Trip Distribution: Dist  
Paths: Default Path  
Routes: Default Route  
Configuration: Default Configuration

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #1 Foothill Expwy & Main St

\*\*\*\*\*

Cycle (sec): 95 Critical Vol./Cap.(X): 0.308
Loss Time (sec): 12 Average Delay (sec/veh): 22.9
Optimal Cycle: 107 Level Of Service: C+

\*\*\*\*\*

Table with columns for Street Name (Foothill Expwy, Main St), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, Y+R, and Lanes.

Table for Volume Module showing Count Date (6 Oct 2016 4:30 PM - 5:30 PM) and various volume metrics like Base Vol, Growth Adj, Initial Bse, etc.

Table for Saturation Flow Module showing Sat/Lane, Adjustment, Lanes, and Final Sat.

Table for Capacity Analysis Module showing Vol/Sat, Crit Moves, Green Time, Volume/Cap, Uniform Del, etc.

-----  
\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #2 1st St & Main Ave

\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.312
Loss Time (sec): 9 Average Delay (sec/veh): 20.0
Optimal Cycle: 36 Level Of Service: B-

\*\*\*\*\*

Table with columns: Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include 1st St and Main Ave with various movement and control details.

Table with columns: Volume Module, Count, Date, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Table with columns: Saturation Flow Module, Sat/Lane, Adjustment, Lanes, Final Sat.

Table with columns: Capacity Analysis Module, Vol/Sat, Crit Moves, Green Time, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.



-----  
\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

Level of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

\*\*\*\*\*
Intersection #3 1st Street & Whitney Street
\*\*\*\*\*

Average Delay (sec/veh): 1.8 Worst Case Level Of Service: A[ 9.7]
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, and Lanes.

Volume Module: Table with 12 columns representing different traffic volumes and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Critical Gap Module: Table with 12 columns showing critical gap and follow-up time values for different movements.

Capacity Module: Table with 12 columns showing conflict volume, potential capacity, move capacity, and volume/capacity ratios.

Level of Service Module: Table with 12 columns showing 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., Shared Queue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

Note: Queue reported is the number of cars per lane.
\*\*\*\*\*

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
 Intersection #4 San Antonio Road & Main Street/Edith Avenue  
 \*\*\*\*\*

Cycle (sec): 120 Critical Vol./Cap.(X): 0.484  
 Loss Time (sec): 0 Average Delay (sec/veh): 27.8  
 Optimal Cycle: 44 Level Of Service: C  
 \*\*\*\*\*

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0	0	2	0	0	1	0	0	1

Volume Module:

Base Vol:	50	505	0	0	684	354	190	0	72	277	53	7
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	50	505	0	0	684	354	190	0	72	277	53	7
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	50	505	0	0	684	354	190	0	72	277	53	7
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	50	505	0	0	684	354	190	0	72	277	53	7
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	50	505	0	0	684	354	190	0	72	277	53	7
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	50	505	0	0	684	354	190	0	72	277	53	7

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.83	1.00	0.92	0.92	0.92	0.92
Lanes:	1.00	2.00	0.00	0.00	2.00	1.00	2.00	0.00	1.00	0.82	0.16	0.02
Final Sat.:	1750	3800	0	0	3800	1750	3150	0	1750	1438	275	36

Capacity Analysis Module:

Vol/Sat:	0.03	0.13	0.00	0.00	0.18	0.20	0.06	0.00	0.04	0.19	0.19	0.19
Crit Moves:	****					****	****					****
Green Time:	7.1	57.3	0.0	0.0	50.2	50.2	15.0	0.0	15.0	47.8	47.8	47.8
Volume/Cap:	0.48	0.28	0.00	0.00	0.43	0.48	0.48	0.00	0.33	0.48	0.48	0.48
Uniform Del:	54.7	18.9	0.0	0.0	24.8	25.5	48.9	0.0	47.9	26.9	26.9	26.9
IncrcmntDel:	3.5	0.1	0.0	0.0	0.2	0.5	0.9	0.0	0.9	0.5	0.5	0.5
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Delay/Veh:	58.2	19.0	0.0	0.0	25.0	26.0	49.9	0.0	48.8	27.5	27.5	27.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	58.2	19.0	0.0	0.0	25.0	26.0	49.9	0.0	48.8	27.5	27.5	27.5
LOS by Move:	E+	B-	A	A	C	C	D	A	D	C	C	C
HCM2kAvgQ:	2	5	0	0	9	10	4	0	3	10	10	10

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Note: Queue reported is the number of cars per lane.

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## Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

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Intersection #5 San Antonio Road and First Street/Cuesta Drive

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Cycle (sec): 95 Critical Vol./Cap.(X): 0.391

Loss Time (sec): 9 Average Delay (sec/veh): 20.3

Optimal Cycle: 95 Level Of Service: C+

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Street Name:	San Antonio Road						First Street/Cuesta Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	7	41	41	16	50	50	29	29	29	29	29	29
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1	0	1	0	1	0	0	1	0

Volume Module:	>> Count	Date:	12 Jun 2018	<<	5:00 PM - 6:00 PM							
Base Vol:	65	385	14	112	733	10	21	187	98	61	75	134
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	65	385	14	112	733	10	21	187	98	61	75	134
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	65	385	14	112	733	10	21	187	98	61	75	134
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	65	385	14	112	733	10	21	187	98	61	75	134
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	65	385	14	112	733	10	21	187	98	61	75	134
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	65	385	14	112	733	10	21	187	98	61	75	134

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.97	0.95	0.92	0.97	0.95	0.95	0.95	0.92	0.95	0.95	0.92
Lanes:	1.00	1.93	0.07	1.00	1.97	0.03	0.10	0.90	1.00	0.45	0.55	1.00
Final Sat.:	1750	3570	130	1750	3650	50	182	1618	1750	807	993	1750

Capacity Analysis Module:												
Vol/Sat:	0.04	0.11	0.11	0.06	0.20	0.20	0.12	0.12	0.06	0.08	0.08	0.08
Crit Moves:	****			****			****					
Green Time:	7.0	41.0	41.0	16.0	50.0	50.0	29.0	29.0	29.0	29.0	29.0	29.0
Volume/Cap:	0.50	0.25	0.25	0.38	0.38	0.38	0.38	0.38	0.18	0.25	0.25	0.25
Uniform Del:	42.3	17.2	17.2	35.1	13.3	13.3	25.9	25.9	24.3	24.8	24.8	24.8
IncrementDel:	3.2	0.1	0.1	0.8	0.1	0.1	0.4	0.4	0.2	0.2	0.2	0.2
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	45.5	17.3	17.3	35.9	13.5	13.5	26.4	26.4	24.5	25.0	25.0	25.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	45.5	17.3	17.3	35.9	13.5	13.5	26.4	26.4	24.5	25.0	25.0	25.1
LOS by Move:	D	B	B	D+	B	B	C	C	C	C	C	C
HCM2kAvgQ:	2	4	4	3	6	6	5	5	2	3	3	3

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Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

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Intersection #6 Foothill Expressway and San Antonio Road

\*\*\*\*\*

Cycle (sec): 95 Critical Vol./Cap.(X): 1.088
Loss Time (sec): 9 Average Delay (sec/veh): 90.2
Optimal Cycle: 300 Level Of Service: F

\*\*\*\*\*

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, and Lanes. Rows include Foothill Expressway and San Antonio Road with various movement and control details.

Volume Module: >> Count Date: 31 Jan 2017 << 4:30 to 5:30 PM. Table showing traffic volume data for various movements and adjustments.

Saturation Flow Module: Table showing saturation flow data for different lanes and movements.

Capacity Analysis Module: Table showing capacity analysis data including Green Time, Volume/Cap, Delay, and LOS by Move.

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\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*



Level of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

\*\*\*\*\*
Intersection #7 San Antonio Road and Whitney Street/Pepper Drive
\*\*\*\*\*

Average Delay (sec/veh): 6.2 Worst Case Level Of Service: E[ 40.4]
\*\*\*\*\*

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes. Rows include San Antonio Road and Whitney Street with various approach and movement details.

Table with columns for Volume Module, Count, Date, and various adjustment factors (Base Vol, Growth Adj, etc.) for different approaches.

Table for Critical Gap Module showing Critical Gap and FollowUpTim values for different approaches.

Table for Capacity Module showing Conflict Vol, Potent Cap., Move Cap., and Volume/Cap. ratios.

Table for Level of Service Module showing 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

Note: Queue reported is the number of cars per lane.
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Scenario Report  
Scenario: Existing +Project AM  
Command: Default Command  
Volume: Existing AM  
Geometry: Existing AM  
Impact Fee: Default Impact Fee  
Trip Generation: Trip Gen AM  
Trip Distribution: Dist  
Paths: Default Path  
Routes: Default Route  
Configuration: Default Configuration

## Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #1 Foothill Expwy &amp; Main St

\*\*\*\*\*

Cycle (sec): 110 Critical Vol./Cap.(X): 0.220  
 Loss Time (sec): 12 Average Delay (sec/veh): 21.0  
 Optimal Cycle: 122 Level Of Service: C+

\*\*\*\*\*

Street Name:	Foothill Expwy						Main St					
	North Bound			South Bound			East Bound			West Bound		
Approach:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	13	72	72	12	71	71	26	26	26	26	26	26
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0	1	1	1	0	0	1	0	1

Volume Module:	>> Count	Date:	12 Mar 2019	<<	8:00 AM - 9:00 AM							
Base Vol:	46	1311	129	67	389	22	57	110	46	46	79	74
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	46	1311	129	67	389	22	57	110	46	46	79	74
Added Vol:	0	0	0	-1	0	0	0	0	0	0	0	4
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	46	1311	129	66	389	22	57	110	46	46	79	78
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	46	1311	129	66	389	22	57	110	46	46	79	78
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	46	1311	129	66	389	22	57	110	46	46	79	78
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	46	1311	129	66	389	22	57	110	46	46	79	78

Saturation Flow Module:	Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.95	0.95	0.92	1.00	0.92	
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	0.71	0.29	1.00	1.00	1.00	
Final Sat.:	1750	3800	1750	1750	3800	1750	1750	1269	531	1750	1900	1750	

Capacity Analysis Module:	Vol/Sat:	0.03	0.34	0.07	0.04	0.10	0.01	0.03	0.09	0.09	0.03	0.04	0.04
Crit Moves:				****	****				****				
Green Time:	11.7	64.9	64.9	10.8	64.0	64.0	23.4	23.4	23.4	23.4	23.4	23.4	
Volume/Cap:	0.25	0.58	0.12	0.38	0.18	0.02	0.15	0.41	0.41	0.12	0.20	0.21	
Uniform Del:	50.0	15.6	11.1	51.5	11.9	10.8	39.0	41.4	41.4	38.8	39.4	39.5	
IncrementDel:	0.7	0.4	0.1	1.4	0.0	0.0	0.2	0.7	0.7	0.1	0.2	0.3	
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Delay/Veh:	50.7	16.0	11.1	53.0	11.9	10.8	39.2	42.1	42.1	38.9	39.6	39.8	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	50.7	16.0	11.1	53.0	11.9	10.8	39.2	42.1	42.1	38.9	39.6	39.8	
LOS by Move:	D	B	B+	D-	B+	B+	D	D	D	D+	D	D	
HCM2kAvgQ:	2	15	2	3	3	0	2	5	5	1	2	2	

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Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

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Intersection #2 1st St & Main Ave

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Cycle (sec): 100 Critical Vol./Cap.(X): 0.199  
 Loss Time (sec): 9 Average Delay (sec/veh): 19.3  
 Optimal Cycle: 36 Level Of Service: B-

\*\*\*\*\*

Street Name:		1st St						Main Ave					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Protected			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	10	10	10	10	10	10	7	10	10	10	10	10	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0	1	0	0	1	0	0	0	1	0	0	0	

Volume Module: >> Count Date: 12 Mar 2019 << 7:45 AM - 8:45 AM

Base Vol:	46	54	28	19	55	52	59	169	92	16	98	18
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	46	54	28	19	55	52	59	169	92	16	98	18
Added Vol:	4	0	1	0	0	0	0	0	-1	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	50	54	29	19	55	52	59	169	91	16	98	18
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	50	54	29	19	55	52	59	169	91	16	98	18
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	50	54	29	19	55	52	59	169	91	16	98	18
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	50	54	29	19	55	52	59	169	91	16	98	18

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.92	0.92	0.92	0.92	0.92	0.95	0.95	0.92	0.92	0.92
Lanes:	0.48	0.52	1.00	0.15	0.44	0.41	1.00	0.65	0.35	0.12	0.74	0.14
Final Sat.:	865	935	1750	264	764	722	1750	1170	630	212	1299	239

Capacity Analysis Module:

Vol/Sat:	0.06	0.06	0.02	0.07	0.07	0.07	0.03	0.14	0.14	0.08	0.08	0.08
Crit Moves:				****			****			****		
Green Time:	36.2	36.2	36.2	36.2	36.2	36.2	16.9	54.8	54.8	37.9	37.9	37.9
Volume/Cap:	0.16	0.16	0.05	0.20	0.20	0.20	0.20	0.26	0.26	0.20	0.20	0.20
Uniform Del:	21.6	21.6	20.7	22.0	22.0	22.0	35.7	11.9	11.9	20.9	20.9	20.9
IncrementDel:	0.1	0.1	0.0	0.2	0.2	0.2	0.3	0.1	0.1	0.1	0.1	0.1
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	21.7	21.7	20.7	22.1	22.1	22.1	36.0	12.1	12.1	21.0	21.0	21.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	21.7	21.7	20.7	22.1	22.1	22.1	36.0	12.1	12.1	21.0	21.0	21.0
LOS by Move:	C+	C+	C+	C+	C+	C+	D+	B	B	C+	C+	C+
HCM2kAvgQ:	2	2	1	3	3	3	2	4	4	3	3	3

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Note: Queue reported is the number of cars per lane.

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Level of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

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 Intersection #3 1st Street & Whitney Street  
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Average Delay (sec/veh): 1.3 Worst Case Level Of Service: A[ 9.3]  
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Approach:	North Bound			South Bound			East Bound			West Bound										
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign										
Rights:	Include			Include			Include			Include										
Lanes:	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0

Volume Module:

Base Vol:	0	133	11	20	102	0	0	0	0	3	0	15
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	133	11	20	102	0	0	0	0	3	0	15
Added Vol:	0	0	-1	-1	0	0	0	0	0	2	0	5
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	133	10	19	102	0	0	0	0	5	0	20
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	133	10	19	102	0	0	0	0	5	0	20
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	133	10	19	102	0	0	0	0	5	0	20

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxxx	143	xxxx	xxxxx	xxxx	xxxx	xxxxx	278	278	138
Potent Cap.:	xxxx	xxxx	xxxxx	1452	xxxx	xxxxx	xxxx	xxxx	xxxxx	716	633	916
Move Cap.:	xxxx	xxxx	xxxxx	1452	xxxx	xxxxx	xxxx	xxxx	xxxxx	709	625	916
Volume/Cap:	xxxx	xxxx	xxxx	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	0.01	0.00	0.02

Level of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	865	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	9.3	xxxxx			
Shared LOS:	*	*	*	A	*	*	*	*	*	*	A	*			
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			9.3					
ApproachLOS:	*			*			*			A					

\*\*\*\*\*  
 Note: Queue reported is the number of cars per lane.  
 \*\*\*\*\*

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

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 Intersection #4 San Antonio Road & Main Street/Edith Avenue  
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Cycle (sec): 120 Critical Vol./Cap.(X): 0.356  
 Loss Time (sec): 0 Average Delay (sec/veh): 19.1  
 Optimal Cycle: 35 Level Of Service: B-  
 \*\*\*\*\*

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0	0	2	0	0	1	0	0	1

Volume Module:

Base Vol:	38	602	0	0	559	331	101	0	22	169	24	3
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	38	602	0	0	559	331	101	0	22	169	24	3
Added Vol:	0	1	0	0	0	0	3	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	38	603	0	0	559	331	104	0	22	169	24	3
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	38	603	0	0	559	331	104	0	22	169	24	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	38	603	0	0	559	331	104	0	22	169	24	3
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	38	603	0	0	559	331	104	0	22	169	24	3

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.83	1.00	0.92	0.92	0.92	0.92
Lanes:	1.00	2.00	0.00	0.00	2.00	1.00	2.00	0.00	1.00	0.86	0.12	0.02
Final Sat.:	1750	3800	0	0	3800	1750	3150	0	1750	1509	214	27

Capacity Analysis Module:

Vol/Sat:	0.02	0.16	0.00	0.00	0.15	0.19	0.03	0.00	0.01	0.11	0.11	0.11
Crit Moves:	****					****	****				****	
Green Time:	7.3	71.1	0.0	0.0	63.8	63.8	11.1	0.0	11.1	44.0	37.8	37.8
Volume/Cap:	0.36	0.27	0.00	0.00	0.28	0.36	0.36	0.00	0.14	0.31	0.36	0.36
Uniform Del:	54.1	11.8	0.0	0.0	15.4	16.2	51.1	0.0	50.0	27.1	31.7	31.7
IncrcmntDel:	2.0	0.1	0.0	0.0	0.1	0.2	0.7	0.0	0.4	0.3	0.4	0.4
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Delay/Veh:	56.1	11.9	0.0	0.0	15.5	16.5	51.8	0.0	50.4	27.4	32.1	32.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	56.1	11.9	0.0	0.0	15.5	16.5	51.8	0.0	50.4	27.4	32.1	32.1
LOS by Move:	E+	B+	A	A	B	B	D-	A	D	C	C-	C-
HCM2kAvgQ:	1	5	0	0	5	7	2	0	1	5	6	6



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Note: Queue reported is the number of cars per lane.

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## Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

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Intersection #5 San Antonio Road and First Street/Cuesta Drive

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Cycle (sec): 116 Critical Vol./Cap.(X): 0.339

Loss Time (sec): 9 Average Delay (sec/veh): 23.8

Optimal Cycle: 116 Level Of Service: C

\*\*\*\*\*

Street Name:	San Antonio Road						First Street/Cuesta Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	21	70	70	12	61	61	25	25	25	25	25	25
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1	0	1	0	1	0	0	1	0

Volume Module:	>> Count	Date:	12 Mar 2019	<< 7:34 AM	- 8:45 AM							
Base Vol:	63	694	8	83	564	4	13	86	36	143	78	216
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	63	694	8	83	564	4	13	86	36	143	78	216
Added Vol:	-1	-1	0	0	2	0	0	0	2	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	62	693	8	83	566	4	13	86	38	143	78	216
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	62	693	8	83	566	4	13	86	38	143	78	216
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	62	693	8	83	566	4	13	86	38	143	78	216
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	62	693	8	83	566	4	13	86	38	143	78	216

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.97	0.95	0.92	0.97	0.95	0.95	0.95	0.92	0.95	0.95	0.92
Lanes:	1.00	1.98	0.02	1.00	1.99	0.01	0.13	0.87	1.00	0.65	0.35	1.00
Final Sat.:	1750	3658	42	1750	3674	26	236	1564	1750	1165	635	1750

Capacity Analysis Module:												
Vol/Sat:	0.04	0.19	0.19	0.05	0.15	0.15	0.06	0.06	0.02	0.12	0.12	0.12
Crit Moves:	****			****						****		
Green Time:	21.0	70.0	70.0	12.0	61.0	61.0	25.0	25.0	25.0	25.0	25.0	25.0
Volume/Cap:	0.20	0.31	0.31	0.46	0.29	0.29	0.26	0.26	0.10	0.57	0.57	0.57
Uniform Del:	40.3	11.3	11.3	48.9	15.4	15.4	37.8	37.8	36.5	40.7	40.7	40.7
IncrementDel:	0.3	0.1	0.1	1.8	0.1	0.1	0.3	0.3	0.1	2.0	2.0	2.1
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	40.6	11.3	11.3	50.8	15.5	15.5	38.1	38.1	36.6	42.7	42.7	42.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	40.6	11.3	11.3	50.8	15.5	15.5	38.1	38.1	36.6	42.7	42.7	42.8
LOS by Move:	D	B+	B+	D	B	B	D+	D+	D+	D	D	D
HCM2kAvgQ:	2	6	6	3	6	6	3	3	1	8	8	8

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Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

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Intersection #6 Foothill Expressway and San Antonio Road

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Cycle (sec): 120 Critical Vol./Cap.(X): 0.699  
 Loss Time (sec): 6 Average Delay (sec/veh): 10.6  
 Optimal Cycle: 120 Level Of Service: B+

\*\*\*\*\*

Street Name: Foothill Expressway				San Antonio Road				
Approach: North Bound		South Bound		East Bound		West Bound		
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	
Control:	Protected		Protected		Split Phase		Split Phase	
Rights:	Ovl		Include		Include		Ovl	
Min. Green:	0 77 77	0 77 0	0 0 0	0 0 0	37 0 37			
Y+R:	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0			
Lanes:	0 0 2 0 1	0 0 2 0 0	0 0 0 0 0	0 0 0 0 0	1 0 1! 0 0			

Volume Module: >> Count Date: 18 Apr 2017 << 8:00 to 9:00 AM

Base Vol:	0 1710 644	0 499 0	0 0 0	0 582 0 113
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	0 1710 644	0 499 0	0 0 0	582 0 113
Added Vol:	0 0 -1	0 0 0	0 0 0	4 0 0
PasserByVol:	0 0 0	0 0 0	0 0 0	0 0 0
Initial Fut:	0 1710 643	0 499 0	0 0 0	586 0 113
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Volume:	0 1710 643	0 499 0	0 0 0	586 0 113
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	0 1710 643	0 499 0	0 0 0	586 0 113
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
FinalVolume:	0 1710 643	0 499 0	0 0 0	586 0 113

Saturation Flow Module:

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.92 1.00 0.92	0.92 1.00 0.92	0.92 1.00 0.92	0.83 1.00 0.92
Lanes:	0.00 2.00 1.00	0.00 2.00 0.00	0.00 0.00 0.00	1.74 0.00 0.26
Final Sat.:	0 3800 1750	0 3800 0	0 0 0	2741 0 450

Capacity Analysis Module:

Vol/Sat:	0.00 0.45 0.37	0.00 0.13 0.00	0.00 0.00 0.00	0.21 0.00 0.25
Crit Moves:	****	****		****
Green Time:	0.0 77.0 120.1	0.0 77.0 0.0	0.0 0.0 0.0	43.1 0.0 43.1
Volume/Cap:	0.00 0.70 0.37	0.00 0.20 0.00	0.00 0.00 0.00	0.60 0.00 0.70
Uniform Del:	0.0 14.0 0.0	0.0 8.9 0.0	0.0 0.0 0.0	31.4 0.0 32.9
IncrementDel:	0.0 0.9 0.1	0.0 0.0 0.0	0.0 0.0 0.0	0.8 0.0 2.2
InitQueueDel:	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0
Delay Adj:	0.00 0.46 0.00	0.00 0.46 0.00	0.00 0.00 0.00	1.00 0.00 1.00
Delay/Veh:	0.0 7.4 0.1	0.0 4.2 0.0	0.0 0.0 0.0	32.2 0.0 35.1
User DelAdj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	0.0 7.4 0.1	0.0 4.2 0.0	0.0 0.0 0.0	32.2 0.0 35.1
LOS by Move:	A A A	A A A	A A A	C- A D+
HCM2kAvgQ:	0 13 1	0 2 0	0 0 0	11 0 15

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Note: Queue reported is the number of cars per lane.

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Level of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

\*\*\*\*\*
Intersection #7 San Antonio Road and Whitney Street/Pepper Drive
\*\*\*\*\*

Average Delay (sec/veh): 2.8 Worst Case Level Of Service: D [ 29.5]
\*\*\*\*\*

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes. Rows include San Antonio Road and Whitney Street with various approach and movement details.

Table with columns for Volume Module, Count, Date, and various volume metrics (Base Vol, Growth Adj, Initial Bse, etc.) for different approaches.

Table for Critical Gap Module with columns for Critical Gp, FollowUpTim, and various gap metrics.

Table for Capacity Module with columns for Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap.

Table for Level of Service Module with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

Note: Queue reported is the number of cars per lane.
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Scenario Report

Scenario: Existing +Project PM

Command: Default Command

Volume: Existing PM

Geometry: Existing PM

Impact Fee: Default Impact Fee

Trip Generation: Trip Gen PM

Trip Distribution: Dist

Paths: Default Path

Routes: Default Route

Configuration: Default Configuration

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #1 Foothill Expwy & Main St

\*\*\*\*\*

Cycle (sec): 95 Critical Vol./Cap.(X): 0.311
Loss Time (sec): 12 Average Delay (sec/veh): 22.9
Optimal Cycle: 107 Level Of Service: C+

\*\*\*\*\*

Table with columns for Street Name (Foothill Expwy, Main St), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, Y+R, and Lanes.

Table for Volume Module showing Count Date (6 Oct 2016 4:30 PM - 5:30 PM) and various volume metrics like Base Vol, Growth Adj, Initial Bse, etc.

Table for Saturation Flow Module showing Sat/Lane, Adjustment, Lanes, and Final Sat.

Table for Capacity Analysis Module showing Vol/Sat, Crit Moves, Green Time, Volume/Cap, Uniform Del, etc.



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Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #2 1st St & Main Ave

\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.313
Loss Time (sec): 9 Average Delay (sec/veh): 20.0
Optimal Cycle: 36 Level Of Service: B-

\*\*\*\*\*

Table with columns for Street Name (1st St, Main Ave), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, Y+R, and Lanes.

Table for Volume Module showing Count Date (12 Mar 2019) and various volume metrics like Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Table for Saturation Flow Module showing Sat/Lane, Adjustment, Lanes, and Final Sat. values.

Table for Capacity Analysis Module showing Vol/Sat, Crit Moves, Green Time, Volume/Cap, Uniform Del, IncrementDel, InitQueueDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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Note: Queue reported is the number of cars per lane.

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Level of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

\*\*\*\*\*
Intersection #3 1st Street & Whitney Street
\*\*\*\*\*

Average Delay (sec/veh): 1.8 Worst Case Level Of Service: A[ 9.7]

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, and Lanes.

Volume Module: Table with 12 columns representing different volume categories and 12 rows of data including Base Vol, Growth Adj, Initial Bse, etc.

Critical Gap Module: Table with 12 columns for gap and follow-up times across different movements.

Capacity Module: Table with 12 columns for capacity metrics and 4 rows of data including Conflict Vol, Potent Cap., etc.

Level of Service Module: Table with 12 columns for LOS metrics and 10 rows of data including 2Way95thQ, Control Del, etc.

Note: Queue reported is the number of cars per lane.
\*\*\*\*\*

## Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #4 San Antonio Road &amp; Main Street/Edith Avenue

\*\*\*\*\*

Cycle (sec): 120 Critical Vol./Cap.(X): 0.485  
 Loss Time (sec): 0 Average Delay (sec/veh): 27.8  
 Optimal Cycle: 44 Level Of Service: C

\*\*\*\*\*

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0	0	2	0	0	1	2	0	0

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	50	505	0	0	684	354	190	0	72	277	53	7
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	50	505	0	0	684	354	190	0	72	277	53	7
Added Vol:	0	0	0	0	2	2	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	50	505	0	0	686	356	190	0	72	277	53	7
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	50	505	0	0	686	356	190	0	72	277	53	7
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	50	505	0	0	686	356	190	0	72	277	53	7
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	50	505	0	0	686	356	190	0	72	277	53	7

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.83	1.00	0.92	0.92	0.92	0.92
Lanes:	1.00	2.00	0.00	0.00	2.00	1.00	2.00	0.00	1.00	0.82	0.16	0.02
Final Sat.:	1750	3800	0	0	3800	1750	3150	0	1750	1438	275	36

Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.03	0.13	0.00	0.00	0.18	0.20	0.06	0.00	0.04	0.19	0.19	0.19
Crit Moves:	****					****	****					****
Green Time:	7.1	57.4	0.0	0.0	50.3	50.3	14.9	0.0	14.9	47.7	47.7	47.7
Volume/Cap:	0.48	0.28	0.00	0.00	0.43	0.48	0.48	0.00	0.33	0.48	0.48	0.48
Uniform Del:	54.7	18.8	0.0	0.0	24.7	25.4	49.0	0.0	48.0	27.0	27.0	27.0
IncramntDel:	3.6	0.1	0.0	0.0	0.2	0.5	0.9	0.0	0.9	0.5	0.5	0.5
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Delay/Veh:	58.3	18.9	0.0	0.0	24.9	25.9	49.9	0.0	48.9	27.5	27.5	27.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	58.3	18.9	0.0	0.0	24.9	25.9	49.9	0.0	48.9	27.5	27.5	27.5
LOS by Move:	E+	B-	A	A	C	C	D	A	D	C	C	C
HCM2kAvgQ:	2	5	0	0	9	10	4	0	3	10	10	10

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Note: Queue reported is the number of cars per lane.

\*\*\*\*\*

## Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #5 San Antonio Road and First Street/Cuesta Drive

\*\*\*\*\*

Cycle (sec): 95 Critical Vol./Cap.(X): 0.392

Loss Time (sec): 9 Average Delay (sec/veh): 20.4

Optimal Cycle: 95 Level Of Service: C+

\*\*\*\*\*

Street Name: San Antonio Road First Street/Cuesta Drive

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted

Rights: Include Include Include Include

Min. Green: 7 41 41 16 50 50 29 29 29 29 29 29

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 1 1 0 1 0 1 1 0 0 1 0 0 0 1

Volume Module: &gt;&gt; Count Date: 12 Jun 2018 &lt;&lt; 5:00 PM - 6:00 PM

Base Vol: 65 385 14 112 733 10 21 187 98 61 75 134

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 65 385 14 112 733 10 21 187 98 61 75 134

Added Vol: 2 2 0 0 0 0 0 0 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 67 387 14 112 733 10 21 187 98 61 75 134

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 67 387 14 112 733 10 21 187 98 61 75 134

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 67 387 14 112 733 10 21 187 98 61 75 134

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 67 387 14 112 733 10 21 187 98 61 75 134

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900

Adjustment: 0.92 0.97 0.95 0.92 0.97 0.95 0.95 0.95 0.92 0.95 0.95 0.92

Lanes: 1.00 1.93 0.07 1.00 1.97 0.03 0.10 0.90 1.00 0.45 0.55 1.00

Final Sat.: 1750 3571 129 1750 3650 50 182 1618 1750 807 993 1750

Capacity Analysis Module:

Vol/Sat: 0.04 0.11 0.11 0.06 0.20 0.20 0.12 0.12 0.06 0.08 0.08 0.08

Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*

Green Time: 7.0 41.0 41.0 16.0 50.0 50.0 29.0 29.0 29.0 29.0 29.0 29.0

Volume/Cap: 0.52 0.25 0.25 0.38 0.38 0.38 0.38 0.38 0.18 0.25 0.25 0.25

Uniform Del: 42.4 17.2 17.2 35.1 13.3 13.3 25.9 25.9 24.3 24.8 24.8 24.8

IncrementDel: 3.7 0.1 0.1 0.8 0.1 0.1 0.4 0.4 0.2 0.2 0.2 0.2

InitQueueDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Delay/Veh: 46.1 17.3 17.3 35.9 13.5 13.5 26.4 26.4 24.5 25.0 25.0 25.1

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 46.1 17.3 17.3 35.9 13.5 13.5 26.4 26.4 24.5 25.0 25.0 25.1

LOS by Move: D B B D+ B B C C C C C C

HCM2kAvgQ: 2 4 4 3 6 6 5 5 2 3 3 3

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Note: Queue reported is the number of cars per lane.

\*\*\*\*\*



Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #6 Foothill Expressway and San Antonio Road

\*\*\*\*\*

Cycle (sec): 95 Critical Vol./Cap.(X): 1.088
Loss Time (sec): 9 Average Delay (sec/veh): 90.1
Optimal Cycle: 300 Level Of Service: F

\*\*\*\*\*

Street Name: Foothill Expressway San Antonio Road
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Split Phase Split Phase
Rights: Ovl Include Include Ovl
Min. Green: 0 68 68 0 68 0 0 0 0 27 0 27
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 0 2 0 1 0 0 2 0 0 0 0 0 0 0 1 0 1! 0 0

Volume Module: >> Count Date: 31 Jan 2017 << 4:30 to 5:30 PM
Base Vol: 0 582 505 0 1518 0 0 0 0 887 0 34
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 582 505 0 1518 0 0 0 0 887 0 34
Added Vol: 0 0 4 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 582 509 0 1518 0 0 0 0 887 0 34
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 0 582 509 0 1518 0 0 0 0 887 0 34
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 582 509 0 1518 0 0 0 0 887 0 34
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 0 582 509 0 1518 0 0 0 0 887 0 34

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.92 1.00 0.92 0.92 0.67 0.92 0.92 1.00 0.92 0.62 1.00 0.92
Lanes: 0.00 2.00 1.00 0.00 2.00 0.00 0.00 0.00 0.00 1.95 0.00 0.05
Final Sat.: 0 3800 1750 0 2546 0 0 0 0 2288 0 85

Capacity Analysis Module:
Vol/Sat: 0.00 0.15 0.29 0.00 0.60 0.00 0.00 0.00 0.00 0.39 0.00 0.40
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*
Green Time: 0.0 62.1 86.8 0.0 62.1 0.0 0.0 0.0 0.0 24.7 0.0 24.7
Volume/Cap: 0.00 0.23 0.32 0.00 0.91 0.00 0.00 0.00 0.00 1.49 0.00 1.53
Uniform Del: 0.0 7.4 0.5 0.0 15.4 0.0 0.0 0.0 0.0 38.5 0.0 38.5
IncrementDel: 0.0 0.0 0.1 0.0 8.0 0.0 0.0 0.0 0.0 230.6 0.0 247.6
InitQueueDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 0.00 1.00 1.00 0.00 2.26 0.00 0.00 0.00 0.00 1.00 0.00 1.00
Delay/Veh: 0.0 7.4 0.7 0.0 42.9 0.0 0.0 0.0 0.0 269.1 0.0 286.1
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 7.4 0.7 0.0 42.9 0.0 0.0 0.0 0.0 269.1 0.0 286.1
LOS by Move: A A A A D A A A A F A F
HCM2kAvgQ: 0 4 2 0 25 0 0 0 0 36 0 56

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Note: Queue reported is the number of cars per lane.

\*\*\*\*\*

Level of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

\*\*\*\*\*  
 Intersection #7 San Antonio Road and Whitney Street/Pepper Drive  
 \*\*\*\*\*

Average Delay (sec/veh): 6.3 Worst Case Level Of Service: E[ 41.2]  
 \*\*\*\*\*

Street Name:	San Antonio Road						Whitney Street													
Approach:	North Bound			South Bound			East Bound			West Bound										
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled						Uncontrolled						Stop Sign			Stop Sign				
Rights:	Include						Include						Include			Include				
Lanes:	1	0	1	1	0	1	0	1	1	0	0	0	1!	0	1	0	0	1!	0	0

Volume Module:	>>	Count	Date:	12 Jun 2018	<<	5:00 PM - 6:00 PM										
Base Vol:	51	433	12	10	668	82	66	20	86	19	23	18				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	51	433	12	10	668	82	66	20	86	19	23	18				
Added Vol:	2	0	0	0	0	2	0	0	0	0	0	0				
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0				
Initial Fut:	53	433	12	10	668	84	66	20	86	19	23	18				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	53	433	12	10	668	84	66	20	86	19	23	18				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
FinalVolume:	53	433	12	10	668	84	66	20	86	19	23	18				

Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxxx	4.1	xxxx	xxxxxx	7.5	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	2.2	xxxx	xxxxxx	2.2	xxxx	xxxxxx	3.5	4.0	3.3	3.5	4.0	3.3

Capacity Module:												
Cnflct Vol:	752	xxxx	xxxxxx	445	xxxx	xxxxxx	1064	1281	376	909	1317	223
Potent Cap.:	867	xxxx	xxxxxx	1126	xxxx	xxxxxx	180	167	627	233	159	787
Move Cap.:	867	xxxx	xxxxxx	1126	xxxx	xxxxxx	147	155	627	172	148	787
Volume/Cap:	0.06	xxxx	xxxx	0.01	xxxx	xxxx	0.45	0.13	0.14	0.11	0.16	0.02

Level of Service Module:															
2Way95thQ:	0.2	xxxx	xxxxxx	0.0	xxxx	xxxxxx	xxxx	xxxx	0.2	xxxx	xxxx	xxxxxx			
Control Del:	9.4	xxxx	xxxxxx	8.2	xxxx	xxxxxx	xxxxxx	xxxx	11.2	xxxxxx	xxxx	xxxxxx			
LOS by Move:	A	*	*	A	*	*	*	*	B	*	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	199	xxxxxx	xxxx	208	xxxxxx			
SharedQueue:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	3.8	xxxxxx	xxxxxx	1.1	xxxxxx			
Shrd ConDel:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	51.2	xxxxxx	xxxxxx	29.2	xxxxxx			
Shared LOS:	*	*	*	*	*	*	*	F	*	*	D	*			
ApproachDel:	xxxxxx			xxxxxx			41.2			29.2					
ApproachLOS:	*			*			E			D					

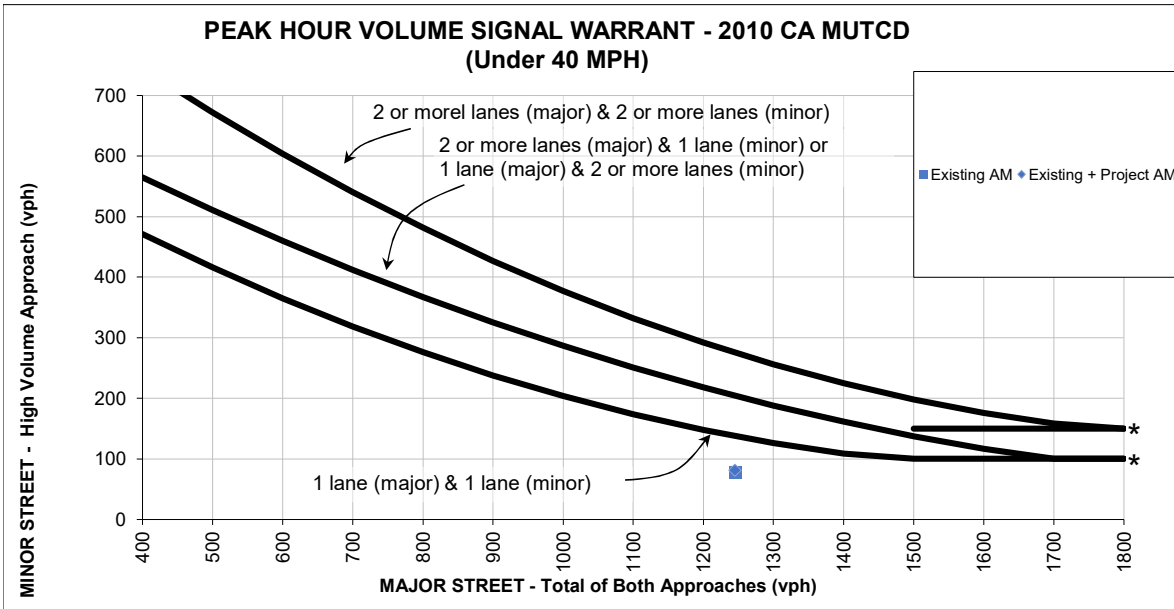
\*\*\*\*\*  
 Note: Queue reported is the number of cars per lane.  
 \*\*\*\*\*



## **Appendix D**

### **Signal Warrant Analysis**

**San Antonio Road and Whitney Street/Pepper Drive**

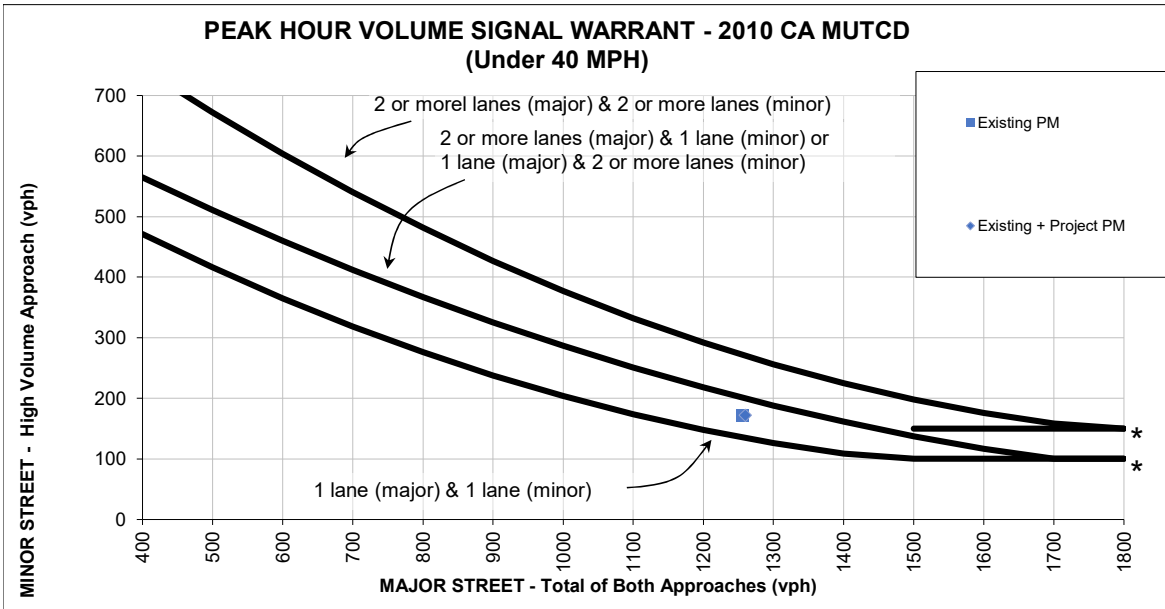


\* NOTE: 150 vph applies as the lower threshold volume for a minor street approach with 2 or more lanes and 100 vph applies as the lower threshold volume for a minor street approach with 1 lane.

**Peak Hour Volume Warrant Per 2003 MUTCD- Under 40 MPH**

		Approach Lanes		AM Peak Hour Volumes	
		2 or One More		Existing AM	Existing + Project AM
Major Street - Both Approaches	San Antonio Road		x	1246	1245
Minor Street - Highest Approach	Whitney Street	x		78	81
Warrant Met?				no	no

**San Antonio Road and Whitney Street/Pepper Drive**



\* NOTE: 150 vph applies as the lower threshold volume for a minor street approach with 2 or more lanes and 100 vph applies as the lower threshold volume for a minor street approach with 1 lane.

**Peak Hour Volume Warrant Per 2003 MUTCD- Under 40 MPH**

		Approach Lanes		PM Peak Hour Volumes	
		2 or One More		Existing PM	Existing + Project PM
Major Street - Both Approaches	San Antonio Road		x	1256	1260
Minor Street - Highest Approach	Whitney Street	x		172	172
Warrant Met?				no	no

# **Appendix E**

















## **Walk n Roll Maps**

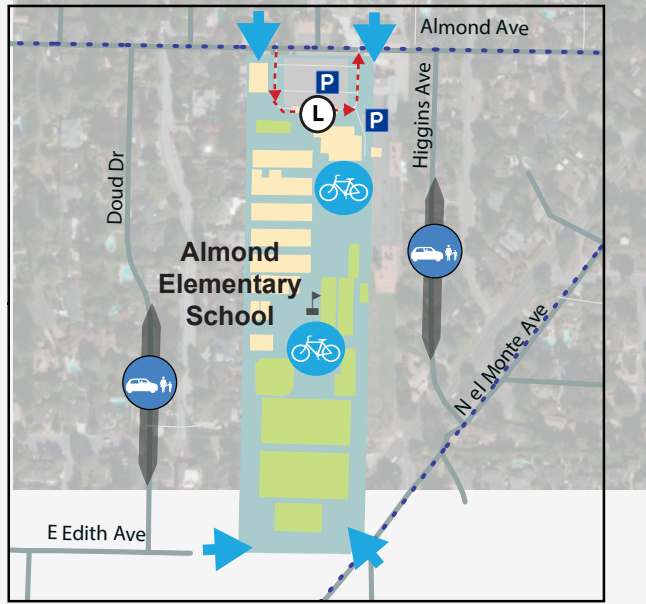


# Almond Elementary School

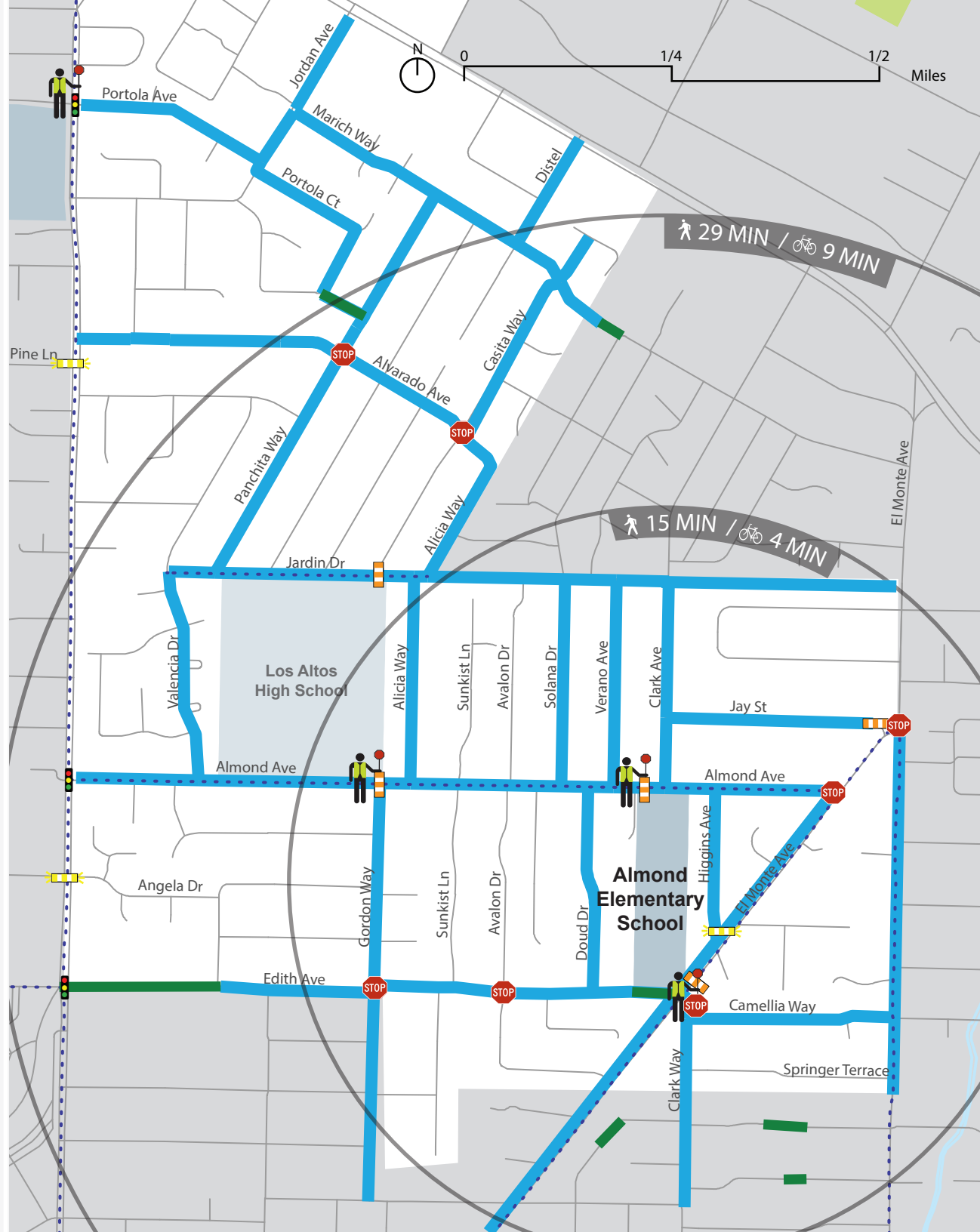
## SUGGESTED ROUTES

550 Almond Ave  
Los Altos, CA 94022

-  Suggested Walking & Biking Route
-  Connector Path
-  Existing Bikeway
-  Marked Crosswalk
-  Flashing Crosswalk
-  Pedestrian & Bicycle Access
-  Half-mile and Mile Zones (Road Network)
-  Park & Walk Location
-  Crossing Guard Location
-  Bicycle Parking
-  Traffic Signal
-  All-Way Stop
-  Attendance Area
-  Parks and Open Space
-  School
-  Drop off/pick up




















Enlargement Map

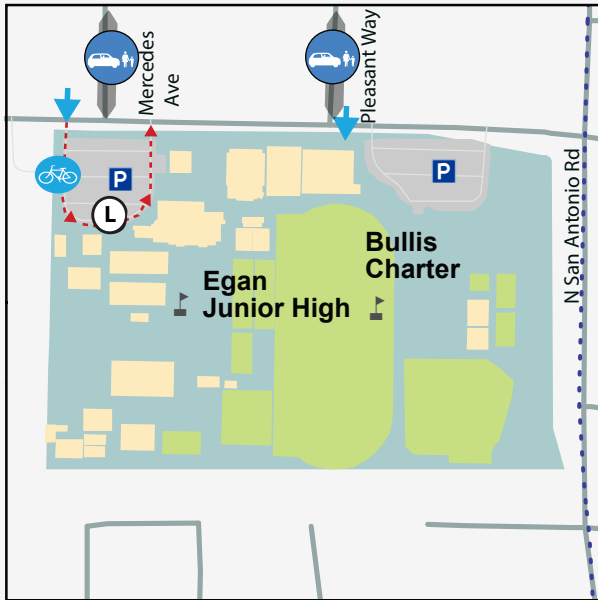


# Egan Junior High School

## SUGGESTED ROUTES

100 W Portola Ave  
Los Altos, CA 94022

-  Suggested Walking & Biking Route
-  Connector Path
-  Existing Cycle Track
-  Existing Bikeway
-  Marked Crosswalk
-  Flashing Crosswalk
-  Pedestrian & Bicycle Access
-  Half-mile and Mile Zones (Road Network)
-  Drop off/pick up
-  Park & Walk Location
-  Crossing Guard Location
-  Bicycle Parking
-  Traffic Signal
-  All-Way Stop
-  Attendance Area
-  Parks and Open Space
-  School





















Enlargement Map

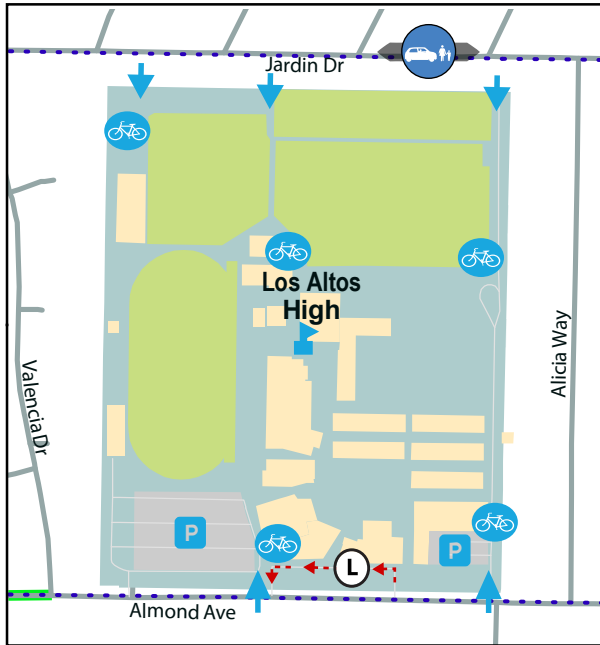


# Los Altos High

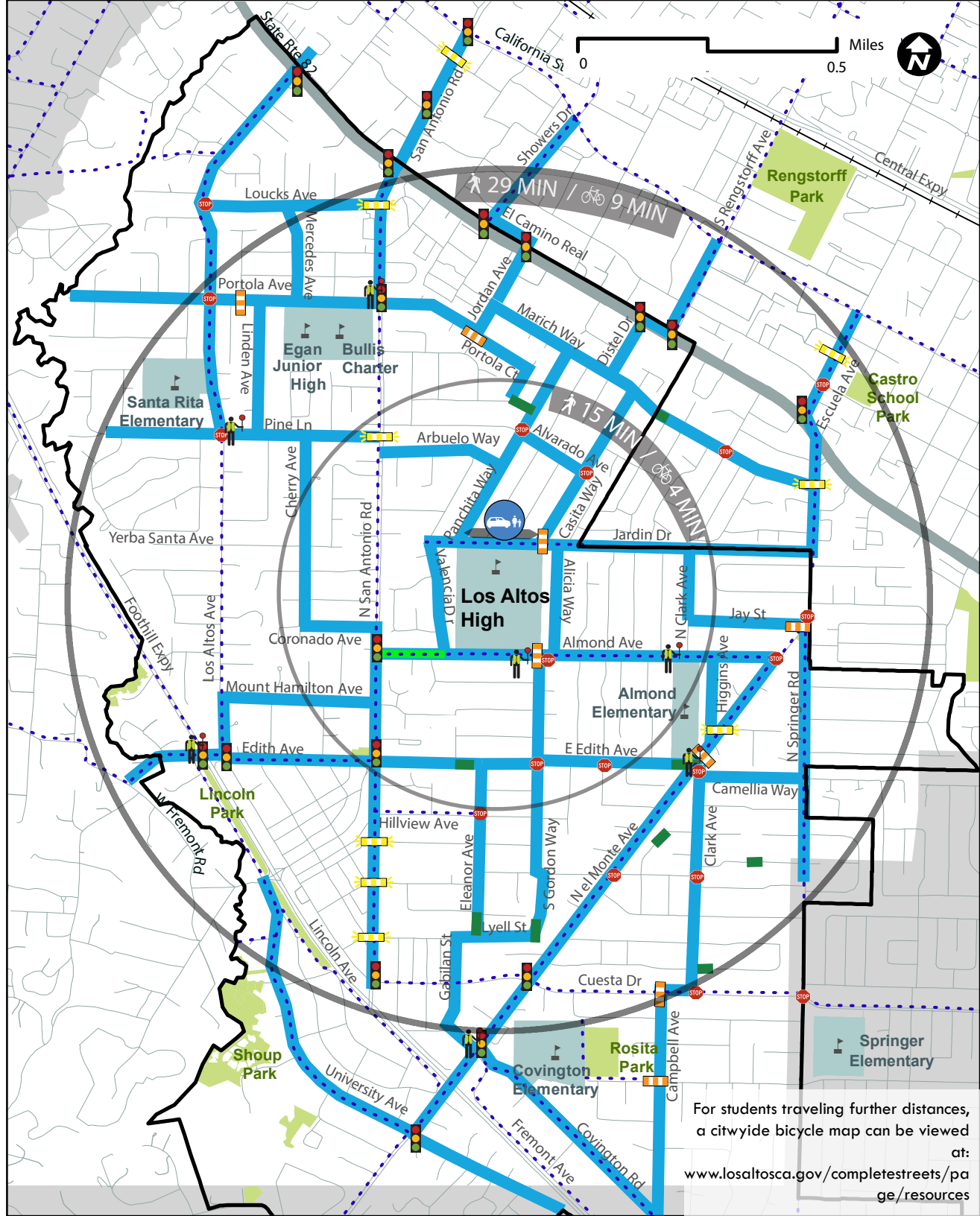
## SUGGESTED ROUTES

201 Almond Ave  
Los Altos, CA 94022

-  Los Altos City Limits
-  Suggested Walking & Biking Route
-  Connector Path
-  Existing Bikeway
-  Existing Cycle Track
-  Marked Crosswalk
-  Flashing Crosswalk
-  Pedestrian & Bicycle Access
-  Half-mile and Mile Zones (Road Network)
-  Crossing Guard Location
-  Bicycle Parking
-  Traffic Signal
-  All-Way Stop
-  Attendance Area
-  Parks and Open Space
-  School
-  Park & Walk Location
-  Drop off/pick up



Enlargement Map



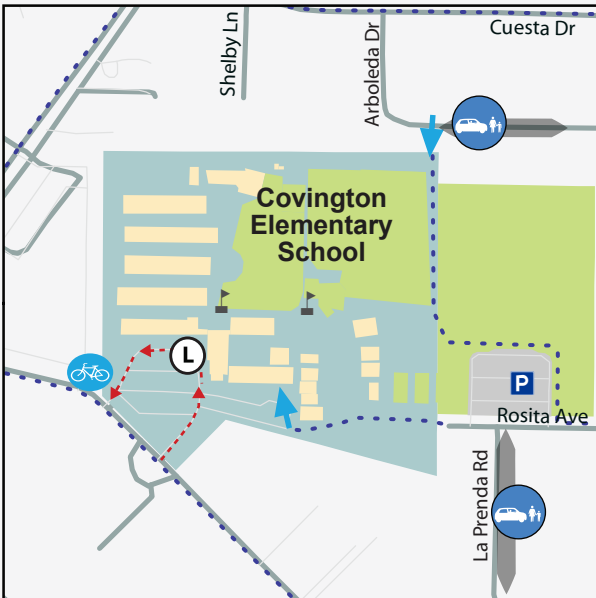
For students traveling further distances,  
a citywide bicycle map can be viewed  
at:  
[www.losaltosca.gov/completestreets/page/resources](http://www.losaltosca.gov/completestreets/page/resources)

# Covington Elementary School

## SUGGESTED ROUTES

201 Covington Road  
Los Altos, CA 94024

-  Suggested Walking & Biking Route
-  Connector Path
-  Drop off/pick up
-  Existing Bikeway
-  Marked Crosswalk
-  Pedestrian & Bicycle Access
-  Half-mile and Mile Zones (Road Network)
-  Park & Walk Location
-  Crossing Guard Location
-  Bicycle Parking
-  Traffic Signal
-  All-Way Stop
-  Attendance Area
-  Parks and Open Space
-  School



Enlargement Map

