



HEXAGON TRANSPORTATION CONSULTANTS, INC.

Memorandum

Date: December 20, 2018

To: Mr. Jeff Warmoth, 425 First Street Los Altos, LLC.

From: Gary Black
Selvi Sivaraj

Subject: Traffic Impact Analysis for the Residential Development at 425 First Street in Los Altos, California

Hexagon Transportation Consultants, Inc. has completed a traffic impact analysis for the proposed residential development at 425 First Street in Los Altos, California (see Figure 1). The project would consist of a three-level residential building with 20 residential units including four studio, eight one-bedroom and eight two-bedroom units. The project proposes to demolish the existing 5,000 square-foot office building on the site. Vehicle access to the parking garage would be provided via a driveway on the alley behind the site (see Figure 2A). The parking would be provided in a puzzle mechanical parking system in an underground parking garage (see Figure 2B).

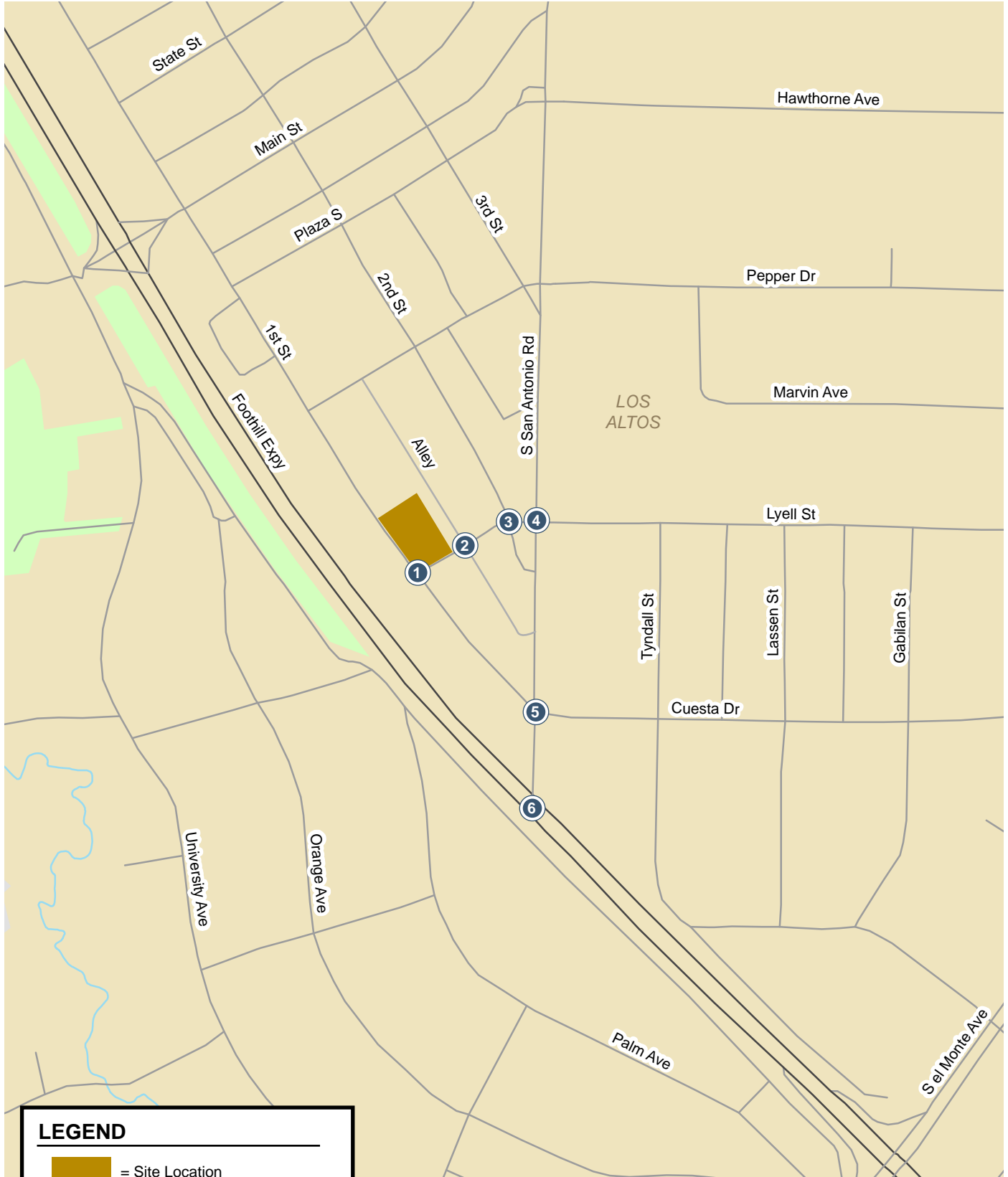
The study includes an evaluation of intersection levels of service and also includes an operations analysis, an evaluation of potential impacts to bicycle, pedestrian, and transit facilities, and a review of site access, on-site circulation, and parking demand.

Scope of Study

The purpose of the traffic analysis is to satisfy the requirements of the City of Los Altos and the Santa Clara Valley Transportation Authority (VTA). VTA administers the Santa Clara County Congestion Management Program (CMP). Because the project would generate fewer than 100 peak-hour trips, an analysis of impacts on CMP facilities is not required. The traffic analysis includes an analysis of weekday AM and PM peak-hour traffic conditions and determines the traffic impacts of the proposed residential development on key intersections in the vicinity of the site. The intersections are identified below.

1. First Street and Lyell Street (unsignalized)
2. Alley and Lyell Street (unsignalized)
3. Second Street and Lyell Street (unsignalized)
4. San Antonio Road and Lyell Street (unsignalized)
5. San Antonio Road and First Street/Cuesta Drive
6. San Antonio Road and Foothill Expressway (CMP)

Traffic conditions at the study intersections were analyzed for the weekday AM and PM peak hours of traffic. Locally, the AM peak hour of traffic is usually between 7:00 and 9:00 AM, and the PM peak hour is typically between 4:00 and 6:00 PM. It is during these periods that the most congested traffic conditions occur on an average weekday.



LEGEND



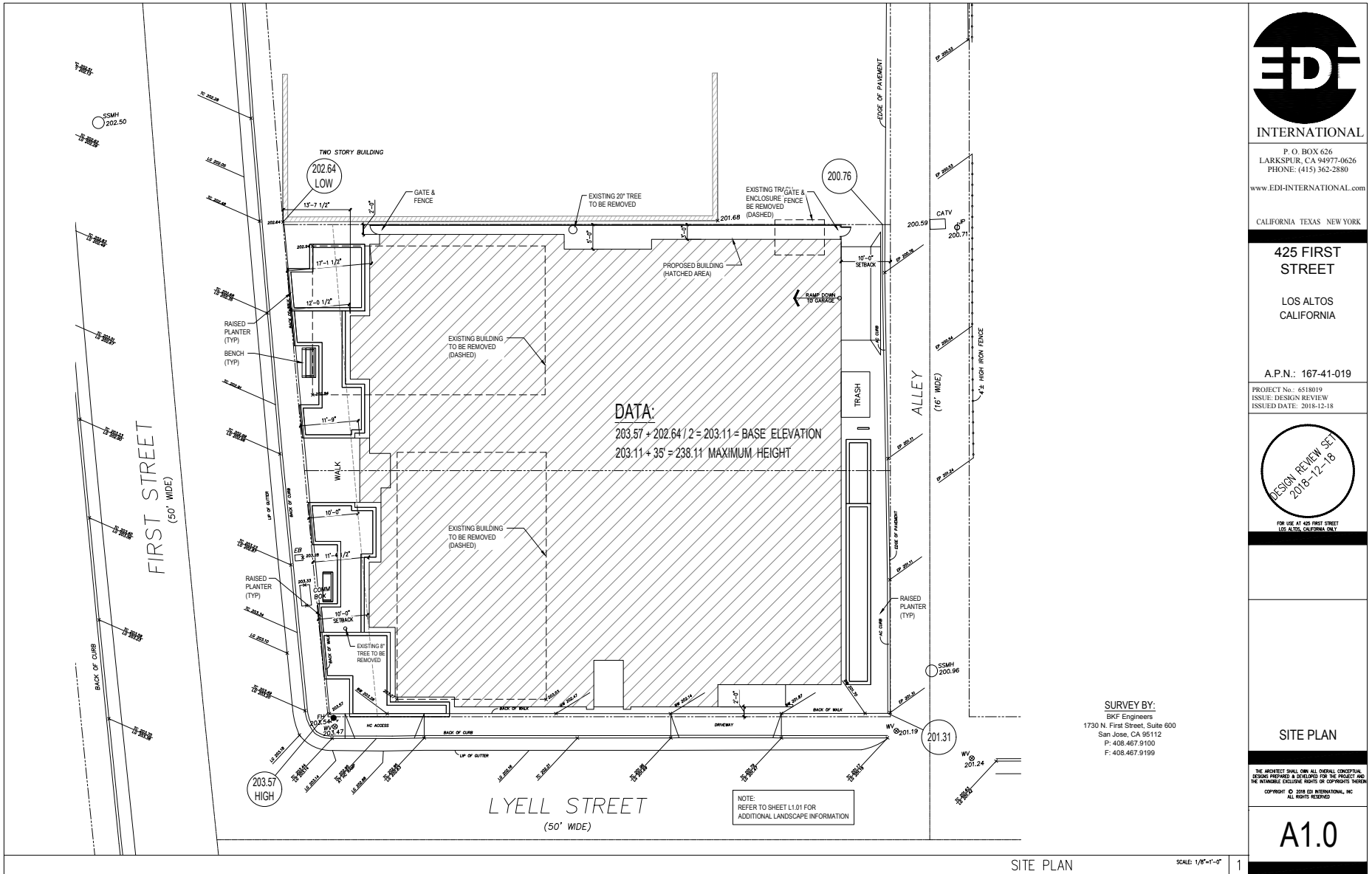
-  = Site Location
-  = Study Intersection

Figure 1
Site Location and Study Intersections



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CALIFORNIA TEXAS NEW YORK

425 FIRST STREET

LOS ALTOS CALIFORNIA

A.P.N.: 167-41-019

PROJECT No.: 4518019
ISSUE: DESIGN REVIEW
ISSUED DATE: 2018-12-18



FOR USE AT 425 FIRST STREET
LOS ALTOS, CALIFORNIA ONLY

SITE PLAN

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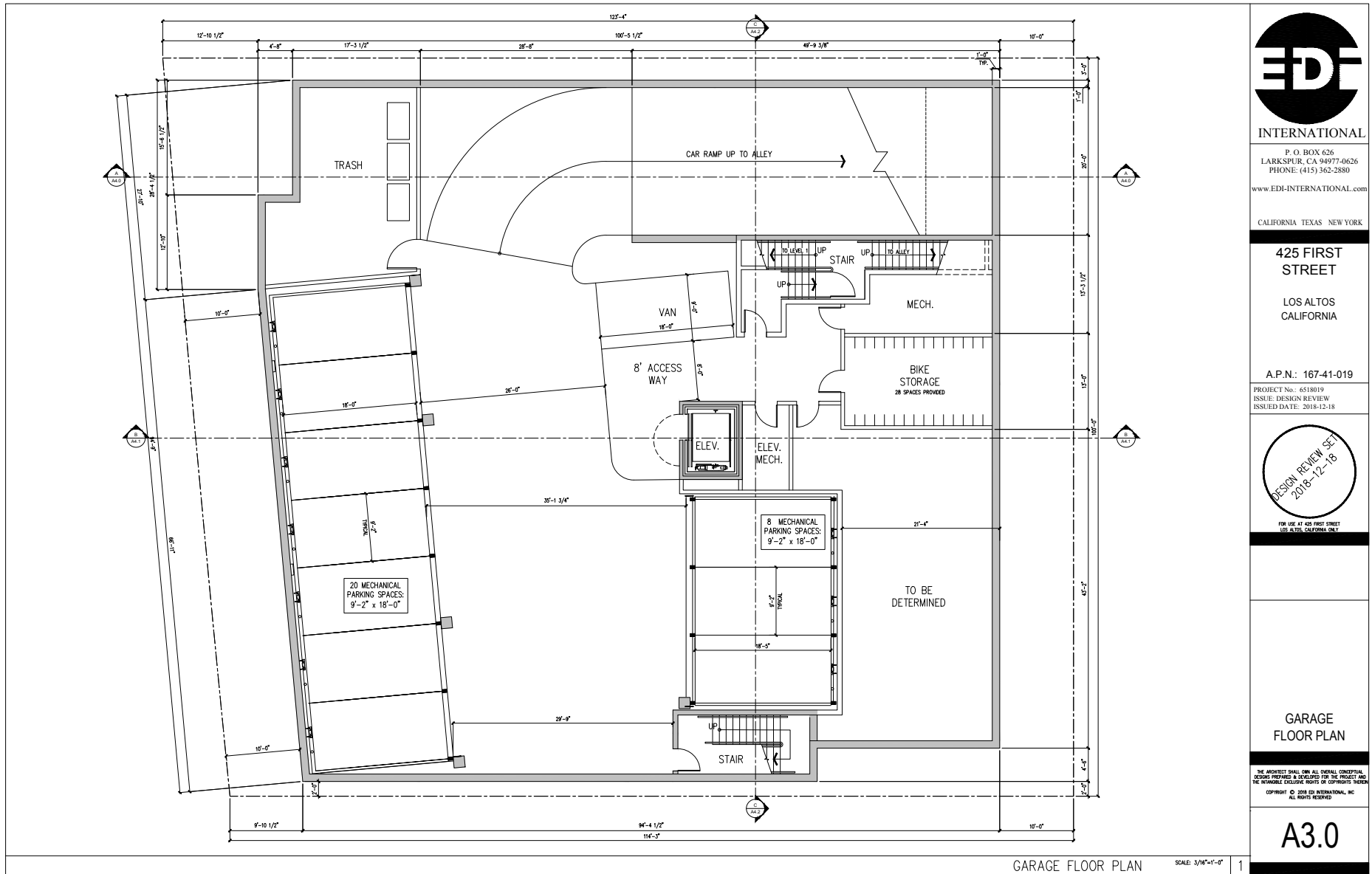
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SCALE: 1/8"=1'-0"

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Figure 2A
Project Site Plan



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425 FIRST STREET

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A.P.N.: 167-41-019

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FOR USE AT 425 FIRST STREET
LOS ALTOS, CALIFORNIA ONLY

GARAGE FLOOR PLAN

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Figure 2B
Project Garage Floor Plan

Traffic conditions were evaluated for the following scenarios:

Scenario 1: *Existing Conditions.* Existing AM and PM peak-hour traffic volumes at study intersections were based on new traffic counts collected in June 2018. Because the counts were conducted when schools were not in session, the volumes were increased by 10% to represent typical conditions. Existing AM and PM peak-hour traffic volumes at the CMP intersection were obtained from recent counts conducted in April 2017 and the 2016 CMP Annual Monitoring Report, respectively.

Scenario 2: *Existing Plus Project Conditions.* Existing plus project traffic volumes were estimated by adding to existing traffic volumes the trips associated with the proposed development. Existing plus project conditions were evaluated relative to existing conditions in order to determine potential project impacts.

Methodology

This section describes 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 field observations and new traffic counts. The following data were collected from these sources:

- Existing intersection peak-hour volumes
- Lane configurations
- Signal timing and phasing

Analysis Methodologies

Signalized Intersection Levels of Service

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 City of Los Altos evaluates intersection levels of service using the TRAFFIX software, which is based on the Highway Capacity Manual (HCM) 2000 method for signalized intersections. Since TRAFFIX is the level of service methodology for the CMP-designated intersections, the City of Los Altos employs the CMP default values for the analysis parameters. The HCM method evaluates signalized intersection operations on the basis of average control delay time for all vehicles at the intersection. This average delay can then be correlated to a level of service. Table 1 presents the level of service definitions for signalized intersections.

The City of Los Altos level of service standard for signalized intersections is LOS D or better. One of the study intersections is a CMP intersection. The CMP level of service standard for signalized intersections is LOS E or better.

Table 1
Signalized Intersection Level of Service Definitions Based on 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 12.0
B		12.1 to 18.0
B-		18.1 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 may still pass through the intersection without stopping.	20.1 to 23.0
C		23.1 to 32.0
C-		32.1 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 39.0
D		39.1 to 51.0
D-		51.1 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 60.0
E		60.1 to 75.0
E-		75.1 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) p10-16. VTA Traffic Level of Service Analysis Guidelines (June 2003), Table 2.

Unsignalized Intersection Levels of Service

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. This study utilizes the TRAFFIX software to determine intersection levels of service based on the 2000 HCM methodology for unsignalized intersections.

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 Average 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 an impact. For this analysis, the criteria used to determine significant impacts on signalized intersections are based on City of Los Altos Level of Service standards. Impacts to the unsignalized study intersections were identified based on engineering judgment. Impacts 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 significant adverse impact 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.

A significant impact 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 a significant impact 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. A significant 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 significant impact 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, significant impacts and the associated improvements to unsignalized intersections are frequently determined on the basis of professional judgment.

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, First Street, Second Street, Lyell 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 or Lyell Street. The speed limit on San Antonio Road is 35 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 Lyell 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.

Second Street is a two-lane local street that runs parallel to and east of Foothill Expressway between Lyell Street and Edith Avenue. Second Street provides access to the project site via Lyell Street. Sidewalks are present on both sides of Second Street. The speed limit on Second Street is 25 mph.

Lyell Street is an east-west local street that extends eastward from First Street, through San Antonio Road, and ends in a cul-de-sac. It is two lanes wide and has discontinuous sidewalks. The project frontage has a sidewalk with on-street parking allowed. The speed limit on Lyell 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 Street. The project is shown to have its driveway on the alley.

Intersection Lane Configurations and Traffic Volumes

The existing lane configurations at the study intersections were obtained from field observations (see Figure 3).

Existing peak-hour traffic volumes were obtained from new turning-movement counts conducted in June 2018 while schools were not in session. The traffic counts from June 2018 were factored by 10% to represent the school year. Existing AM and PM peak-hour traffic volumes at the CMP intersection were obtained from recent counts conducted in April 2017 and the 2016 CMP Annual Monitoring Report, respectively (see Figure 4). New intersection turning-movement counts conducted for this analysis are presented in Appendix A. Traffic volumes for all components of traffic are tabulated in Appendix C.

Existing Intersection Levels of Service

The intersection level of service analysis results show that all study intersections currently operate at acceptable levels of service during both AM and PM peak hours (see Table 3). The intersection level of service calculation sheets are included in Appendix B.

**Table 3
Existing Intersection Level of Service Summary**

Study Number	Intersection	Control	Peak Hour	Count Date	Avg Delay (sec/veh)	LOS
1	First Street and Lyell Street <i>(Unsignalized Intersection)</i>	Two-Way Stop	AM	06/12/18	11.4	B
			PM	06/12/18	12.8	B
2	Alley and Lyell Street <i>(Unsignalized Intersection)</i>	Two-Way Stop	AM	06/12/18	8.7	A
			PM	06/12/18	8.7	A
3	Second Street and Lyell Street <i>(Unsignalized Intersection)</i>	Two-Way Stop	AM	06/12/18	10.1	B
			PM	06/12/18	10.0	A
4	San Antonio Road and Lyell Street <i>(Unsignalized Intersection)</i>	Two-Way Stop	AM	06/12/18	21.7	C
			PM	06/12/18	25.0	D
5	San Antonio Road and First Street/Cuesta Drive	Signal	AM	06/12/18	22.6	C+
			PM	06/12/18	20.5	C+
6	San Antonio Road and Foothill Expressway*	Signal	AM	04/18/17	10.3	B+
			PM	01/31/17	56.4	E+

Note: For two-way stop controlled intersections, the average delay and LOS is reported for the worst approach.
* Denotes a CMP designated intersection

Overall the study intersections operated adequately during both the AM and PM peak hours of traffic, and the level of service analysis appears to accurately reflect actual existing traffic conditions. Field observations showed that some operational issues occurred between the closely-spaced intersections on San Antonio Road. However, the operational issues did not result in operational deficiencies at the intersections.

San Antonio Road between Foothill Expressway and First Street

During the AM and PM peak hours, the westbound vehicle queues on San Antonio Road constantly extended from Foothill Expressway past First Street. However, because the traffic signals at the two intersections are coordinated, the queued vehicles were not observed to block or extend past any downstream intersections. The long westbound vehicle queues at the San Antonio Road/First Street intersection occasionally took more than one cycle to clear both intersections during the PM peak hour. During the AM peak hour, the vehicle queues cleared both intersections in one signal cycle. During the PM peak hour, Foothill Expressway experiences very heavy traffic volumes southbound. This creates stop-and-go conditions on the expressway. Southbound vehicles occasionally required two signal cycles to clear the intersection.

425 First Street Residential Development TIA

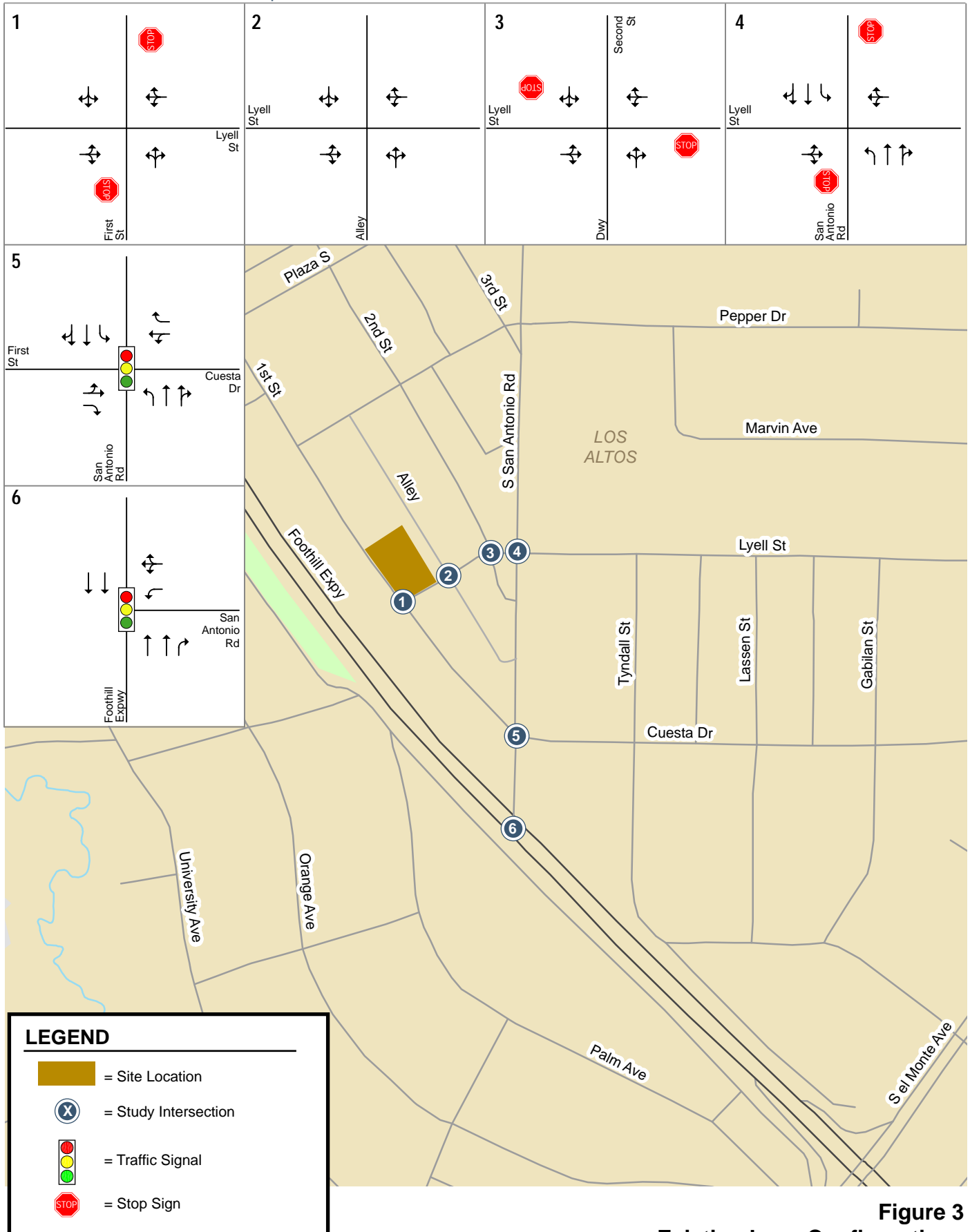


Figure 3
Existing Lane Configurations

425 First Street Residential Development TIA

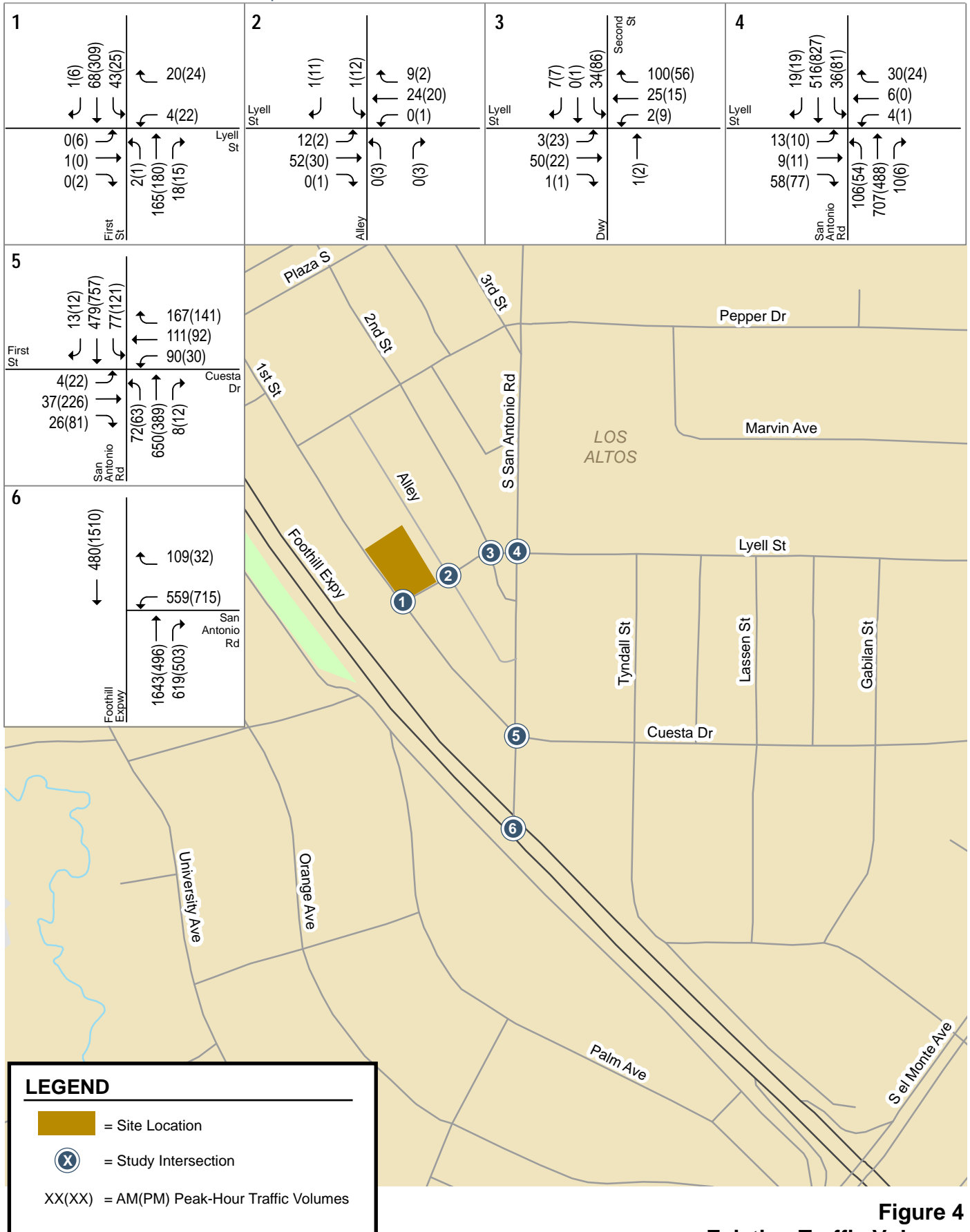


Figure 4
Existing Traffic Volumes

Project Trip Generation

Through empirical research, data have been collected that quantify the amount of traffic produced by common land uses. Thus, for the most common land uses there are standard trip generation rates that can be applied to help predict the future traffic increases that would result from a new development. The magnitude of traffic added to the roadway system by a particular development is estimated by multiplying the applicable trip generation rates by the size of the development. The trip generation rates published in the Institute of Transportation Engineers' (ITE) manual entitled *Trip Generation, 10th Edition (2017)* were used for this analysis. The rates published for Multifamily Housing – Low-Rise (Land Use 220) were used to estimate the trips generated by the proposed multifamily dwelling units. Based on these rates, the proposed project would generate 146 daily trips with 9 trips during the AM peak hour and 11 trips during the PM peak hour (see Table 4).

The magnitude of traffic that is being generated by the existing businesses on the site was estimated based on trip generation rates for Small Office Building (Land Use 712) published in the Institute of Transportation Engineers (ITE) manual entitled *Trip Generation, 10th Edition*. As shown in Table 4, the existing uses on site are estimated to generate 81 daily trips with 10 trips during the AM peak hour and 12 trips during the PM peak hour.

After accounting for the trips generated by the existing offices, the proposed residential project is estimated to generate 65 new daily trips with a net decrease of one trip in the AM peak hour and a net decrease of one trip in the PM peak hour.

Table 4
Project Trip Generation Estimates

Land Use	Size	Daily Rate	Daily Trips	AM Peak Hour			PM Peak Hour				
				Rate	In	Out	Total Trips	Rate	In	Out	Total Trips
<u>Proposed Use</u>											
Townhomes ¹	20 units	7.32	146	0.46	2	7	9	0.56	7	4	11
<u>Existing Land Use</u>											
Office ²	5,000 sq.ft.	16.19	(81)	1.92	(8)	(2)	(10)	2.45	(4)	(8)	(12)
Net New Trips:			65		(6)	5	(1)		3	(4)	(1)
Notes:											
¹ Low-Rise Multifamily Housing (Land Use 220), <i>ITE Trip Generation Manual, 10th Edition (2017)</i> , average rates for General Urban/Suburban settings are used.											
² Small Office Building (Land Use 712), <i>ITE Trip Generation Manual, 10th Edition (2017)</i> , average rates for General Urban/Suburban settings are used.											

Trip Distribution and Assignment

The trip distribution pattern for the proposed development was estimated based on existing travel patterns on the surrounding roadway system and the locations of complementary land uses (see Figure 5).

The peak-hour trips generated by the existing and proposed uses were assigned to the roadway system based on the directions of approach and departure, the roadway network connections, and the location of the project driveway (see Figure 6). The trips generated by the existing uses were subtracted from the roadway network prior to assigning project trips.

Intersection 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 (see Figure 7). Traffic volumes for all components of traffic are tabulated in Appendix C.

Intersection Levels of Service

The intersection level of service analysis results show that all study intersections would operate at acceptable levels of service during both AM and PM peak hours under existing plus project conditions (see Table 5). It should be noted that, at some study intersections, the average delay under project conditions is shown to be better than under no-project conditions. This occurs because the project would subtract from some traffic movements. The intersection level of service calculation sheets are included in Appendix B.

**Table 5
Existing Plus Project Intersection Levels of Service**

#	Intersection	Control	Peak Hour	Count Date	Existing		Existing + Project			
					Avg Delay (sec/veh)	LOS	Avg Delay (sec/veh)	LOS	Incr. In Crit. Delay	Incr. In Crit. V/C
1	First Street and Lyell Street <i>(Unsignalized Intersection)</i>	Two-Way Stop	AM	06/12/18	11.4	B	11.3	B	-	-
			PM	06/12/18	12.8	B	12.8	B	-	-
2	Alley and Lyell Street <i>(Unsignalized Intersection)</i>	Two-Way Stop	AM	06/12/18	8.7	A	8.6	A	-	-
			PM	06/12/18	8.7	A	8.7	A	-	-
3	Second Street and Lyell Street <i>(Unsignalized Intersection)</i>	Two-Way Stop	AM	06/12/18	10.1	B	10.1	B	-	-
			PM	06/12/18	10.0	A	10.0	A	-	-
4	San Antonio Road and Lyell Street <i>(Unsignalized Intersection)</i>	Two-Way Stop	AM	06/12/18	21.7	C	22.2	C	-	-
			PM	06/12/18	25.0	D	24.4	C	-	-
5	San Antonio Road and First Street/Cuesta Dri	Signal	AM	06/12/18	22.6	C+	22.5	C+	5.9	-0.113
			PM	06/12/18	20.5	C+	20.5	C+	0.0	0.001
6	San Antonio Road and Foothill Expressway*	Signal	AM	04/18/17	10.3	B+	10.3	B+	-27.0	-0.482
			PM	01/31/17	56.4	E+	56.2	E+	-0.2	0.000

Note: For two-way stop controlled intersections, the average delay and LOS is reported for the worst approach.
* Denotes a CMP designated Intersection

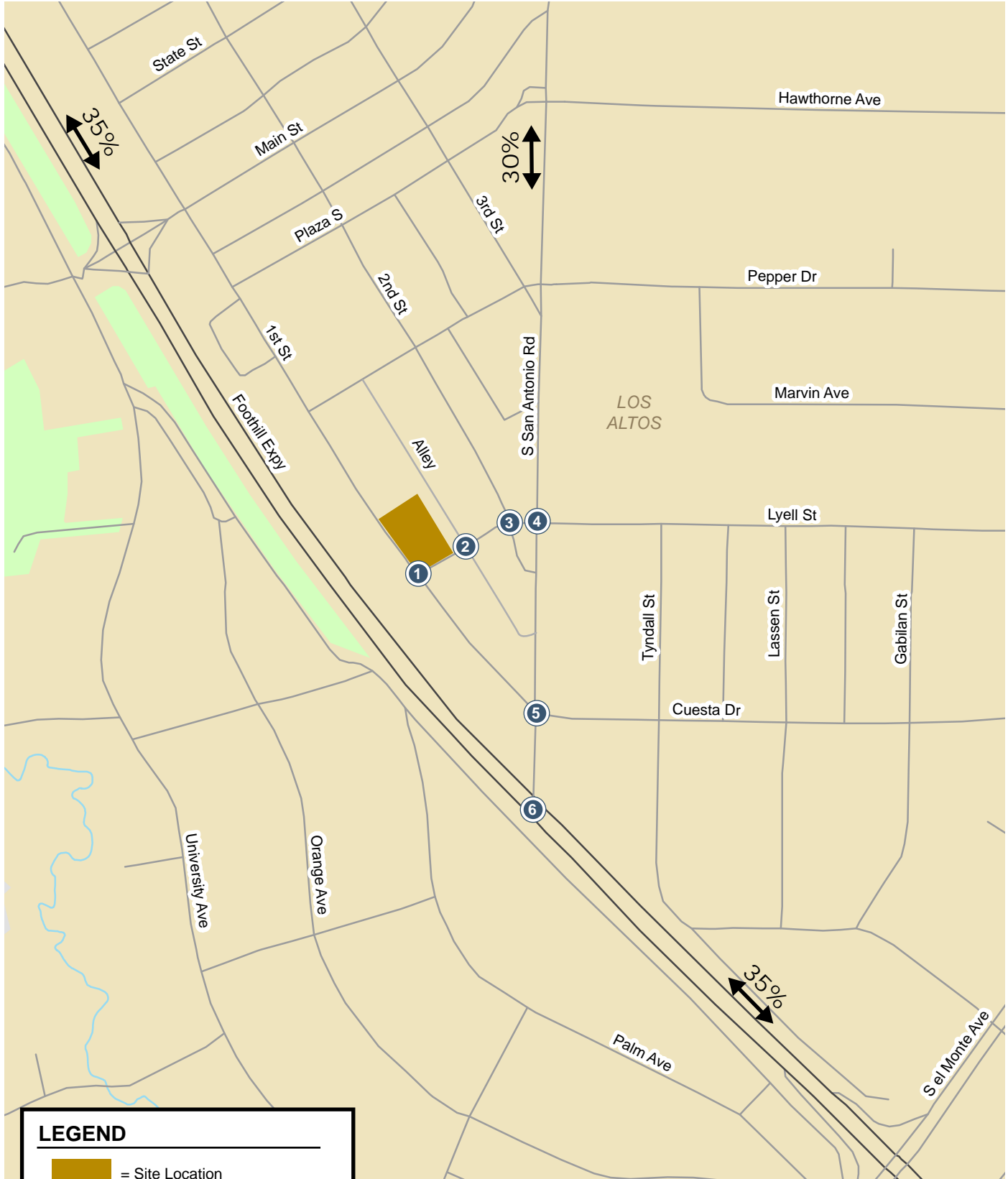


Figure 5
Project Trip Distribution

425 First Street Residential Development TIA

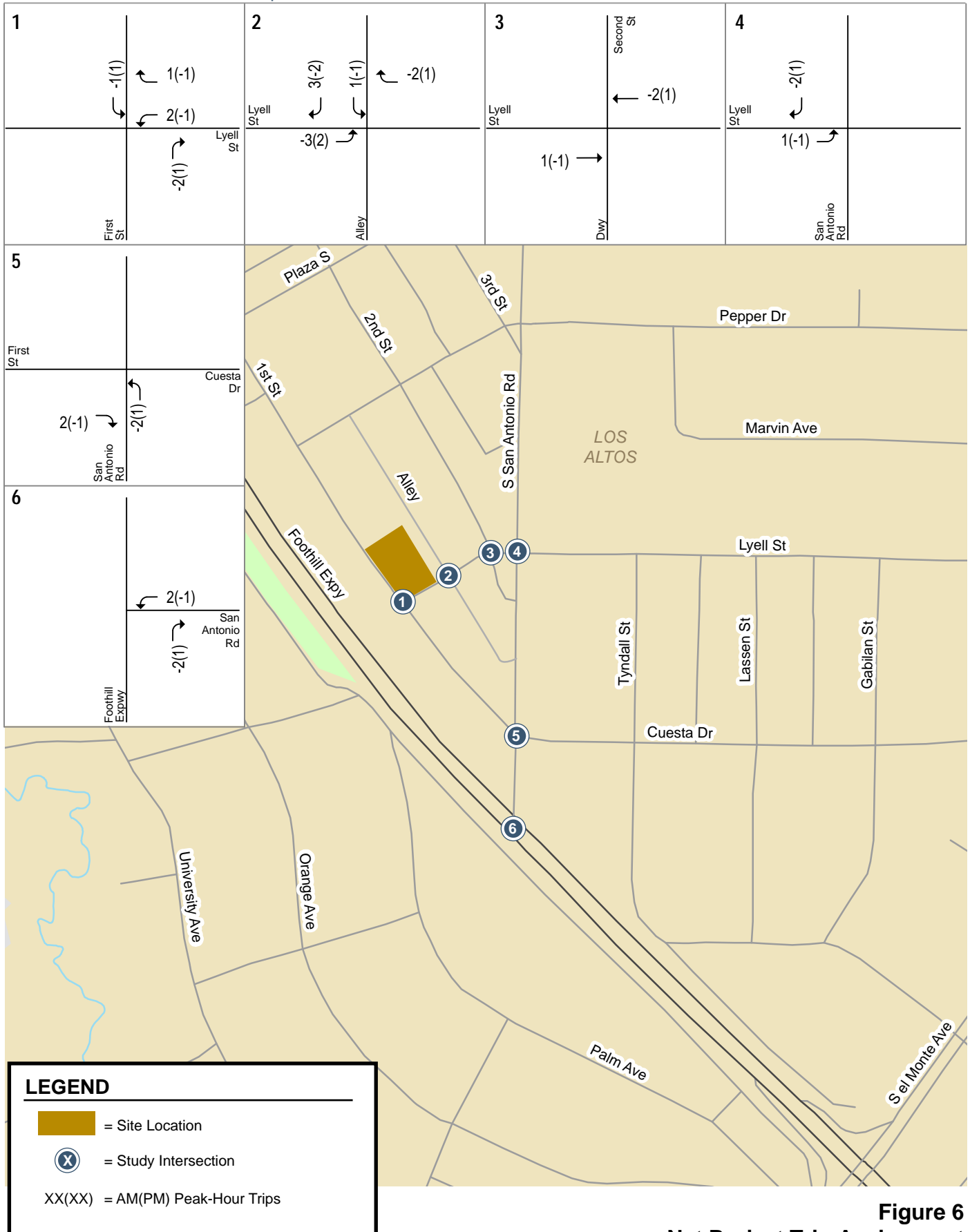


Figure 6
Net Project Trip Assignment

425 First Street Residential Development TIA

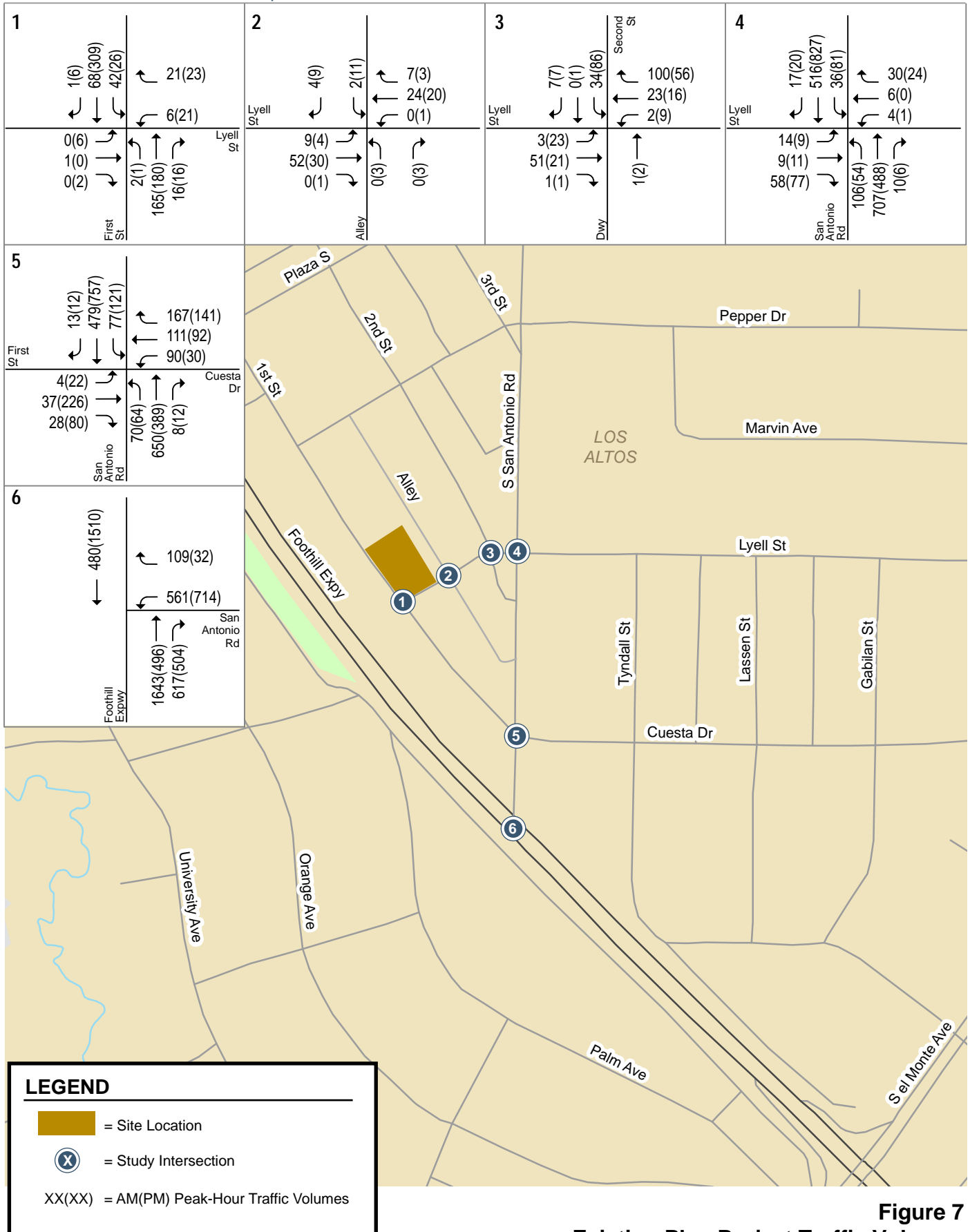


Figure 7
Existing Plus Project Traffic Volumes

Parking Analysis

The proposed project would provide Below Market Rate (BMR) units. According to the Los Altos Municipal Code Ordinance 14.28.040 (C), the project would be eligible for a density bonus and would be qualified for a parking requirement alteration. According to the Los Altos Municipal Code, Ordinance 14.28.040 (G), for any development eligible for a density bonus, upon the request of the developer, the city shall not impose a parking requirement, inclusive of handicapped and guest parking, that exceeds the following requirements:

- i. For zero to one bedroom, one on-site parking space.
- ii. For two to three bedrooms, two on-site parking spaces.
- iii. For four and more bedrooms, two and one-half parking spaces.

According to the city code, the project is required to provide a total of 28 parking spaces (12 for studio and one-bedroom units and 16 for two-bedroom units). The site plan shows a one-level underground parking garage with 29 parking spaces, including 28 parking spaces in the puzzle parking system and one van accessible parking space. Thus, the project would meet the City's overall parking requirement. However, nearly all onsite parking spaces would be provided in the puzzle parking system, which would require residents to use a remote control to park their car. Even though guest parking is not required, any guest parking would need to occur on-street on Lyell Street and First Street.

The Valley Transportation Authority (VTA) provides guidelines for bike parking in its publication *Bike Technical Guidelines*. Class I spaces are defined as spaces that protect the entire bike and its components from theft, such as in a secure designated room or a bike locker. Class II spaces provide an opportunity to secure at least one wheel and the frame using a lock, such as bike racks. For multi-family dwelling units, VTA recommends one Class I space per three dwelling units and one Class II space per 15 dwelling units. For the proposed project, this equates to 7 Class I spaces and 2 Class II spaces. The project site plan shows a bike room in the underground parking garage with 28 bicycle parking spaces. The project will also provide two Class II spaces with a U-shaped bike rack near the garage entrance on the alley.

Site Access and On-Site Circulation

A review of the project site plan was performed to determine whether adequate site access and on-site circulation would be provided. This review was based on the site plan provided by EDI International, Inc. dated December 18, 2018 (see Figures 2A and 2B).

Site Access

The site access was evaluated to determine the adequacy of the site's driveway with regard to the following: traffic volume, delays, vehicle queues, truck access, pedestrian and bicycle access.

The site plan shows that the new proposed residential building would be accessed by a driveway on the alley. According to the City's Zoning Code (14.74.200), a two-way driveway should be a minimum of 18 feet wide. Based on the project site plan, the garage driveway would be 20 feet wide, which complies with the City's standards.

The project is estimated to generate 9 trips during the AM peak hour and 11 trips during PM peak hour. This equates to one vehicle every seven minutes during the AM peak hour and one vehicle every five minutes during the PM peak hour. Based on existing traffic counts conducted at the alley and Lyell Street, 23 vehicles use the alley during AM peak hour and 27 vehicles during the PM

peak hour. This equates one vehicle every three minutes during the AM peak hour and one vehicle every two minutes during PM peak hour. The addition of project trips would increase the delays for vehicles exiting the alley onto Lyell Street by approximately seven seconds during AM and PM peak hour. The width of the alley adjacent to the project site is 18 feet, which is wide enough for two vehicles to pass each other. Given the low traffic volumes in the alley, vehicle queues entering and exiting the alley would seldom exceed one vehicle. It should be noted that Los Altos requires development on both sides of the alley to dedicate right-of-way such that the ultimate width of the alley will be 20 feet.

Sight distance generally should be provided in accordance with Caltrans design standards. Sight distance requirements vary depending on the roadway speeds. In the vicinity of the project site, the speed limit on the alley is presumably 25 mph. However, traffic was observed to be travelling much slower because of the narrow alley width. The Caltrans recommended sight distance is 150 feet. This means that a driver must be able to see 150 feet down the alley to locate a sufficient gap to turn out of the driveway. The setback between the proposed building and the alley would be approximately 8 feet, which would provide sufficient sight distance for drivers to see oncoming traffic in the alley without their vehicles entering the travelled way. There are no sharp roadway curves or landscaping features shown on the site plan that would obstruct the vision of exiting drivers.

Garage Ramp Design

The proposed curved garage ramp is shown to have a maximum slope of 20% with 10% transitions on each side. These dimensions are acceptable. Commonly cited parking publications recommend grades of up to 16% on ramps where no parking is permitted, but grades of up to 20% are cited as acceptable when ramps are covered (i.e. protected from weather) and not used for pedestrian walkways. It should be noted that the vast majority of ramp users will be residents, and thus, will quickly become accustomed to steeper grades.

Garbage Collection and Loading Space

The site plan shows a trash room located near the northwest corner of the underground garage. Garbage collection activities for the project are not expected to occur on-site because vehicle access would not be provided to the trash room. Therefore, the trash bins should be moved to the proposed trash pad along the Alley on designated garbage collection days. For loading and unloading, on-street parking is permitted along Lyell Street and First Street; thus, large delivery and service trucks may be able to park on the street, subject to the availability of spaces.

On-Site Circulation and Puzzle Parking Lift

The on-site circulation was reviewed in accordance with generally accepted traffic engineering standards. The project would provide 90-degree parking stalls designed around Klaus TrendVario 4300 three car stackers in the parking garage. According to the City's Zoning Code, two-way drive aisles adjacent to 90-degree parking are required to be a minimum of 26 feet wide to provide sufficient room for vehicles to back out of the parking stalls. The project site plan shows one van accessible parking space located at the entrance of the parking garage near the bottom of the ramp. Drivers would be required to undertake a three-point turn in order to park in this space. The remaining 28 parking spaces would be served by a drive aisle ranging from 26 to 35 feet in width and the aforementioned puzzle lift system. The lift system shown on the project plans would stack three vehicles in each parking bay – two levels of parking at basement level and one below in the "pit". Upon arriving at the garage, future patrons would utilize a remote to open their designated, secured, parking bay. If their vehicle is located in the pit, the puzzle lift system will shift parked vehicles on the upper level horizontally or vertically, as needed, to make space to raise the vehicle

on the lower level. For some of the assigned puzzle lift parking spaces, three-point turns may be required to enter the puzzle lift parking bay. While not ideal, this situation is generally considered acceptable in urban areas where land is scarce and the onsite traffic volumes are very low. According to AASHTO, the standard size of a passenger car design vehicle is 4.25 feet (height) x 7 feet (width) x 19 feet (length). Per the project site plan, the parking lift would accommodate sedans and mid-size trucks up to 5.5 feet (height) x 9.17 feet (width) x 18.0 feet (length). Full-sized SUVs would not fit in the parking lifts and, therefore, could not use the garage. It is assumed that potential residents with large vehicles would self-select not to live in the project.

Potential Impacts on Pedestrians, Bicycles and Transit

Pedestrian facilities within the study area are in the form of sidewalks, signalized crossings, and unsignalized crossings. Local streets in the study area, including First Street and Lyell Street have sidewalks on at least one side of the street. Sidewalks are found on both sides of Second Street and San Antonio Road. Crosswalks with pedestrian signal heads and push buttons are located at the San Antonio Road and First Street/Cuesta Drive signalized study intersection. Crosswalks are also present at the unsignalized study intersections.

Existing pedestrian counts were conducted as part of the peak-hour intersection turning movement counts for the project. The highest pedestrian crossing counts were 26 pedestrians during the AM peak hour at the First Street/Lyell Street intersection and 13 pedestrians during the PM peak hour at the San Antonio Road/Lyell Street intersection.

Bicycle facilities in the study area include bike lanes and a bike route. Bike lanes are lanes on roadways designated for use by bicycles with special lane markings, pavement legends, and signage. Bike routes are existing rights-of-way that accommodate bicycles but are not separate from the existing travel lanes. Routes are typically designated only with signs or pavement markers.

Within the project study area, bike lanes are provided along Foothill Expressway, San Antonio Road, Los Altos Avenue, El Monte Avenue, and westbound Edith Avenue. Eastbound Edith Avenue, Hillview Avenue and Cuesta Drive are marked as bike routes. Local streets near the project site, such as First Street, Second Street and Lyell Street, are not marked as bike lanes or routes, but they carry low traffic volumes and are conducive to bicycling.

Local VTA route 40 provides service between Foothill College in Los Altos Hills and La Avenida Street in Mountain View via San Antonio Road, Lyell Street and First Street (near the project site) with 25 to 40-minute commute hour headways through weekdays and 30 to 60-minute headway on weekends. In the project vicinity, the closest bus stops are located at San Antonio Road and Lyell Street. The distance between the project site and these bus stops is approximately 350 feet.

Conclusions

The proposed residential development would not result in any significant impacts to the study intersections during the AM and PM peak hours under the existing plus project scenario.

Full-sized SUVs would not fit in the parking lifts and, therefore, could not use the garage. It is assumed that potential residents with large vehicles would self-select not to live in the project. Also, the parking lifts would not accommodate visitors, so visitors would park on First Street or Lyell Street.

Appendix A

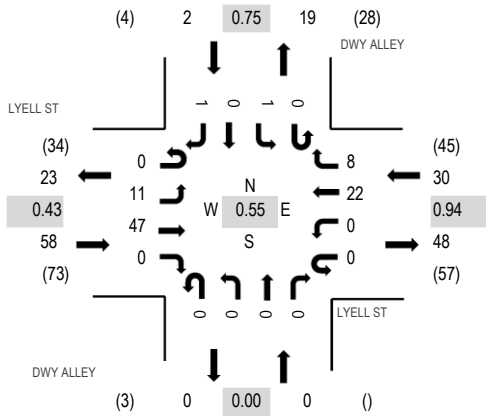
Traffic Counts



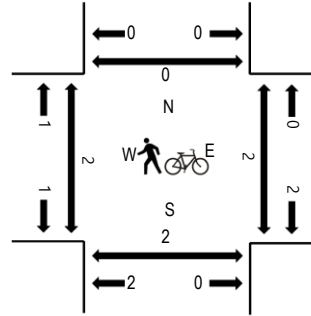
(303) 216-2439
www.alltrafficdata.net

Location: 1 DWY ALLEY & LYELL ST AM
Date and Start Time: Tuesday, June 12, 2018
Peak Hour: 08:00 AM - 09:00 AM
Peak 15-Minutes: 08:45 AM - 09:00 AM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	LYELL ST Eastbound				LYELL ST Westbound				DWY ALLEY Northbound				DWY ALLEY 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	0	1	0	0	0	0	3	1	0	0	0	0	0	0	0	5	32	0	0	0	2
7:15 AM	0	0	4	1	0	1	4	0	0	0	0	0	0	0	0	0	10	42	0	0	0	0
7:30 AM	0	2	2	0	0	0	1	1	0	0	0	0	0	0	0	1	7	44	0	0	2	2
7:45 AM	0	2	2	1	0	0	1	3	0	0	0	0	0	0	0	1	10	59	0	0	0	0
8:00 AM	0	3	4	0	0	0	5	2	0	0	0	0	0	1	0	0	15	90	2	0	0	0
8:15 AM	0	0	4	0	0	0	4	4	0	0	0	0	0	0	0	0	12		0	0	0	0
8:30 AM	0	5	8	0	0	0	6	2	0	0	0	0	0	0	0	1	22		0	0	0	0
8:45 AM	0	3	31	0	0	0	7	0	0	0	0	0	0	0	0	0	41		0	2	2	0

Peak Rolling Hour Flow Rates

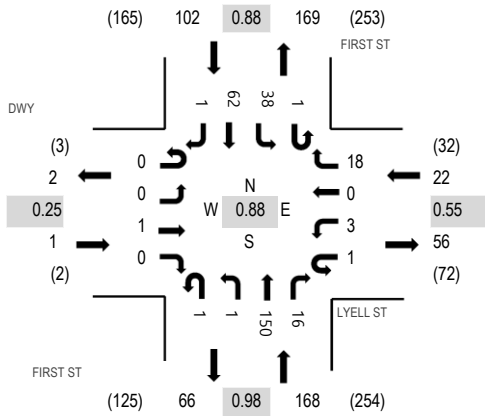
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	10	46	0	0	0	22	8	0	0	0	0	0	1	0	1	88
Mediums	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	11	47	0	0	0	22	8	0	0	0	0	0	1	0	1	90



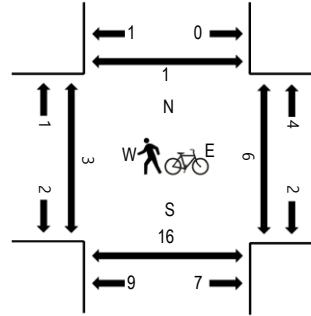
(303) 216-2439
www.alltrafficdata.net

Location: 2 FIRST ST & LYELL ST AM
Date and Start Time: Tuesday, June 12, 2018
Peak Hour: 08:00 AM - 09:00 AM
Peak 15-Minutes: 08:45 AM - 09:00 AM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	DWY Eastbound				LYELL ST Westbound				FIRST ST Northbound				FIRST 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	0	0	0	0	0	0	1	2	1	0	13	1	0	0	13	0	31	160	4	1	0	0
7:15 AM	0	1	0	0	0	0	0	4	0	0	0	15	3	0	2	17	0	42	204	1	2	0	0
7:30 AM	0	0	0	0	0	0	0	2	0	0	0	21	1	0	3	7	0	34	221	0	2	2	0
7:45 AM	0	0	0	0	0	1	0	0	0	0	0	26	5	0	1	20	0	53	263	0	0	0	0
8:00 AM	0	0	0	0	1	1	0	2	1	0	0	37	5	0	0	28	0	75	293	0	1	0	0
8:15 AM	0	0	0	0	0	0	0	2	0	0	0	37	2	1	0	17	0	59		0	2	4	1
8:30 AM	0	0	0	0	0	1	0	5	0	0	0	38	5	0	11	16	0	76		1	1	8	0
8:45 AM	0	0	1	0	0	1	0	9	0	1	0	38	4	0	27	1	1	83		1	1	4	0

Peak Rolling Hour Flow Rates

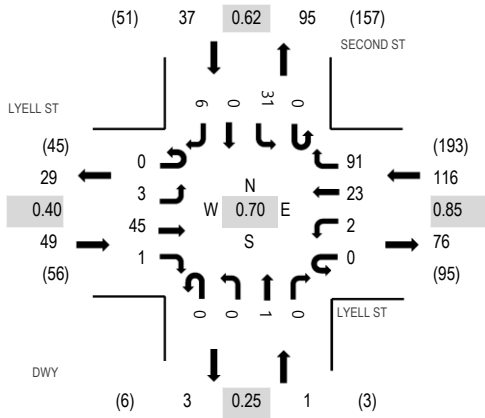
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
Lights	0	0	1	0	1	3	0	17	1	1	146	16	1	35	57	1	280
Mediums	0	0	0	0	0	0	0	1	0	0	4	0	0	3	3	0	11
Total	0	0	1	0	1	3	0	18	1	1	150	16	1	38	62	1	293



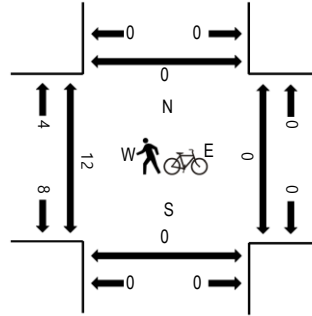
(303) 216-2439
www.alltrafficdata.net

Location: 3 DWY & LYELL ST AM
Date and Start Time: Tuesday, June 12, 2018
Peak Hour: 08:00 AM - 09:00 AM
Peak 15-Minutes: 08:45 AM - 09:00 AM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	LYELL ST Eastbound				LYELL ST Westbound				DWY Northbound				SECOND 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	0	0	0	0	0	4	10	0	0	0	0	0	6	0	0	20	100	1	0	0	1
7:15 AM	0	0	3	0	0	2	5	20	0	0	1	1	0	1	0	1	34	119	1	0	0	1
7:30 AM	0	0	2	0	0	1	2	15	0	0	0	0	0	3	0	0	23	128	0	0	0	1
7:45 AM	0	1	1	0	0	0	3	15	0	0	0	0	0	2	0	1	23	154	4	0	1	2
8:00 AM	0	0	5	0	0	1	4	22	0	0	0	0	0	4	0	3	39	203	0	0	0	0
8:15 AM	0	0	3	1	0	1	8	25	0	0	0	0	0	5	0	0	43		2	0	0	0
8:30 AM	0	1	8	0	0	0	7	23	0	0	0	0	0	10	0	0	49		6	0	0	0
8:45 AM	0	2	29	0	0	0	4	21	0	0	1	0	0	12	0	3	72		4	0	0	0

Peak Rolling Hour Flow Rates

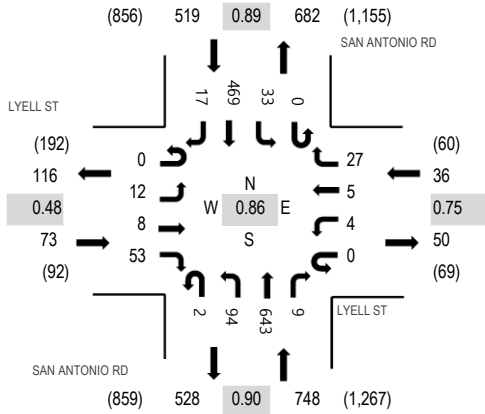
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	3	44	1	0	2	23	91	0	0	1	0	0	31	0	6	202
Mediums	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	3	45	1	0	2	23	91	0	0	1	0	0	31	0	6	203



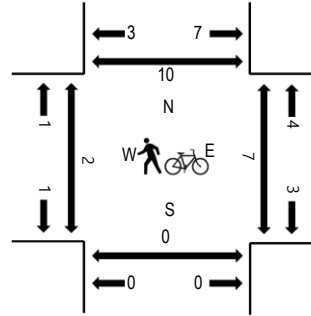
(303) 216-2439
www.alltrafficdata.net

Location: 4 SAN ANTONIO RD & LYELL ST AM
Date and Start Time: Tuesday, June 12, 2018
Peak Hour: 08:00 AM - 09:00 AM
Peak 15-Minutes: 08:45 AM - 09:00 AM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	LYELL ST Eastbound				LYELL ST Westbound				SAN ANTONIO RD Northbound				SAN ANTONIO RD 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	0	1	5	0	0	1	0	0	10	69	0	0	0	3	44	2	135	899	1	0	0	1
7:15 AM	0	3	0	2	0	0	0	2	0	24	118	0	0	0	2	86	2	239	1,071	0	1	0	3
7:30 AM	0	2	1	2	0	1	1	8	0	17	108	3	0	0	5	97	1	246	1,153	2	0	0	3
7:45 AM	0	0	1	2	0	0	0	11	0	17	152	1	0	0	2	92	1	279	1,254	1	2	0	3
8:00 AM	0	3	0	6	0	1	0	4	0	20	145	1	0	0	6	114	7	307	1,376	0	3	0	2
8:15 AM	0	1	0	7	0	1	2	10	0	28	158	3	0	0	6	101	4	321		1	0	0	0
8:30 AM	0	1	1	16	0	1	2	6	2	25	155	3	0	0	11	121	3	347		0	1	0	2
8:45 AM	0	7	7	24	0	1	1	7	0	21	185	2	0	0	10	133	3	401		0	2	0	4

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	2	0	0	0	1	0	3
Lights	0	11	8	51	0	4	5	26	2	94	620	9	0	33	459	17	1,339
Mediums	0	1	0	2	0	0	0	1	0	0	21	0	0	0	9	0	34
Total	0	12	8	53	0	4	5	27	2	94	643	9	0	33	469	17	1,376



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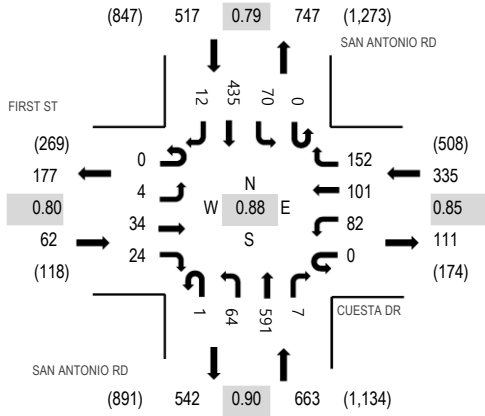
Location: 5 SAN ANTONIO RD & CUESTA DR AM

Date and Start Time: Tuesday, June 12, 2018

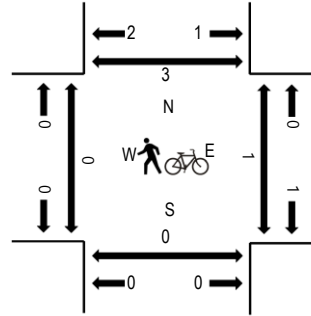
Peak Hour: 08:00 AM - 09:00 AM

Peak 15-Minutes: 08:45 AM - 09:00 AM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	FIRST ST Eastbound				CUESTA DR Westbound				SAN ANTONIO RD Northbound				SAN ANTONIO RD 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	1	7	5	0	4	8	11	0	7	71	1	0	1	43	1	160	1,030	1	0	0	3
7:15 AM	0	3	6	4	0	6	9	31	0	7	110	0	0	8	78	1	263	1,234	0	0	0	1
7:30 AM	0	0	7	2	0	10	13	24	0	11	104	1	0	11	86	0	269	1,345	0	0	0	1
7:45 AM	0	2	13	6	0	13	18	26	0	16	143	0	0	8	92	1	338	1,469	0	0	0	0
8:00 AM	0	4	13	9	0	11	28	26	0	17	135	2	0	9	108	2	364	1,577	0	0	0	1
8:15 AM	0	0	10	8	0	15	20	40	0	13	150	2	0	21	93	2	374		0	0	0	0
8:30 AM	0	0	11	7	0	25	32	41	0	14	142	3	0	11	104	3	393		0	1	0	0
8:45 AM	0	0	0	0	0	31	21	45	1	20	164	0	0	29	130	5	446		0	0	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	1	0	1	0	0	0	0	0	1	0	0	0	0	2	0	5
Lights	0	3	33	21	0	82	100	150	1	61	570	7	0	69	430	12	1,539
Mediums	0	0	1	2	0	0	1	2	0	2	21	0	0	1	3	0	33
Total	0	4	34	24	0	82	101	152	1	64	591	7	0	70	435	12	1,577



(303) 216-2439
www.alltrafficdata.net

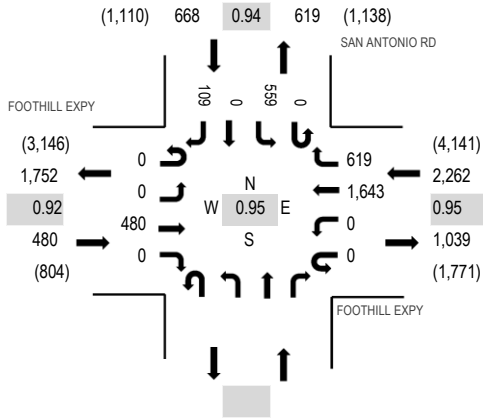
Location: 3 SAN ANTONIO RD & FOOTHILL EXPY AM

Date and Start Time: Tuesday, April 18, 2017

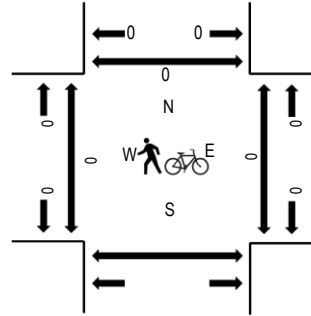
Peak Hour: 08:00 AM - 09:00 AM

Peak 15-Minutes: 08:30 AM - 08:45 AM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	FOOTHILL EXPY Eastbound				FOOTHILL EXPY Westbound				Northbound			SAN ANTONIO RD 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
7:00 AM	0	0	48	0	0	0	293	80					0	64	0	9	494	2,645	0	0	0
7:15 AM	0	0	60	0	0	0	325	107					0	77	0	5	574	2,978	0	0	0
7:30 AM	0	0	104	0	0	0	355	163					0	113	0	14	749	3,214	0	0	0
7:45 AM	0	0	112	0	0	0	387	169					0	154	0	6	828	3,359	0	0	0
8:00 AM	0	0	119	0	0	0	412	147					0	131	0	18	827	3,410	0	0	0
8:15 AM	0	0	117	0	0	0	371	144					0	148	0	30	810		0	0	0
8:30 AM	0	0	131	0	0	0	449	147					0	142	0	25	894		0	0	0
8:45 AM	0	0	113	0	0	0	411	181					0	138	0	36	879		0	0	0

Peak Rolling Hour Flow Rates

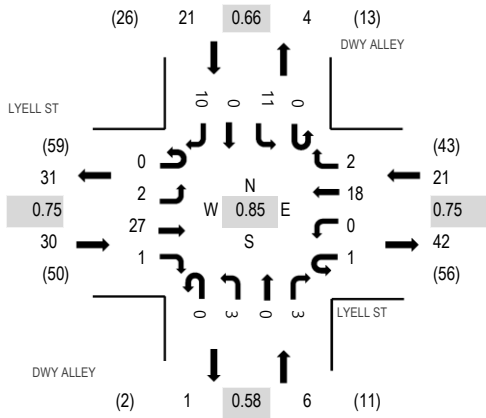
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	1	1					0	0	0	0	2
Lights	0	0	476	0	0	0	1,627	602					0	551	0	109	3,365
Mediums	0	0	4	0	0	0	15	16					0	8	0	0	43
Total	0	0	480	0	0	0	1,643	619					0	559	0	109	3,410



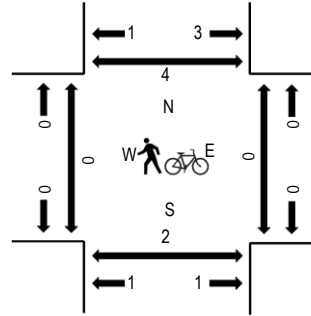
(303) 216-2439
www.alltrafficdata.net

Location: 1 DWY ALLEY & LYELL ST PM
Date and Start Time: Tuesday, June 12, 2018
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	LYELL ST Eastbound				LYELL ST Westbound				DWY ALLEY Northbound				DWY ALLEY 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	0	4	0	0	0	0	3	1	0	1	0	0	0	0	0	2	11	58	0	0	1	0
4:15 PM	1	2	3	0	0	0	6	1	0	1	0	0	0	0	0	0	0	14	69	0	0	0	1
4:30 PM	0	0	3	0	0	0	4	1	0	1	0	0	0	2	0	2	13	78	0	0	0	0	
4:45 PM	0	2	6	0	0	0	8	0	0	1	0	0	0	0	0	3	20	75	0	0	0	2	
5:00 PM	0	0	7	1	0	0	3	0	0	1	0	2	0	4	0	4	22	72	0	0	0	0	
5:15 PM	0	0	11	0	1	0	3	1	0	0	0	1	0	5	0	1	23	0	0	2	2	2	
5:30 PM	0	4	1	1	0	0	3	0	0	0	0	0	0	1	0	0	10	0	0	0	0	4	
5:45 PM	0	1	3	0	0	0	8	0	0	1	0	2	0	0	0	2	17	0	0	0	0	0	

Peak Rolling Hour Flow Rates

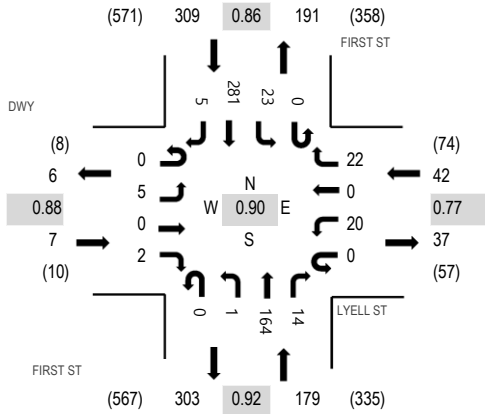
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	2	27	1	1	0	18	2	0	3	0	3	0	11	0	10	78
Mediums	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	27	1	1	0	18	2	0	3	0	3	0	11	0	10	78



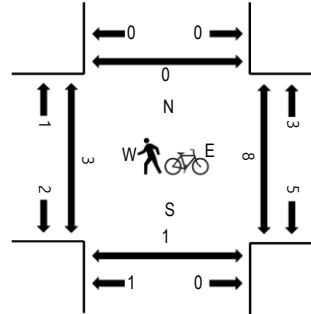
(303) 216-2439
www.alltrafficdata.net

Location: 2 FIRST ST & LYELL ST PM
Date and Start Time: Tuesday, June 12, 2018
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	DWY Eastbound				LYELL ST Westbound				FIRST ST Northbound				FIRST 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	0	0	1	0	6	0	2	0	0	38	1	0	6	52	0	106	490	4	4	1	1
4:15 PM	0	1	0	1	0	2	1	7	0	0	40	2	0	1	62	1	118	534	1	2	1	0
4:30 PM	0	1	0	1	0	5	0	2	0	0	42	1	0	5	68	3	128	537	0	2	0	0
4:45 PM	0	2	0	0	0	3	0	11	0	1	45	3	0	9	63	1	138	519	1	1	1	0
5:00 PM	0	1	0	0	0	6	0	6	0	0	44	3	0	3	86	1	150	500	1	2	0	0
5:15 PM	0	1	0	1	0	6	0	3	0	0	33	7	0	6	64	0	121		1	3	0	0
5:30 PM	0	0	0	0	0	1	0	2	0	0	34	3	1	1	68	0	110		2	2	2	0
5:45 PM	0	0	0	0	0	3	0	8	0	0	34	4	0	2	68	0	119		0	1	0	0

Peak Rolling Hour Flow Rates

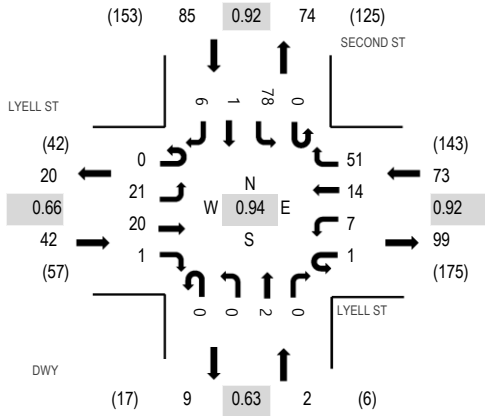
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	5	0	2	0	20	0	22	0	1	164	14	0	23	279	5	535
Mediums	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
Total	0	5	0	2	0	20	0	22	0	1	164	14	0	23	281	5	537



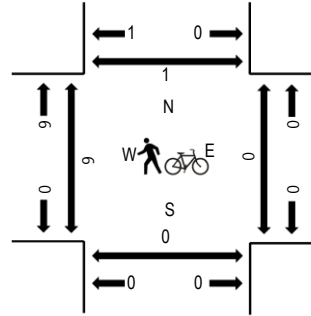
(303) 216-2439
www.alltrafficdata.net

Location: 3 DWY & LYELL ST PM
Date and Start Time: Tuesday, June 12, 2018
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	LYELL ST Eastbound				LYELL ST Westbound				DWY Northbound				SECOND 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	2	2	0	0	1	3	14	0	0	0	1	0	13	1	1	38	182	1	1	0	0
4:15 PM	0	0	4	0	1	1	6	12	0	0	1	1	0	19	2	1	48	196	3	0	0	0
4:30 PM	0	1	4	0	0	3	4	14	0	0	1	0	0	21	0	1	49	202	1	0	0	0
4:45 PM	0	4	2	1	0	1	5	12	0	0	1	0	0	19	0	2	47	181	2	0	0	1
5:00 PM	0	8	8	0	1	2	2	12	0	0	0	0	0	17	1	1	52	177	0	0	0	0
5:15 PM	0	8	6	0	0	1	3	13	0	0	0	0	0	21	0	2	54		3	0	0	0
5:30 PM	0	0	1	1	0	1	3	11	0	0	0	1	0	10	0	0	28		3	0	0	0
5:45 PM	0	1	4	0	0	0	7	10	0	0	0	0	0	19	1	1	43		1	0	0	0

Peak Rolling Hour Flow Rates

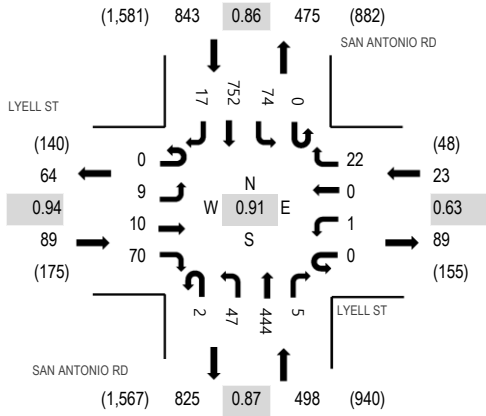
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	21	20	1	1	7	14	51	0	0	2	0	0	78	1	6	202
Mediums	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	21	20	1	1	7	14	51	0	0	2	0	0	78	1	6	202



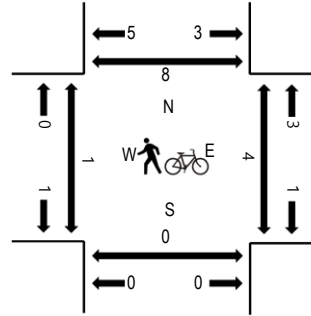
(303) 216-2439
www.alltrafficdata.net

Location: 4 SAN ANTONIO RD & LYELL ST PM
Date and Start Time: Tuesday, June 12, 2018
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	LYELL ST Eastbound				LYELL ST Westbound				SAN ANTONIO RD Northbound				SAN ANTONIO RD 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	5	1	10	0	1	0	3	0	13	98	0	0	7	139	3	280	1,291	0	1	0	2
4:15 PM	0	3	2	17	0	1	2	2	0	12	102	2	0	20	183	8	354	1,408	2	1	0	0
4:30 PM	0	1	3	23	0	3	2	5	1	14	88	0	0	11	180	5	336	1,397	0	1	0	3
4:45 PM	0	3	2	16	0	1	0	5	1	15	92	4	0	14	166	2	321	1,404	0	1	0	5
5:00 PM	0	3	2	21	0	0	0	2	0	11	110	2	0	19	221	6	397	1,453	0	0	0	0
5:15 PM	0	2	4	21	0	0	0	5	0	12	100	0	0	21	175	3	343		0	0	0	2
5:30 PM	0	1	1	11	0	1	0	6	2	12	104	2	0	20	180	3	343		0	0	0	3
5:45 PM	0	3	3	17	0	0	0	9	0	12	130	1	0	14	176	5	370		0	3	0	2

Peak Rolling Hour Flow Rates

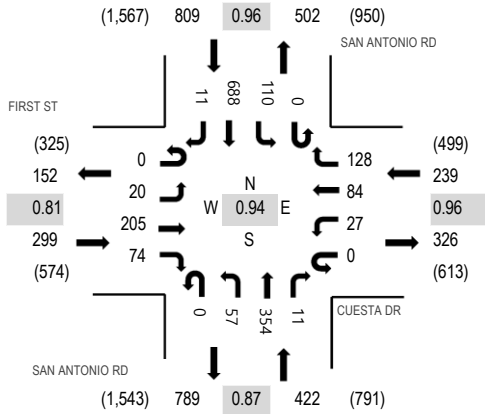
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	9	10	70	0	1	0	22	2	47	442	5	0	74	748	17	1,447
Mediums	0	0	0	0	0	0	0	0	0	0	2	0	0	0	4	0	6
Total	0	9	10	70	0	1	0	22	2	47	444	5	0	74	752	17	1,453



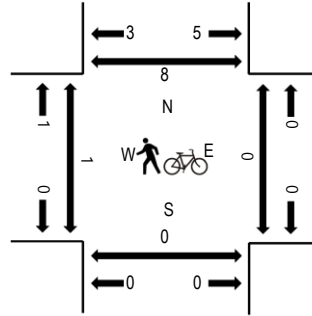
(303) 216-2439
www.alltrafficdata.net

Location: 5 SAN ANTONIO RD & CUESTA DR PM
Date and Start Time: Tuesday, June 12, 2018
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	FIRST ST Eastbound				CUESTA DR Westbound				SAN ANTONIO RD Northbound				SAN ANTONIO RD 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	5	34	24	0	3	27	36	0	12	72	1	0	27	129	3	373	1,662	0	0	0	1
4:15 PM	0	5	41	19	0	11	23	24	0	11	86	0	0	28	174	4	426	1,760	1	1	0	0
4:30 PM	0	1	38	30	0	13	29	26	0	11	81	1	0	31	174	2	437	1,767	0	0	0	2
4:45 PM	0	5	55	18	0	5	34	29	0	14	78	2	0	29	154	3	426	1,753	0	0	0	1
5:00 PM	0	5	63	27	0	5	27	29	0	15	92	1	0	33	169	5	471	1,769	1	0	0	1
5:15 PM	0	4	50	13	0	7	19	35	0	15	73	6	0	25	184	2	433		0	0	0	2
5:30 PM	0	5	40	18	0	6	17	32	0	14	84	1	0	27	176	3	423		0	0	0	2
5:45 PM	0	6	52	16	0	9	21	32	0	13	105	3	0	25	159	1	442		0	0	0	1

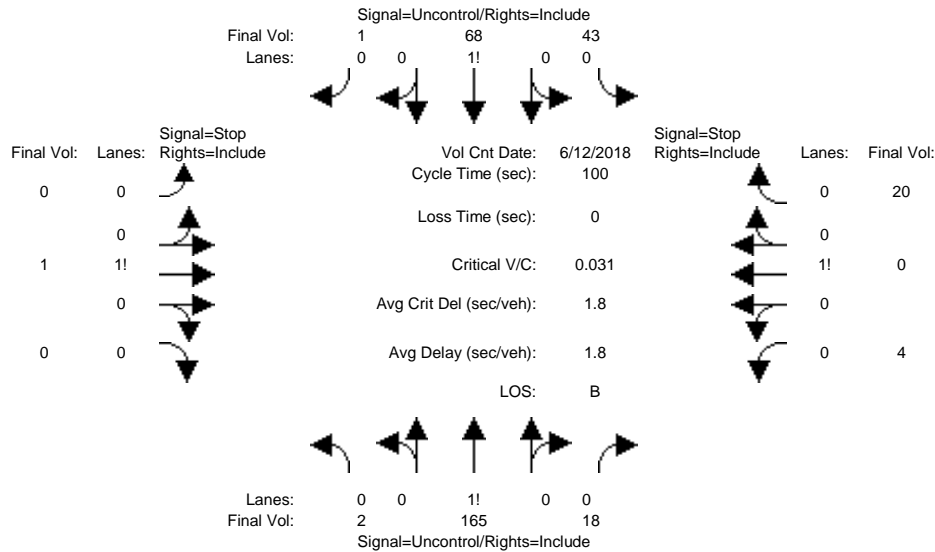
Peak Rolling Hour Flow Rates

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	0	1	0	1
Lights	0	20	203	73	0	27	84	127	0	57	353	11	0	110	681	11	1,757
Mediums	0	0	2	1	0	0	0	1	0	0	1	0	0	0	6	0	11
Total	0	20	205	74	0	27	84	128	0	57	354	11	0	110	688	11	1,769

Appendix B
Intersection Level of Service Calculations

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing AM

Intersection #1: First Street and Lyell Street



Street Name: First Street Lyell Street
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Table with columns for Volume Module, Count, Date (12 Jun 2018), and time range (8:00 to 9:00 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.

Table for Critical Gap Module with columns for Critical Gp and FollowUpTim across different movements.

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.

Peak Hour Delay Signal Warrant Report

Intersection #1 First Street and Lyell Street

Future Volume Alternative: Peak Hour Warrant NOT Met

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
Lanes:	0 0 1! 0 0	0 0 1! 0 0	0 0 1 0 0	0 0 1! 0 0
Initial Vol:	2 165 18	43 68 1	0 1 0	4 0 20
ApproachDel:	xxxxxx	xxxxxx	11.4	9.6

Approach[eastbound][lanes=1][control=Stop Sign]
 Signal Warrant Rule #1: [vehicle-hours=0.0]
 FAIL - Vehicle-hours less than 4 for one lane approach.
 Signal Warrant Rule #2: [approach volume=1]
 FAIL - Approach volume less than 100 for one lane approach.
 Signal Warrant Rule #3: [approach count=4][total volume=322]
 FAIL - Total volume less than 650 for intersection
 with less than four approaches.

Approach[westbound][lanes=1][control=Stop Sign]
 Signal Warrant Rule #1: [vehicle-hours=0.1]
 FAIL - Vehicle-hours less than 4 for one lane approach.
 Signal Warrant Rule #2: [approach volume=24]
 FAIL - Approach volume less than 100 for one lane approach.
 Signal Warrant Rule #3: [approach count=4][total volume=322]
 FAIL - Total volume less than 650 for intersection
 with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Peak Hour Volume Signal Warrant Report [Urban]

 Intersection #1 First Street and Lyell Street

 Future Volume Alternative: Peak Hour Warrant NOT Met

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
Lanes:	0 0 1! 0 0	0 0 1! 0 0	0 0 1 0 0	0 0 1! 0 0
Initial Vol:	2 165 18	43 68 1	0 1 0	4 0 20

Major Street Volume: 297
 Minor Approach Volume: 24
 Minor Approach Volume Threshold: 543

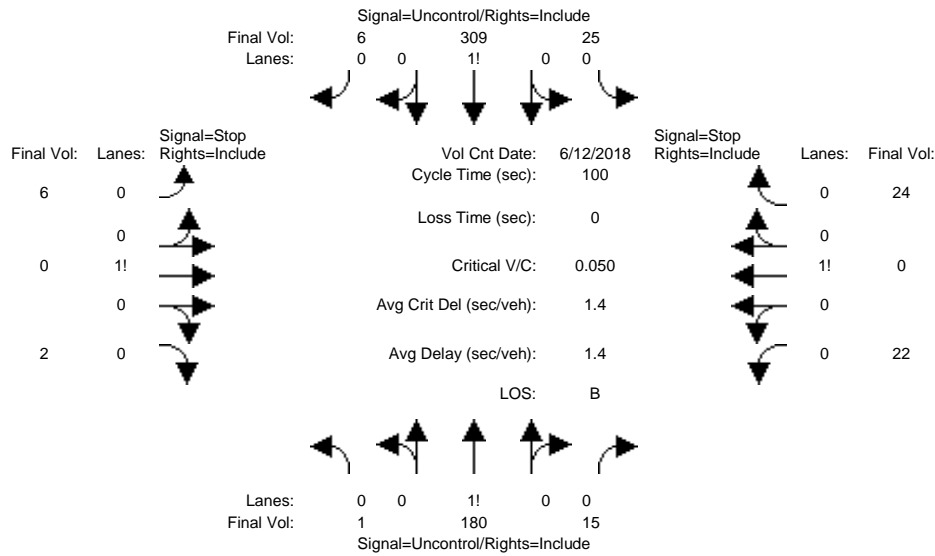
SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing PM

Intersection #1: First Street and Lyell Street



Street Name: First Street Lyell Street
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

Volume Module:	>> Count	Date:	12 Jun 2018	<<	4:30 to 5:30 PM
Base Vol:	1 180 15	25 309	6	6 0 2	22 0 24
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 1.00
Initial Bse:	1 180 15	25 309	6	6 0 2	22 0 24
Added Vol:	0 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 0
Initial Fut:	1 180 15	25 309	6	6 0 2	22 0 24
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 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 1.00
PHF Volume:	1 180 15	25 309	6	6 0 2	22 0 24
Reduct Vol:	0 0 0	0 0 0	0	0 0 0	0 0 0
FinalVolume:	1 180 15	25 309	6	6 0 2	22 0 24

Critical Gap Module:

Critical Gp:	4.1 xxxx xxxxx	4.1 xxxx xxxxx	7.1 6.5 6.2	7.1 6.5 6.2
FollowUpTim:	2.2 xxxx xxxxx	2.2 xxxx xxxxx	3.5 4.0 3.3	3.5 4.0 3.3

Capacity Module:

Cnflct Vol:	315 xxxx xxxxx	195 xxxx xxxxx	564 559 312	553 555 188
Potent Cap.:	1257 xxxx xxxxx	1390 xxxx xxxxx	440 440 733	447 443 860
Move Cap.:	1257 xxxx xxxxx	1390 xxxx xxxxx	421 432 733	439 435 860
Volume/Cap:	0.00 xxxx xxxxx	0.02 xxxx xxxxx	0.01 0.00 0.00	0.05 0.00 0.03

Level Of Service Module:

2Way95thQ:	0.0 xxxx xxxxx	0.1 xxxx xxxxx	xxxx xxxx xxxxx	xxxx xxxx xxxxx
Control Del:	7.9 xxxx xxxxx	7.6 xxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx
LOS by Move:	A * *	A * *	* * *	* * *
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx xxxx xxxxx	xxxx xxxx xxxxx	xxxx 471 xxxxx	xxxx 590 xxxxx
SharedQueue:	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx 0.1 xxxxx	xxxxx 0.3 xxxxx
Shrd ConDel:	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx 12.8 xxxxx	xxxxx 11.6 xxxxx
Shared LOS:	* * *	* * *	* B *	* B *
ApproachDel:	xxxxxxx	xxxxxxx	12.8	11.6
ApproachLOS:	*	*	B	B

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

Peak Hour Delay Signal Warrant Report

 Intersection #1 First Street and Lyell Street

 Future Volume Alternative: Peak Hour Warrant NOT Met

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
Lanes:	0 0 1! 0 0	0 0 1! 0 0	0 0 1! 0 0	0 0 1! 0 0
Initial Vol:	1 180 15	25 309 6	6 0 2	22 0 24
ApproachDel:	xxxxxx	xxxxxx	12.8	11.6

Approach[eastbound][lanes=1][control=Stop Sign]
 Signal Warrant Rule #1: [vehicle-hours=0.0]
 FAIL - Vehicle-hours less than 4 for one lane approach.
 Signal Warrant Rule #2: [approach volume=8]
 FAIL - Approach volume less than 100 for one lane approach.
 Signal Warrant Rule #3: [approach count=4][total volume=590]
 FAIL - Total volume less than 650 for intersection
 with less than four approaches.

Approach[westbound][lanes=1][control=Stop Sign]
 Signal Warrant Rule #1: [vehicle-hours=0.1]
 FAIL - Vehicle-hours less than 4 for one lane approach.
 Signal Warrant Rule #2: [approach volume=46]
 FAIL - Approach volume less than 100 for one lane approach.
 Signal Warrant Rule #3: [approach count=4][total volume=590]
 FAIL - Total volume less than 650 for intersection
 with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Peak Hour Volume Signal Warrant Report [Urban]

 Intersection #1 First Street and Lyell Street

 Future Volume Alternative: Peak Hour Warrant NOT Met

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
Lanes:	0 0 1! 0 0	0 0 1! 0 0	0 0 1! 0 0	0 0 1! 0 0
Initial Vol:	1 180 15	25 309 6	6 0 2	22 0 24

Major Street Volume: 536
 Minor Approach Volume: 46
 Minor Approach Volume Threshold: 386

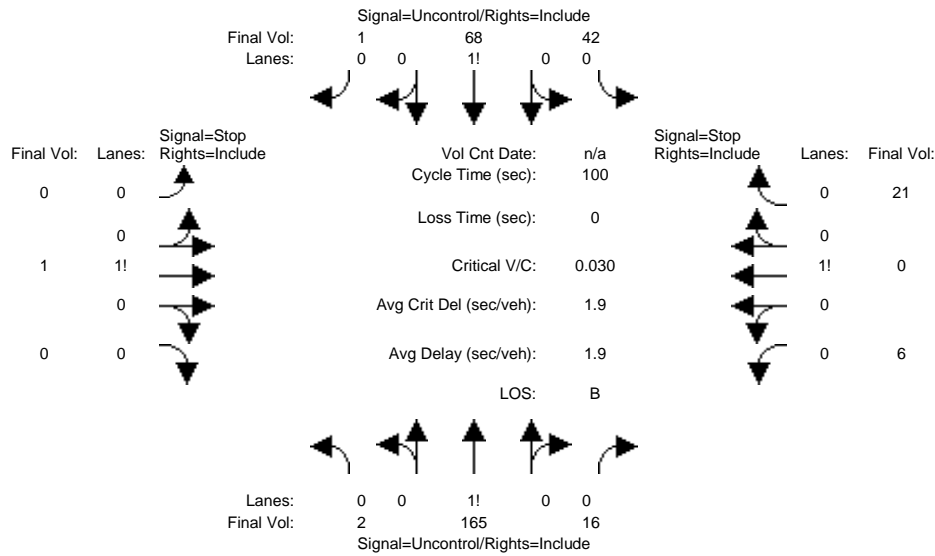
SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing +Project AM

Intersection #1: First Street and Lyell Street



Street Name: First Street Lyell Street
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Table with 12 columns representing movements and 10 rows of volume data including Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume.

Table with 12 columns representing movements and 2 rows of critical gap data including Critical Gap and FollowUpTime.

Table with 12 columns representing movements and 4 rows of capacity data including Conflict Vol, Potent Cap., Move Cap., and Volume/Cap.

Table with 12 columns representing movements and 10 rows of level of service data including 2Way95thQ, Control Del, LOS by Move, Shared Cap., Shared Queue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

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

Peak Hour Delay Signal Warrant Report

Intersection #1 First Street and Lyell Street

Future Volume Alternative: Peak Hour Warrant NOT Met

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
Lanes:	0 0 1! 0 0	0 0 1! 0 0	0 0 1 0 0	0 0 1! 0 0
Initial Vol:	2 165 16	42 68 1	0 1 0	6 0 21
ApproachDel:	xxxxxx	xxxxxx	11.3	9.7

Approach[eastbound][lanes=1][control=Stop Sign]
 Signal Warrant Rule #1: [vehicle-hours=0.0]
 FAIL - Vehicle-hours less than 4 for one lane approach.
 Signal Warrant Rule #2: [approach volume=1]
 FAIL - Approach volume less than 100 for one lane approach.
 Signal Warrant Rule #3: [approach count=4][total volume=322]
 FAIL - Total volume less than 650 for intersection
 with less than four approaches.

Approach[westbound][lanes=1][control=Stop Sign]
 Signal Warrant Rule #1: [vehicle-hours=0.1]
 FAIL - Vehicle-hours less than 4 for one lane approach.
 Signal Warrant Rule #2: [approach volume=27]
 FAIL - Approach volume less than 100 for one lane approach.
 Signal Warrant Rule #3: [approach count=4][total volume=322]
 FAIL - Total volume less than 650 for intersection
 with less than four approaches.

SIGNAL WARRANT DISCLAIMER

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The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Peak Hour Volume Signal Warrant Report [Urban]

 Intersection #1 First Street and Lyell Street

 Future Volume Alternative: Peak Hour Warrant NOT Met

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
Lanes:	0 0 1! 0 0	0 0 1! 0 0	0 0 1 0 0	0 0 1! 0 0
Initial Vol:	2 165 16	42 68 1	0 1 0	6 0 21

Major Street Volume: 294
 Minor Approach Volume: 27
 Minor Approach Volume Threshold: 546

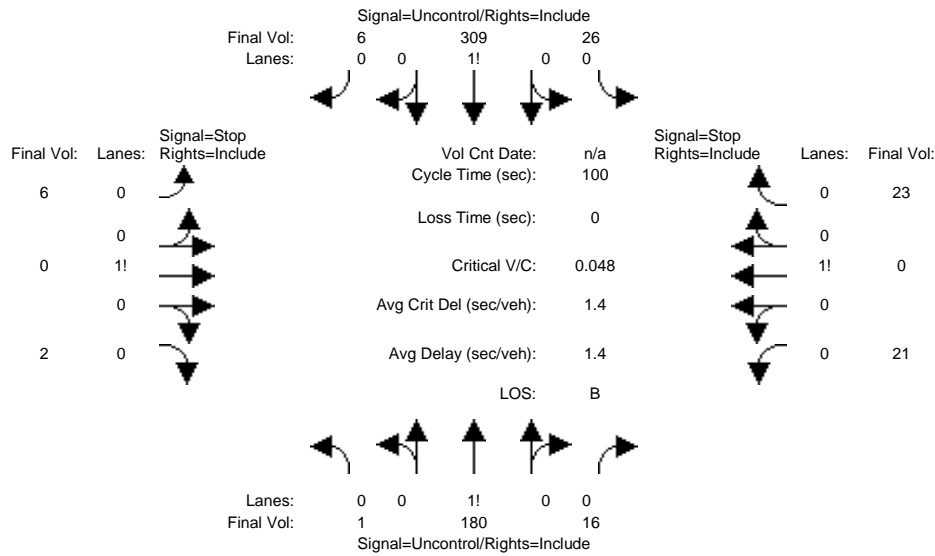
SIGNAL WARRANT DISCLAIMER

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Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing +Project PM

Intersection #1: First Street and Lyell Street



Street Name: First Street Lyell Street
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Table with 12 columns representing movements and 11 rows of volume data including Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume.

Table with 12 columns representing movements and 2 rows of critical gap and follow-up time data.

Table with 12 columns representing movements and 4 rows of capacity data including Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap.

Table with 12 columns representing movements and 10 rows of Level of Service data including 2Way95thQ, Control Del, LOS by Move, Shared Cap., Shared Queue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

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

Peak Hour Delay Signal Warrant Report

Intersection #1 First Street and Lyell Street

Future Volume Alternative: Peak Hour Warrant NOT Met

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
Lanes:	0 0 1! 0 0	0 0 1! 0 0	0 0 1! 0 0	0 0 1! 0 0
Initial Vol:	1 180 16	26 309 6	6 0 2	21 0 23
ApproachDel:	xxxxxx	xxxxxx	12.8	11.6

Approach[eastbound][lanes=1][control=Stop Sign]
 Signal Warrant Rule #1: [vehicle-hours=0.0]
 FAIL - Vehicle-hours less than 4 for one lane approach.
 Signal Warrant Rule #2: [approach volume=8]
 FAIL - Approach volume less than 100 for one lane approach.
 Signal Warrant Rule #3: [approach count=4][total volume=590]
 FAIL - Total volume less than 650 for intersection
 with less than four approaches.

Approach[westbound][lanes=1][control=Stop Sign]
 Signal Warrant Rule #1: [vehicle-hours=0.1]
 FAIL - Vehicle-hours less than 4 for one lane approach.
 Signal Warrant Rule #2: [approach volume=44]
 FAIL - Approach volume less than 100 for one lane approach.
 Signal Warrant Rule #3: [approach count=4][total volume=590]
 FAIL - Total volume less than 650 for intersection
 with less than four approaches.

SIGNAL WARRANT DISCLAIMER

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Peak Hour Volume Signal Warrant Report [Urban]

 Intersection #1 First Street and Lyell Street

 Future Volume Alternative: Peak Hour Warrant NOT Met

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
Lanes:	0 0 1! 0 0	0 0 1! 0 0	0 0 1! 0 0	0 0 1! 0 0
Initial Vol:	1 180 16	26 309 6	6 0 2	21 0 23

Major Street Volume: 538
 Minor Approach Volume: 44
 Minor Approach Volume Threshold: 385

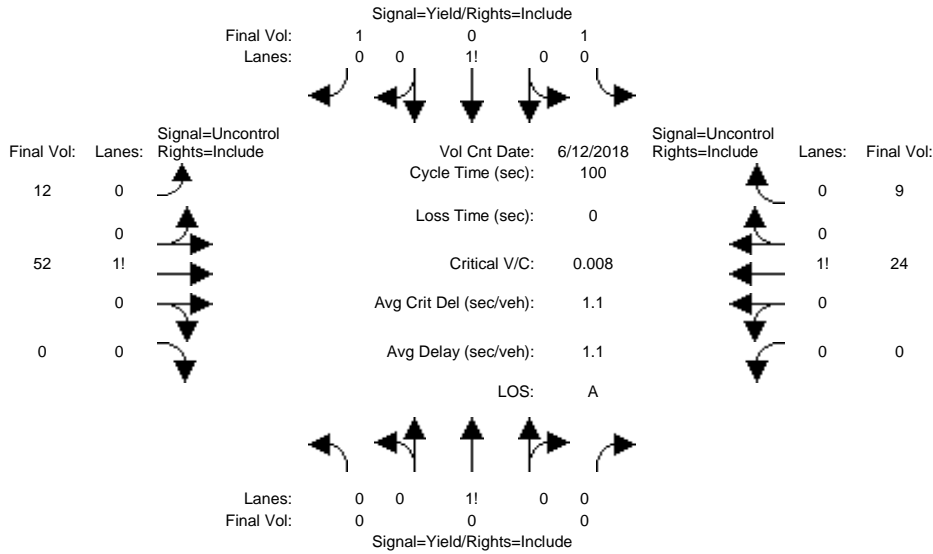
SIGNAL WARRANT DISCLAIMER

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Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing AM

Intersection #2: Alley and Lyell Street



Street Name: Alley Lyell Street
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

Volume Module:	>>	Count	Date:	12 Jun 2018	<<	8:00 to 9:00 AM						
Base Vol:	0	0	0	1	0	1	12	52	0	0	24	9
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	0	0	1	0	1	12	52	0	0	24	9
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	0	0	1	0	1	12	52	0	0	24	9
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	0	0	1	0	1	12	52	0	0	24	9
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	1	0	1	12	52	0	0	24	9

Critical Gap Module:

Critical Gp:	7.1	6.5	6.2	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	105	109	52	105	105	29	33	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	880	785	1021	898	789	1052	1592	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	874	779	1021	893	783	1052	1592	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	0.00	0.01	xxxx	xxxx	xxxx	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	0	xxxxx	xxxx	966	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.0	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	8.7	xxxxx	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxxx				8.7		xxxxxxx			xxxxxxx		
ApproachLOS:	*				A		*			*		*

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

Peak Hour Delay Signal Warrant Report

 Intersection #2 Alley and Lyell Street

 Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Yield Sign	Yield Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 1! 0 0	0 0 1! 0 0	0 1 0 0 0	0 0 0 1 0
Initial Vol:	0 0 0	1 0 1	12 52 0	0 24 9
ApproachDel:	xxxxxx	8.7	xxxxxx	xxxxxx

Approach[southbound][lanes=1][control=Yield Sign]
 Signal Warrant Rule #1: [vehicle-hours=0.0]
 FAIL - Controller not stop sign.
 Signal Warrant Rule #2: [approach volume=2]
 FAIL - Approach volume less than 100 for one lane approach.
 Signal Warrant Rule #3: [approach count=3][total volume=99]
 FAIL - Total volume less than 650 for intersection
 with less than four approaches.

SIGNAL WARRANT DISCLAIMER

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Peak Hour Volume Signal Warrant Report [Urban]

 Intersection #2 Alley and Lyell Street

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Yield Sign	Yield Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 1! 0 0	0 0 1! 0 0	0 1 0 0 0	0 0 0 1 0
Initial Vol:	0 0 0	1 0 1	12 52 0	0 24 9

Major Street Volume: 97
 Minor Approach Volume: 2
 Minor Approach Volume Threshold: 842

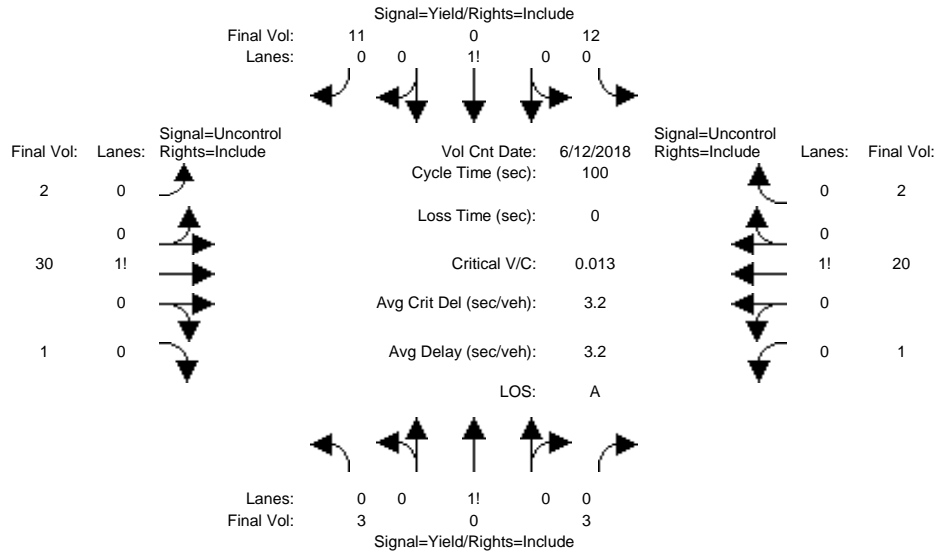
SIGNAL WARRANT DISCLAIMER

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Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing PM

Intersection #2: Alley and Lyell Street



Street Name: Alley Lyell Street
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

Volume Module:	>> Count	Date:	12 Jun 2018	<<	4:30 to 5:30 PM
Base Vol:	3 0 3	12 0 11	2 30 1	1 20 2	
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	1.00 1.00 1.00
Initial Bse:	3 0 3	12 0 11	2 30 1	1 20 2	
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:	3 0 3	12 0 11	2 30 1	1 20 2	
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	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	1.00 1.00 1.00
PHF Volume:	3 0 3	12 0 11	2 30 1	1 20 2	
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0	
FinalVolume:	3 0 3	12 0 11	2 30 1	1 20 2	

Critical Gap Module:

Critical Gp:	7.1 6.5 6.2	7.1 6.5 6.2	4.1 xxxx xxxxxx	4.1 xxxx xxxxxx
FollowUpTim:	3.5 4.0 3.3	3.5 4.0 3.3	2.2 xxxx xxxxxx	2.2 xxxx xxxxxx

Capacity Module:

Cnflct Vol:	63 59 31	59 58 21	22 xxxx xxxxxx	31 xxxx xxxxxx
Potent Cap.:	936 836 1050	942 837 1062	1607 xxxx xxxxxx	1595 xxxx xxxxxx
Move Cap.:	925 835 1050	938 835 1062	1607 xxxx xxxxxx	1595 xxxx xxxxxx
Volume/Cap:	0.00 0.00 0.00	0.01 0.00 0.01	0.00 xxxx xxxxxx	0.00 xxxx xxxxxx

Level Of Service Module:

2Way95thQ:	xxxx xxxx xxxxxx	xxxx xxxx xxxxxx	0.0 xxxx xxxxxx	0.0 xxxx xxxxxx
Control Del:	xxxxx xxxx xxxxxx	xxxxx xxxx xxxxxx	7.2 xxxx xxxxxx	7.3 xxxx xxxxxx
LOS by Move:	* * *	* * *	A * *	A * *
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx 984 xxxxxx	xxxx 994 xxxxxx	xxxx xxxx xxxxxx	xxxx xxxx xxxxxx
SharedQueue:	xxxxx 0.0 xxxxxx	xxxxx 0.1 xxxxxx	xxxxx xxxx xxxxxx	xxxxx xxxx xxxxxx
Shrd ConDel:	xxxxx 8.7 xxxxxx	xxxxx 8.7 xxxxxx	xxxxx xxxx xxxxxx	xxxxx xxxx xxxxxx
Shared LOS:	* A *	* A *	* * *	* * *
ApproachDel:	8.7	8.7	xxxxxxx	xxxxxxx
ApproachLOS:	A	A	*	*

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

Peak Hour Delay Signal Warrant Report

Intersection #2 Alley and Lyell Street

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Yield Sign	Yield Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 1! 0 0	0 0 1! 0 0	0 0 1! 0 0	0 0 1! 0 0
Initial Vol:	3 0 3	12 0 11	2 30 1	1 20 2
ApproachDel:	8.7	8.7	xxxxxx	xxxxxx

Approach[northbound][lanes=1][control=Yield Sign]
 Signal Warrant Rule #1: [vehicle-hours=0.0]
 FAIL - Controller not stop sign.
 Signal Warrant Rule #2: [approach volume=6]
 FAIL - Approach volume less than 100 for one lane approach.
 Signal Warrant Rule #3: [approach count=4][total volume=85]
 FAIL - Total volume less than 650 for intersection
 with less than four approaches.

Approach[southbound][lanes=1][control=Yield Sign]
 Signal Warrant Rule #1: [vehicle-hours=0.1]
 FAIL - Controller not stop sign.
 Signal Warrant Rule #2: [approach volume=23]
 FAIL - Approach volume less than 100 for one lane approach.
 Signal Warrant Rule #3: [approach count=4][total volume=85]
 FAIL - Total volume less than 650 for intersection
 with less than four approaches.

SIGNAL WARRANT DISCLAIMER

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Peak Hour Volume Signal Warrant Report [Urban]

 Intersection #2 Alley and Lyell Street

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Yield Sign	Yield Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 1! 0 0	0 0 1! 0 0	0 0 1! 0 0	0 0 1! 0 0
Initial Vol:	3 0 3	12 0 11	2 30 1	1 20 2

Major Street Volume: 56
 Minor Approach Volume: 23
 Minor Approach Volume Threshold: 988

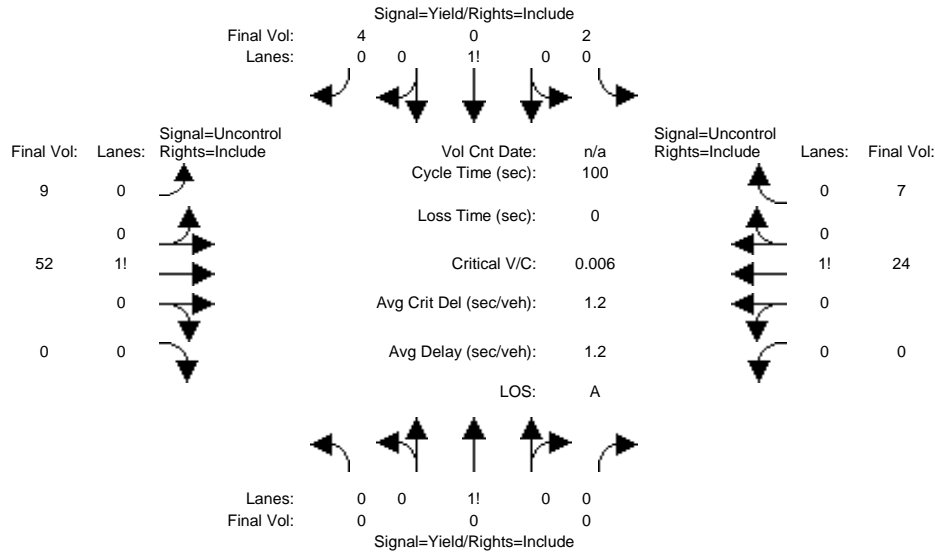
SIGNAL WARRANT DISCLAIMER

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Level Of Service Computation Report
 2000 HCM Unsignalized (Future Volume Alternative)
 Existing +Project AM

Intersection #2: Alley and Lyell Street



Street Name: Alley Lyell Street
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

Volume Module:												
	North Bound			South Bound			East Bound			West Bound		
	L	T	R	L	T	R	L	T	R	L	T	R
Base Vol:	0	0	0	2	0	4	9	52	0	0	24	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:	0	0	0	2	0	4	9	52	0	0	24	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:	0	0	0	2	0	4	9	52	0	0	24	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:	0	0	0	2	0	4	9	52	0	0	24	7
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	2	0	4	9	52	0	0	24	7

Critical Gap Module:												
	North Bound			South Bound			East Bound			West Bound		
	L	T	R	L	T	R	L	T	R	L	T	R
Critical Gp:	7.1	6.5	6.2	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx

Capacity Module:												
	North Bound			South Bound			East Bound			West Bound		
	L	T	R	L	T	R	L	T	R	L	T	R
Cnflct Vol:	100	101	52	98	98	28	31	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	887	793	1021	907	796	1054	1595	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	880	788	1021	903	792	1054	1595	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	0.00	0.01	xxxx	xxxx	xxxx	xxxx	xxxx

Level Of Service Module:												
	North Bound			South Bound			East Bound			West Bound		
	L	T	R	L	T	R	L	T	R	L	T	R
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	
Shared Cap.:	xxxx	0	xxxxx	xxxx	998	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.0	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	8.6	xxxxx	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxxx			8.6			xxxxxxx			xxxxxxx		
ApproachLOS:	*			A			*			*		

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

Peak Hour Delay Signal Warrant Report

 Intersection #2 Alley and Lyell Street

 Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Yield Sign	Yield Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 1! 0 0	0 0 1! 0 0	0 1 0 0 0	0 0 0 1 0
Initial Vol:	0 0 0	2 0 4	9 52 0	0 24 7
ApproachDel:	xxxxxx	8.6	xxxxxx	xxxxxx

Approach[southbound][lanes=1][control=Yield Sign]
 Signal Warrant Rule #1: [vehicle-hours=0.0]
 FAIL - Controller not stop sign.
 Signal Warrant Rule #2: [approach volume=6]
 FAIL - Approach volume less than 100 for one lane approach.
 Signal Warrant Rule #3: [approach count=3][total volume=98]
 FAIL - Total volume less than 650 for intersection
 with less than four approaches.

SIGNAL WARRANT DISCLAIMER

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Peak Hour Volume Signal Warrant Report [Urban]

 Intersection #2 Alley and Lyell Street

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Yield Sign	Yield Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 1! 0 0	0 0 1! 0 0	0 1 0 0 0	0 0 0 1 0
Initial Vol:	0 0 0	2 0 4	9 52 0	0 24 7

Major Street Volume: 92
 Minor Approach Volume: 6
 Minor Approach Volume Threshold: 856

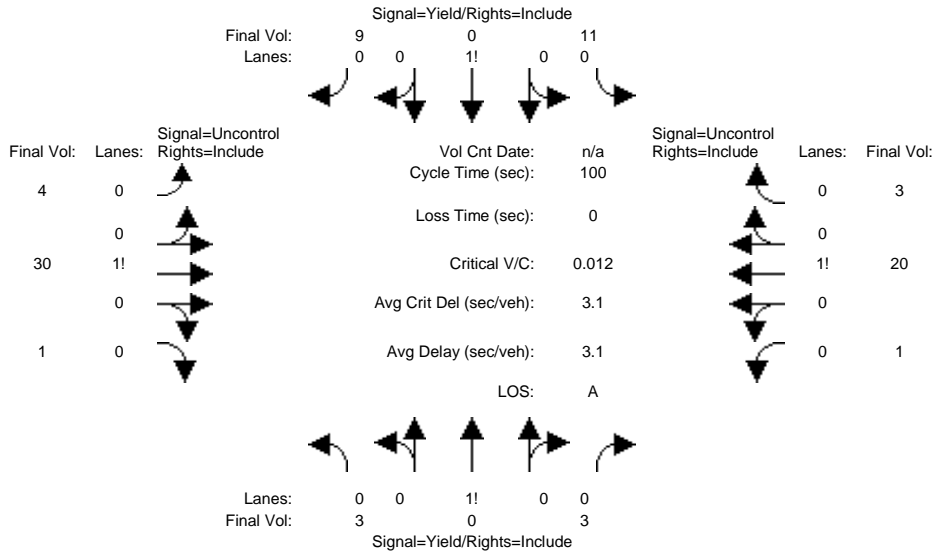
SIGNAL WARRANT DISCLAIMER

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Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing +Project PM

Intersection #2: Alley and Lyell Street



Street Name: Alley Lyell Street

Approach: North Bound South Bound East Bound West Bound

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

Volume Module:

Base Vol:	3	0	3	11	0	9	4	30	1	1	20	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:	3	0	3	11	0	9	4	30	1	1	20	3
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:	3	0	3	11	0	9	4	30	1	1	20	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:	3	0	3	11	0	9	4	30	1	1	20	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	3	0	3	11	0	9	4	30	1	1	20	3

Critical Gap Module:

Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxxx	4.1	xxxx	xxxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxxx	2.2	xxxx	xxxxxx

Capacity Module:

Cnflct Vol:	67	64	31	64	63	22	23	xxxx	xxxxxx	31	xxxx	xxxxxx
Potent Cap.:	932	831	1050	936	832	1062	1605	xxxx	xxxxxx	1595	xxxx	xxxxxx
Move Cap.:	922	829	1050	931	830	1062	1605	xxxx	xxxxxx	1595	xxxx	xxxxxx
Volume/Cap:	0.00	0.00	0.00	0.01	0.00	0.01	0.00	xxxx	xxxx	0.00	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	0.0	xxxx	xxxxxx	0.0	xxxx	xxxxxx
Control Del:	xxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	7.2	xxxx	xxxxxx	7.3	xxxx	xxxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	981	xxxxxx	xxxx	986	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx
SharedQueue:	xxxxxx	0.0	xxxxxx	xxxxxx	0.1	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
Shrd ConDel:	xxxxxx	8.7	xxxxxx	xxxxxx	8.7	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
Shared LOS:	*	A	*	*	A	*	*	*	*	*	*	*
ApproachDel:	8.7			8.7			xxxxxxx			xxxxxxx		
ApproachLOS:	A			A			*			*		*

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

Peak Hour Delay Signal Warrant Report

Intersection #2 Alley and Lyell Street

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Yield Sign	Yield Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 1! 0 0	0 0 1! 0 0	0 0 1! 0 0	0 0 1! 0 0
Initial Vol:	3 0 3	11 0 9	4 30 1	1 20 3
ApproachDel:	8.7	8.7	xxxxxx	xxxxxx

Approach[northbound][lanes=1][control=Yield Sign]
 Signal Warrant Rule #1: [vehicle-hours=0.0]
 FAIL - Controller not stop sign.
 Signal Warrant Rule #2: [approach volume=6]
 FAIL - Approach volume less than 100 for one lane approach.
 Signal Warrant Rule #3: [approach count=4][total volume=85]
 FAIL - Total volume less than 650 for intersection
 with less than four approaches.

Approach[southbound][lanes=1][control=Yield Sign]
 Signal Warrant Rule #1: [vehicle-hours=0.0]
 FAIL - Controller not stop sign.
 Signal Warrant Rule #2: [approach volume=20]
 FAIL - Approach volume less than 100 for one lane approach.
 Signal Warrant Rule #3: [approach count=4][total volume=85]
 FAIL - Total volume less than 650 for intersection
 with less than four approaches.

SIGNAL WARRANT DISCLAIMER
 This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Peak Hour Volume Signal Warrant Report [Urban]

 Intersection #2 Alley and Lyell Street

 Future Volume Alternative: Peak Hour Warrant NOT Met

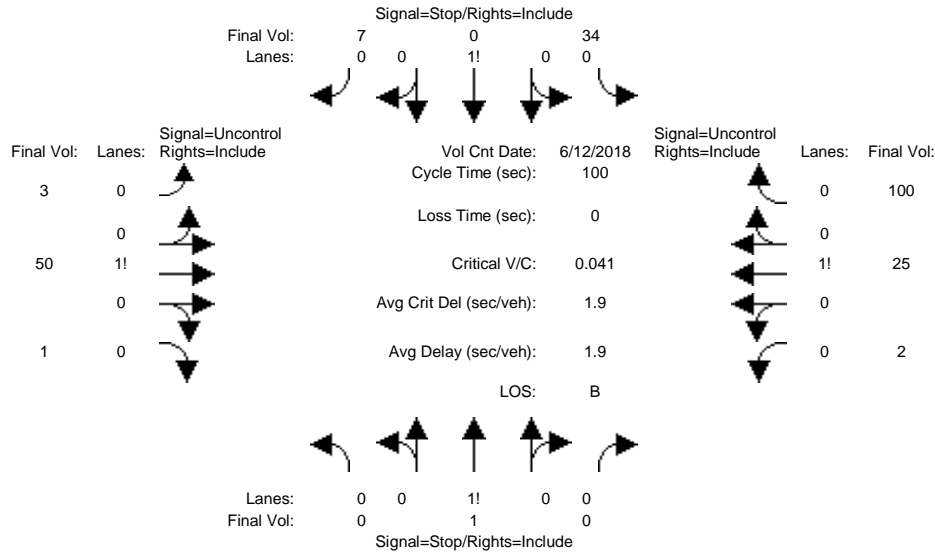
Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Yield Sign	Yield Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 1! 0 0	0 0 1! 0 0	0 0 1! 0 0	0 0 1! 0 0
Initial Vol:	3 0 3	11 0 9	4 30 1	1 20 3
Major Street Volume:	59			
Minor Approach Volume:	20			
Minor Approach Volume Threshold:	974			

SIGNAL WARRANT DISCLAIMER
 This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Level Of Service Computation Report
 2000 HCM Unsignalized (Future Volume Alternative)
 Existing AM

Intersection #3: Second Street and Lyell Street



Street Name: Second Street Lyell Street
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

Volume Module:	>> Count	Date:	12 Jun 2018	<<	8:00 to 9:00 AM
Base Vol:	0 1 0		34 0 7		3 50 1 2 25 100
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 1 0		34 0 7		3 50 1 2 25 100
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 1 0		34 0 7		3 50 1 2 25 100
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 1 0		34 0 7		3 50 1 2 25 100
Reduct Vol:	0 0 0		0 0 0		0 0 0 0 0 0
FinalVolume:	0 1 0		34 0 7		3 50 1 2 25 100

Critical Gap Module:

Critical Gp:xxxxx	6.5 xxxxx	7.1 6.5 6.2	4.1 xxxx xxxxx	4.1 xxxx xxxxx
FollowUpTim:xxxxx	4.0 xxxxx	3.5 4.0 3.3	2.2 xxxx xxxxx	2.2 xxxx xxxxx

Capacity Module:

Cnflct Vol:	xxxx 186 xxxxx	136 136 75	125 xxxx xxxxx	51 xxxx xxxxx
Potent Cap.:	xxxx 712 xxxxx	840 759 992	1474 xxxx xxxxx	1568 xxxx xxxxx
Move Cap.:	xxxx 710 xxxxx	837 756 992	1474 xxxx xxxxx	1568 xxxx xxxxx
Volume/Cap:	xxxx 0.00 xxxx	0.04 0.00 0.01	0.00 xxxx xxxx	0.00 xxxx xxxx

Level Of Service Module:

2Way95thQ:	xxxx 0.0 xxxxx	xxxx xxxx xxxxx	0.0 xxxx xxxxx	0.0 xxxx xxxxx
Control Del:xxxxx	10.1 xxxxx	xxxxx xxxx xxxxx	7.4 xxxx xxxxx	7.3 xxxx xxxxx
LOS by Move:	* B * * *	* * * * *	A * * * *	A * * * *
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx xxxx xxxxx	xxxx 860 xxxxx	xxxx xxxx xxxxx	xxxx xxxx xxxxx
SharedQueue:xxxxx	xxxx xxxxx xxxxx	xxxxx 0.2 xxxxx	xxxxx xxxx xxxxx	xxxxx xxxx xxxxx
Shrd ConDel:xxxxx	xxxx xxxxx xxxxx	xxxxx 9.4 xxxxx	xxxxx xxxx xxxxx	xxxxx xxxx xxxxx
Shared LOS:	* * * * *	* A * * *	* * * * *	* * * * *
ApproachDel:	10.1	9.4	xxxxxxx	xxxxxxx
ApproachLOS:	B	A	*	*

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

Peak Hour Delay Signal Warrant Report

 Intersection #3 Second Street and Lyell Street

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 1 0 0	0 0 1! 0 0	0 0 1! 0 0	0 0 1! 0 0
Initial Vol:	0 1 0	34 0 7	3 50 1	2 25 100
ApproachDel:	10.1	9.4	xxxxxx	xxxxxx

Approach[northbound][lanes=1][control=Stop Sign]
 Signal Warrant Rule #1: [vehicle-hours=0.0]
 FAIL - Vehicle-hours less than 4 for one lane approach.
 Signal Warrant Rule #2: [approach volume=1]
 FAIL - Approach volume less than 100 for one lane approach.
 Signal Warrant Rule #3: [approach count=4][total volume=223]
 FAIL - Total volume less than 650 for intersection
 with less than four approaches.

Approach[southbound][lanes=1][control=Stop Sign]
 Signal Warrant Rule #1: [vehicle-hours=0.1]
 FAIL - Vehicle-hours less than 4 for one lane approach.
 Signal Warrant Rule #2: [approach volume=41]
 FAIL - Approach volume less than 100 for one lane approach.
 Signal Warrant Rule #3: [approach count=4][total volume=223]
 FAIL - Total volume less than 650 for intersection
 with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Peak Hour Volume Signal Warrant Report [Urban]

 Intersection #3 Second Street and Lyell Street

 Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 1 0 0	0 0 1! 0 0	0 0 1! 0 0	0 0 1! 0 0
Initial Vol:	0 1 0	34 0 7	3 50 1	2 25 100

Major Street Volume: 181
 Minor Approach Volume: 41
 Minor Approach Volume Threshold: 675

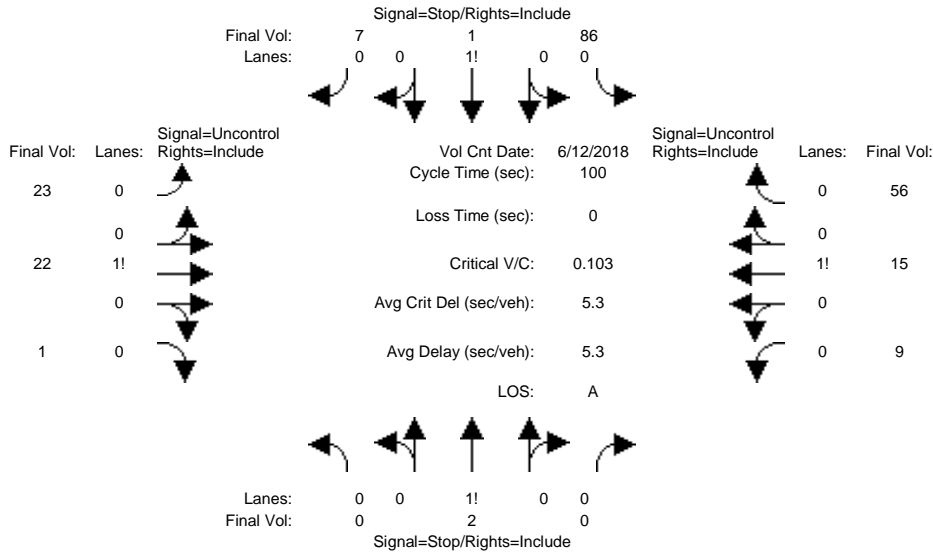
SIGNAL WARRANT DISCLAIMER

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Level Of Service Computation Report
 2000 HCM Unsignalized (Future Volume Alternative)
 Existing PM

Intersection #3: Second Street and Lyell Street



Street Name: Second Street Lyell Street
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

Volume Module:	>>	Count	Date:	12 Jun 2018	<<	4:30 to 5:30 PM						
Base Vol:	0	2	0	86	1	7	23	22	1	9	15	56
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	2	0	86	1	7	23	22	1	9	15	56
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	2	0	86	1	7	23	22	1	9	15	56
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	2	0	86	1	7	23	22	1	9	15	56
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	2	0	86	1	7	23	22	1	9	15	56

Critical Gap Module:

Critical Gp:xxxxx	6.5	xxxxx	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:xxxxx	4.0	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	xxxx	158	xxxxx	131	130	43	71	xxxx	xxxxx	23	xxxx	xxxxx
Potent Cap.:	xxxx	738	xxxxx	847	764	1033	1542	xxxx	xxxxx	1605	xxxx	xxxxx
Move Cap.:	xxxx	723	xxxxx	832	749	1033	1542	xxxx	xxxxx	1605	xxxx	xxxxx
Volume/Cap:	xxxx	0.00	xxxx	0.10	0.00	0.01	0.01	xxxx	xxxx	0.01	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	0.0	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx
Control Del:xxxxx	10.0	xxxxx	xxxxx	xxxx	xxxx	xxxxx	7.4	xxxx	xxxxx	7.3	xxxx	xxxxx
LOS by Move:	*	A	*	*	*	*	A	*	*	A	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	843	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:xxxxx	xxxx	xxxxx	xxxxx	xxxxx	0.4	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:xxxxx	xxxx	xxxxx	xxxxx	xxxxx	9.8	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	*	*	*	*	*	*
ApproachDel:	10.0			9.8			xxxxxxx			xxxxxxx		
ApproachLOS:	A			A			*			*		*

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

Peak Hour Delay Signal Warrant Report

 Intersection #3 Second Street and Lyell Street

 Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 1 0 0	0 0 1! 0 0	0 0 1! 0 0	0 0 1! 0 0
Initial Vol:	0 2 0	86 1 7	23 22 1	9 15 56
ApproachDel:	10.0	9.8	xxxxxx	xxxxxx

Approach[northbound][lanes=1][control=Stop Sign]
 Signal Warrant Rule #1: [vehicle-hours=0.0]
 FAIL - Vehicle-hours less than 4 for one lane approach.
 Signal Warrant Rule #2: [approach volume=2]
 FAIL - Approach volume less than 100 for one lane approach.
 Signal Warrant Rule #3: [approach count=4][total volume=222]
 FAIL - Total volume less than 650 for intersection
 with less than four approaches.

Approach[southbound][lanes=1][control=Stop Sign]
 Signal Warrant Rule #1: [vehicle-hours=0.3]
 FAIL - Vehicle-hours less than 4 for one lane approach.
 Signal Warrant Rule #2: [approach volume=94]
 FAIL - Approach volume less than 100 for one lane approach.
 Signal Warrant Rule #3: [approach count=4][total volume=222]
 FAIL - Total volume less than 650 for intersection
 with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Peak Hour Volume Signal Warrant Report [Urban]

 Intersection #3 Second Street and Lyell Street

 Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 1 0 0	0 0 1! 0 0	0 0 1! 0 0	0 0 1! 0 0
Initial Vol:	0 2 0	86 1 7	23 22 1	9 15 56

Major Street Volume: 126
 Minor Approach Volume: 94
 Minor Approach Volume Threshold: 772

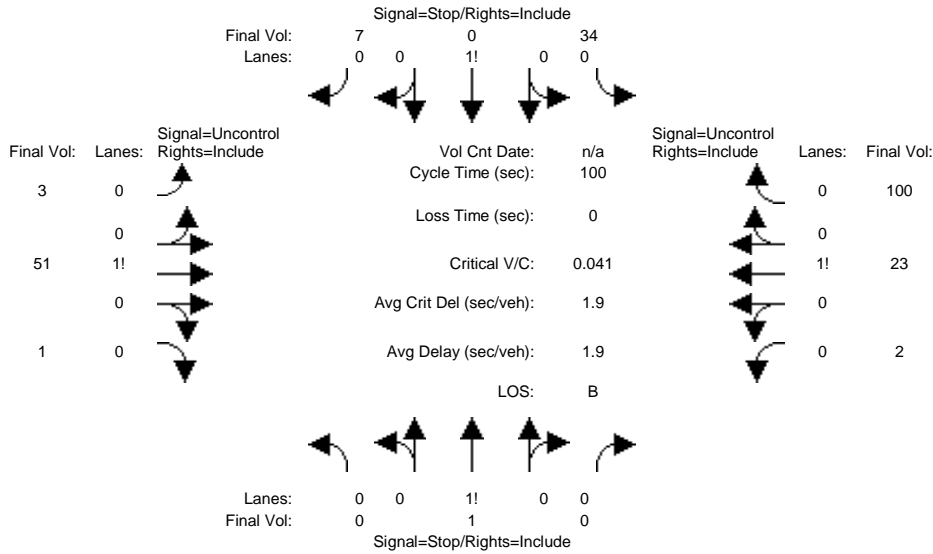
SIGNAL WARRANT DISCLAIMER

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Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing +Project AM

Intersection #3: Second Street and Lyell Street



Street Name: Second Street Lyell Street
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Table with 12 columns representing movements and 10 rows of volume data including Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, and FinalVolume.

Table with 12 columns representing movements and 2 rows of critical gap data including Critical Gp and FollowUpTim.

Table with 12 columns representing movements and 4 rows of capacity data including Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap.

Table with 12 columns representing movements and 10 rows of level of service data including 2Way95thQ, Control Del, LOS by Move, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

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

Peak Hour Delay Signal Warrant Report

Intersection #3 Second Street and Lyell Street

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 1 0 0	0 0 1! 0 0	0 0 1! 0 0	0 0 1! 0 0
Initial Vol:	0 1 0	34 0 7	3 51 1	2 23 100
ApproachDel:	10.1	9.4	xxxxxx	xxxxxx

Approach[northbound][lanes=1][control=Stop Sign]
 Signal Warrant Rule #1: [vehicle-hours=0.0]
 FAIL - Vehicle-hours less than 4 for one lane approach.
 Signal Warrant Rule #2: [approach volume=1]
 FAIL - Approach volume less than 100 for one lane approach.
 Signal Warrant Rule #3: [approach count=4][total volume=222]
 FAIL - Total volume less than 650 for intersection
 with less than four approaches.

Approach[southbound][lanes=1][control=Stop Sign]
 Signal Warrant Rule #1: [vehicle-hours=0.1]
 FAIL - Vehicle-hours less than 4 for one lane approach.
 Signal Warrant Rule #2: [approach volume=41]
 FAIL - Approach volume less than 100 for one lane approach.
 Signal Warrant Rule #3: [approach count=4][total volume=222]
 FAIL - Total volume less than 650 for intersection
 with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Peak Hour Volume Signal Warrant Report [Urban]

 Intersection #3 Second Street and Lyell Street

 Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 1 0 0	0 0 1! 0 0	0 0 1! 0 0	0 0 1! 0 0
Initial Vol:	0 1 0	34 0 7	3 51 1	2 23 100

Major Street Volume: 180
 Minor Approach Volume: 41
 Minor Approach Volume Threshold: 677

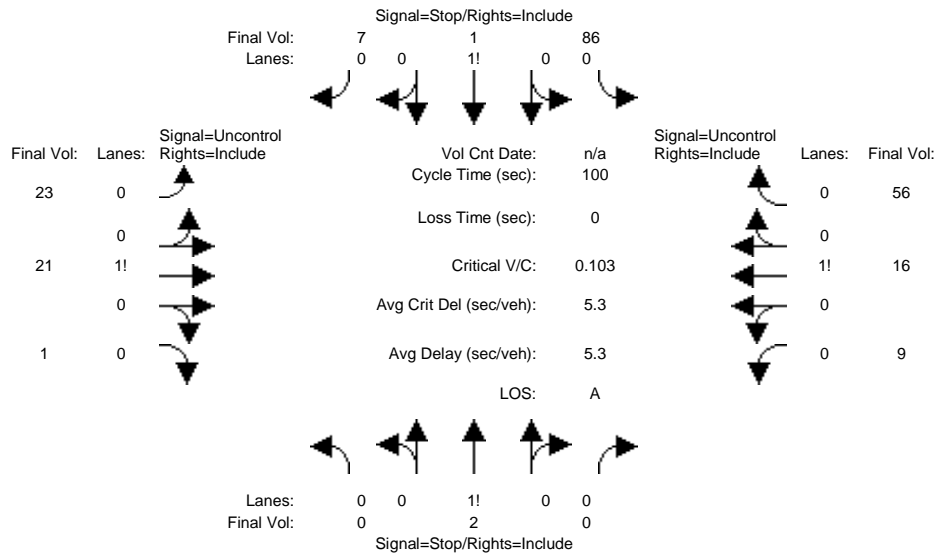
SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing +Project PM

Intersection #3: Second Street and Lyell Street



Street Name: Second Street Lyell Street
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Table with 13 columns representing movements and 12 rows of volume data including Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, and FinalVolume.

Table with 13 columns representing movements and 2 rows of critical gap data including Critical Gp and FollowUpTim.

Table with 13 columns representing movements and 4 rows of capacity data including Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap.

Table with 13 columns representing movements and 10 rows of level of service data including 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.

Peak Hour Delay Signal Warrant Report

Intersection #3 Second Street and Lyell Street

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 1 0 0	0 0 1! 0 0	0 0 1! 0 0	0 0 1! 0 0
Initial Vol:	0 2 0	86 1 7	23 21 1	9 16 56
ApproachDel:	10.0	9.8	xxxxxx	xxxxxx

Approach[northbound][lanes=1][control=Stop Sign]
 Signal Warrant Rule #1: [vehicle-hours=0.0]
 FAIL - Vehicle-hours less than 4 for one lane approach.
 Signal Warrant Rule #2: [approach volume=2]
 FAIL - Approach volume less than 100 for one lane approach.
 Signal Warrant Rule #3: [approach count=4][total volume=222]
 FAIL - Total volume less than 650 for intersection
 with less than four approaches.

Approach[southbound][lanes=1][control=Stop Sign]
 Signal Warrant Rule #1: [vehicle-hours=0.3]
 FAIL - Vehicle-hours less than 4 for one lane approach.
 Signal Warrant Rule #2: [approach volume=94]
 FAIL - Approach volume less than 100 for one lane approach.
 Signal Warrant Rule #3: [approach count=4][total volume=222]
 FAIL - Total volume less than 650 for intersection
 with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Peak Hour Volume Signal Warrant Report [Urban]

 Intersection #3 Second Street and Lyell Street

 Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 1 0 0	0 0 1! 0 0	0 0 1! 0 0	0 0 1! 0 0
Initial Vol:	0 2 0	86 1 7	23 21 1	9 16 56

Major Street Volume: 126
 Minor Approach Volume: 94
 Minor Approach Volume Threshold: 772

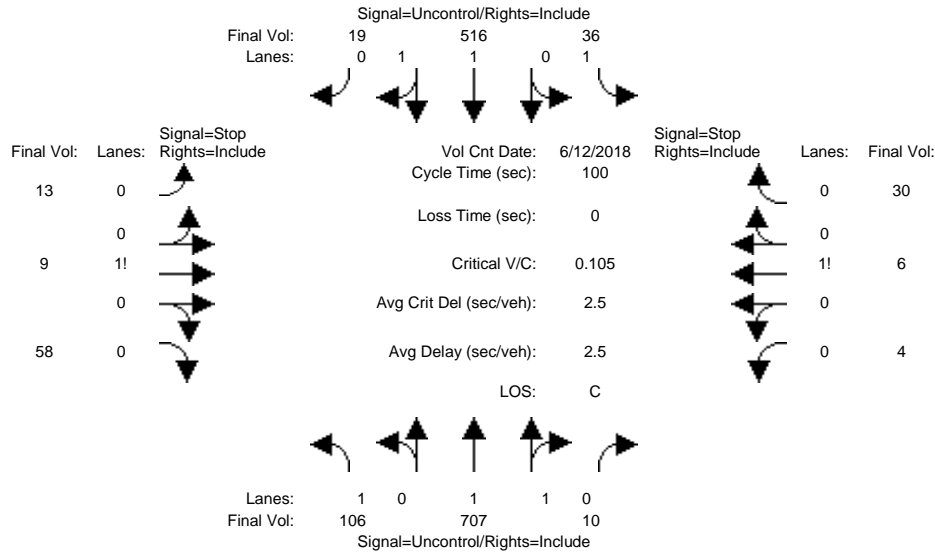
SIGNAL WARRANT DISCLAIMER

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Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing AM

Intersection #4: San Antonio Road and Lyell Street



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

Table with 12 columns representing movements and 10 rows of traffic volume data including Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume.

Table for Critical Gap Module with 12 columns and 2 rows of data for Critical Gap and FollowUpTim.

Table for Capacity Module with 12 columns and 4 rows of data for Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap.

Table for Level Of Service Module with 12 columns and 10 rows of data including 2Way95thQ, Control Del, LOS by Move, Shared Cap., Shared Queue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

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

Peak Hour Delay Signal Warrant Report

Intersection #4 San Antonio Road and Lyell Street

Future Volume Alternative: Peak Hour Warrant NOT Met

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
Lanes:	1 0 1 1 0	1 0 1 1 0	0 0 1! 0 0	0 0 1! 0 0
Initial Vol:	106 707 10	36 516 19	13 9 58	4 6 30
ApproachDel:	xxxxxx	xxxxxx	21.7	20.3

Approach[eastbound][lanes=1][control=Stop Sign]
 Signal Warrant Rule #1: [vehicle-hours=0.5]
 FAIL - Vehicle-hours less than 4 for one lane approach.
 Signal Warrant Rule #2: [approach volume=80]
 FAIL - Approach volume less than 100 for one lane approach.
 Signal Warrant Rule #3: [approach count=4][total volume=1514]
 SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[westbound][lanes=1][control=Stop Sign]
 Signal Warrant Rule #1: [vehicle-hours=0.2]
 FAIL - Vehicle-hours less than 4 for one lane approach.
 Signal Warrant Rule #2: [approach volume=40]
 FAIL - Approach volume less than 100 for one lane approach.
 Signal Warrant Rule #3: [approach count=4][total volume=1514]
 SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Peak Hour Volume Signal Warrant Report [Urban]

 Intersection #4 San Antonio Road and Lyell Street

Future Volume Alternative: Peak Hour Warrant NOT Met

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
Lanes:	1 0 1 1 0	1 0 1 1 0	0 0 1! 0 0	0 0 1! 0 0
Initial Vol:	106 707 10	36 516 19	13 9 58	4 6 30

Major Street Volume: 1394
 Minor Approach Volume: 80
 Minor Approach Volume Threshold: 170

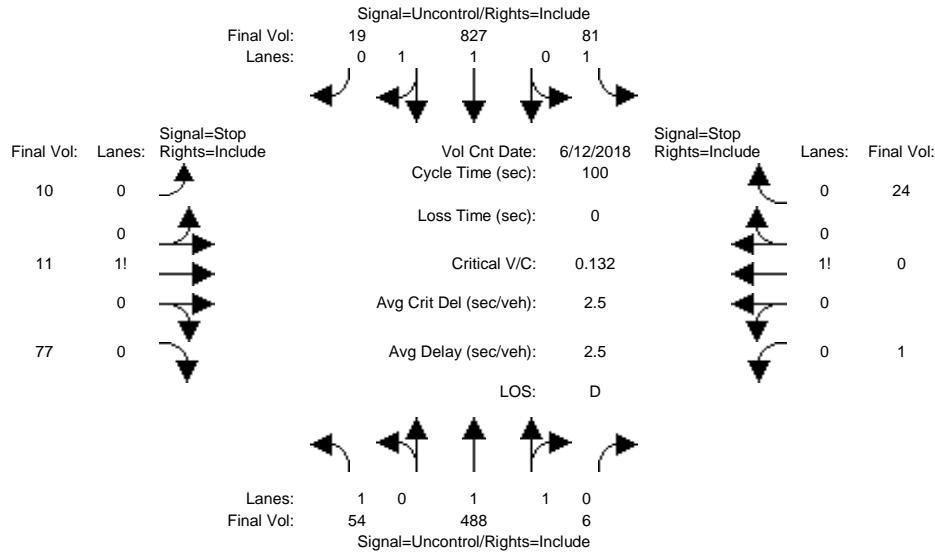
SIGNAL WARRANT DISCLAIMER

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Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing PM

Intersection #4: San Antonio Road and Lyell Street



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

Table with 12 columns representing movements and 10 rows of traffic volume data including Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume.

Table for Critical Gap Module with 12 columns and 2 rows of data for Critical Gap and FollowUpTim.

Table for Capacity Module with 12 columns and 4 rows of data for Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap.

Table for Level Of Service Module with 12 columns and 10 rows of data including 2Way95thQ, Control Del, LOS by Move, Shared Cap., Shared Queue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

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

Peak Hour Delay Signal Warrant Report

Intersection #4 San Antonio Road and Lyell Street

Future Volume Alternative: Peak Hour Warrant NOT Met

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
Lanes:	1 0 1 1 0	1 0 1 1 0	0 0 1! 0 0	0 0 1! 0 0
Initial Vol:	54 488 6	81 827 19	10 11 77	1 0 24
ApproachDel:	xxxxxx	xxxxxx	25.0	11.2

Approach[eastbound][lanes=1][control=Stop Sign]
 Signal Warrant Rule #1: [vehicle-hours=0.7]
 FAIL - Vehicle-hours less than 4 for one lane approach.
 Signal Warrant Rule #2: [approach volume=98]
 FAIL - Approach volume less than 100 for one lane approach.
 Signal Warrant Rule #3: [approach count=4][total volume=1598]
 SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[westbound][lanes=1][control=Stop Sign]
 Signal Warrant Rule #1: [vehicle-hours=0.1]
 FAIL - Vehicle-hours less than 4 for one lane approach.
 Signal Warrant Rule #2: [approach volume=25]
 FAIL - Approach volume less than 100 for one lane approach.
 Signal Warrant Rule #3: [approach count=4][total volume=1598]
 SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Peak Hour Volume Signal Warrant Report [Urban]

 Intersection #4 San Antonio Road and Lyell Street

Future Volume Alternative: Peak Hour Warrant NOT Met

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
Lanes:	1 0 1 1 0	1 0 1 1 0	0 0 1! 0 0	0 0 1! 0 0
Initial Vol:	54 488 6	81 827 19	10 11 77	1 0 24

Major Street Volume: 1475
 Minor Approach Volume: 98
 Minor Approach Volume Threshold: 151

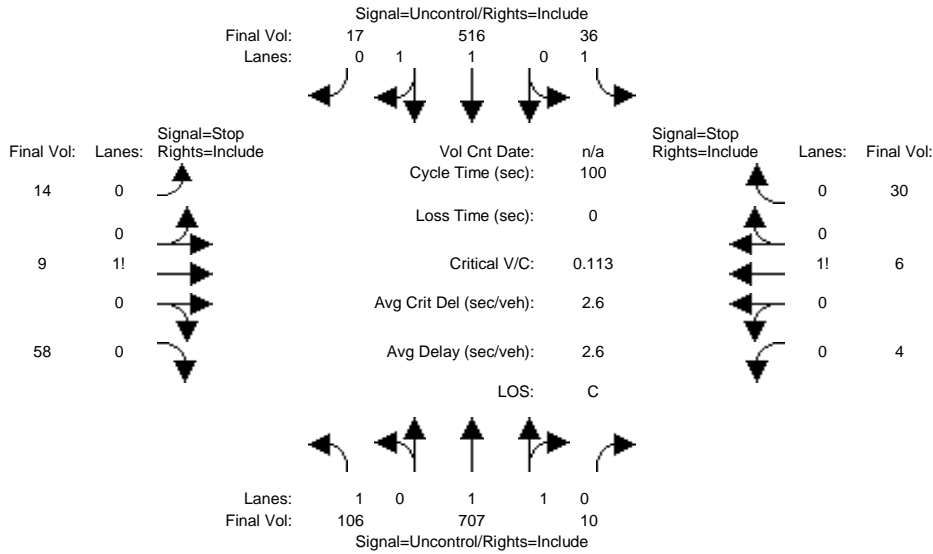
SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Level Of Service Computation Report
 2000 HCM Unsignalized (Future Volume Alternative)
 Existing +Project AM

Intersection #4: San Antonio Road and Lyell Street



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

Volume Module:

Base Vol:	106	707	10	36	516	17	14	9	58	4	6	30
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:	106	707	10	36	516	17	14	9	58	4	6	30
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:	106	707	10	36	516	17	14	9	58	4	6	30
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:	106	707	10	36	516	17	14	9	58	4	6	30
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	106	707	10	36	516	17	14	9	58	4	6	30

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:	533	xxxx	xxxxxx	717	xxxx	xxxxxx	1165	1526	267	1259	1529	359
Potent Cap.:	1045	xxxx	xxxxxx	893	xxxx	xxxxxx	152	119	738	130	118	644
Move Cap.:	1045	xxxx	xxxxxx	893	xxxx	xxxxxx	124	103	738	100	102	644
Volume/Cap:	0.10	xxxx	xxxx	0.04	xxxx	xxxx	0.11	0.09	0.08	0.04	0.06	0.05

Level Of Service Module:

2Way95thQ:	0.3	xxxx	xxxxxx	0.1	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx
Control Del:	8.8	xxxx	xxxxxx	9.2	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	290	xxxxxx	xxxx	275	xxxxxx
SharedQueue:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	1.1	xxxxxx	xxxxxx	0.5	xxxxxx
Shrd ConDel:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	22.2	xxxxxx	xxxxxx	20.3	xxxxxx
Shared LOS:	*	*	*	*	*	*	*	C	*	*	C	*
ApproachDel:	xxxxxxx			xxxxxxx				22.2			20.3	
ApproachLOS:	*			*				C			C	

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

Peak Hour Delay Signal Warrant Report

 Intersection #4 San Antonio Road and Lyell Street

Future Volume Alternative: Peak Hour Warrant NOT Met

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
Lanes:	1 0 1 1 0	1 0 1 1 0	0 0 1! 0 0	0 0 1! 0 0
Initial Vol:	106 707 10	36 516 17	14 9 58	4 6 30
ApproachDel:	xxxxxx	xxxxxx	22.2	20.3

Approach[eastbound][lanes=1][control=Stop Sign]
 Signal Warrant Rule #1: [vehicle-hours=0.5]
 FAIL - Vehicle-hours less than 4 for one lane approach.
 Signal Warrant Rule #2: [approach volume=81]
 FAIL - Approach volume less than 100 for one lane approach.
 Signal Warrant Rule #3: [approach count=4][total volume=1513]
 SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[westbound][lanes=1][control=Stop Sign]
 Signal Warrant Rule #1: [vehicle-hours=0.2]
 FAIL - Vehicle-hours less than 4 for one lane approach.
 Signal Warrant Rule #2: [approach volume=40]
 FAIL - Approach volume less than 100 for one lane approach.
 Signal Warrant Rule #3: [approach count=4][total volume=1513]
 SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER

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Peak Hour Volume Signal Warrant Report [Urban]

 Intersection #4 San Antonio Road and Lyell Street

Future Volume Alternative: Peak Hour Warrant NOT Met

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
Lanes:	1 0 1 1 0	1 0 1 1 0	0 0 1! 0 0	0 0 1! 0 0
Initial Vol:	106 707 10	36 516 17	14 9 58	4 6 30

Major Street Volume: 1392
 Minor Approach Volume: 81
 Minor Approach Volume Threshold: 171

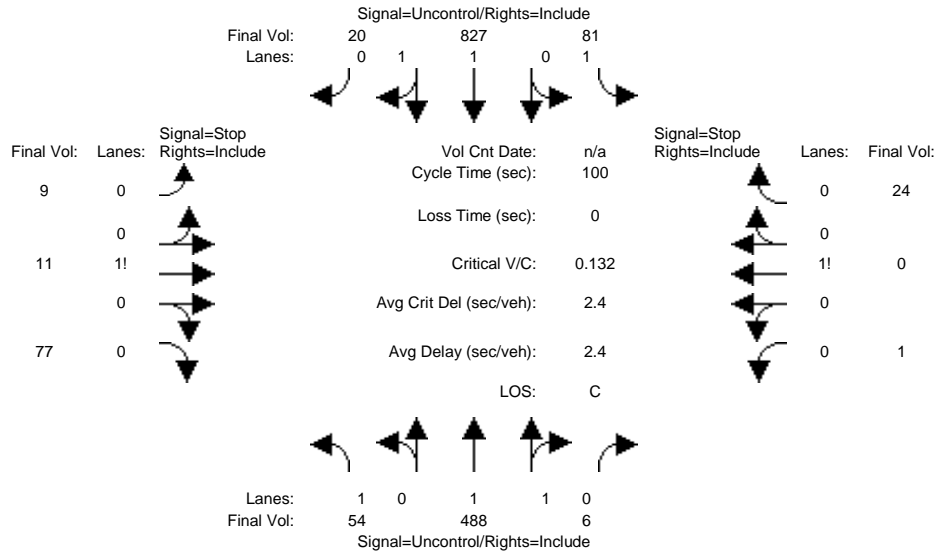
SIGNAL WARRANT DISCLAIMER

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Level Of Service Computation Report
 2000 HCM Unsignalized (Future Volume Alternative)
 Existing +Project PM

Intersection #4: San Antonio Road and Lyell Street



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

Volume Module:

Base Vol:	54	488	6	81	827	20	9	11	77	1	0	24
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:	54	488	6	81	827	20	9	11	77	1	0	24
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:	54	488	6	81	827	20	9	11	77	1	0	24
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:	54	488	6	81	827	20	9	11	77	1	0	24
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	54	488	6	81	827	20	9	11	77	1	0	24

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:	847	xxxx	xxxxxx	494	xxxx	xxxxxx	1351	1601	424	1180	1608	247
Potent Cap.:	799	xxxx	xxxxxx	1080	xxxx	xxxxxx	111	107	585	148	106	759
Move Cap.:	799	xxxx	xxxxxx	1080	xxxx	xxxxxx	96	92	585	105	91	759
Volume/Cap:	0.07	xxxx	xxxx	0.07	xxxx	xxxx	0.09	0.12	0.13	0.01	0.00	0.03

Level Of Service Module:

2Way95thQ:	0.2	xxxx	xxxxxx	0.2	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx
Control Del:	9.8	xxxx	xxxxxx	8.6	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	281	xxxxxx	xxxx	607	xxxxxx
SharedQueue:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	1.5	xxxxxx	xxxxxx	0.1	xxxxxx
Shrd ConDel:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	24.4	xxxxxx	xxxxxx	11.2	xxxxxx
Shared LOS:	*	*	*	*	*	*	*	C	*	*	B	*
ApproachDel:	xxxxxxx			xxxxxxx				24.4			11.2	
ApproachLOS:	*			*				C			B	

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

Peak Hour Delay Signal Warrant Report

 Intersection #4 San Antonio Road and Lyell Street

Future Volume Alternative: Peak Hour Warrant NOT Met

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
Lanes:	1 0 1 1 0	1 0 1 1 0	0 0 1! 0 0	0 0 1! 0 0
Initial Vol:	54 488 6	81 827 20	9 11 77	1 0 24
ApproachDel:	xxxxxx	xxxxxx	24.4	11.2

Approach[eastbound][lanes=1][control=Stop Sign]
 Signal Warrant Rule #1: [vehicle-hours=0.7]
 FAIL - Vehicle-hours less than 4 for one lane approach.
 Signal Warrant Rule #2: [approach volume=97]
 FAIL - Approach volume less than 100 for one lane approach.
 Signal Warrant Rule #3: [approach count=4][total volume=1598]
 SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[westbound][lanes=1][control=Stop Sign]
 Signal Warrant Rule #1: [vehicle-hours=0.1]
 FAIL - Vehicle-hours less than 4 for one lane approach.
 Signal Warrant Rule #2: [approach volume=25]
 FAIL - Approach volume less than 100 for one lane approach.
 Signal Warrant Rule #3: [approach count=4][total volume=1598]
 SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER

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Peak Hour Volume Signal Warrant Report [Urban]

 Intersection #4 San Antonio Road and Lyell Street

 Future Volume Alternative: Peak Hour Warrant NOT Met

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
Lanes:	1 0 1 1 0	1 0 1 1 0	0 0 1! 0 0	0 0 1! 0 0
Initial Vol:	54 488 6	81 827 20	9 11 77	1 0 24

Major Street Volume: 1476
 Minor Approach Volume: 97
 Minor Approach Volume Threshold: 151

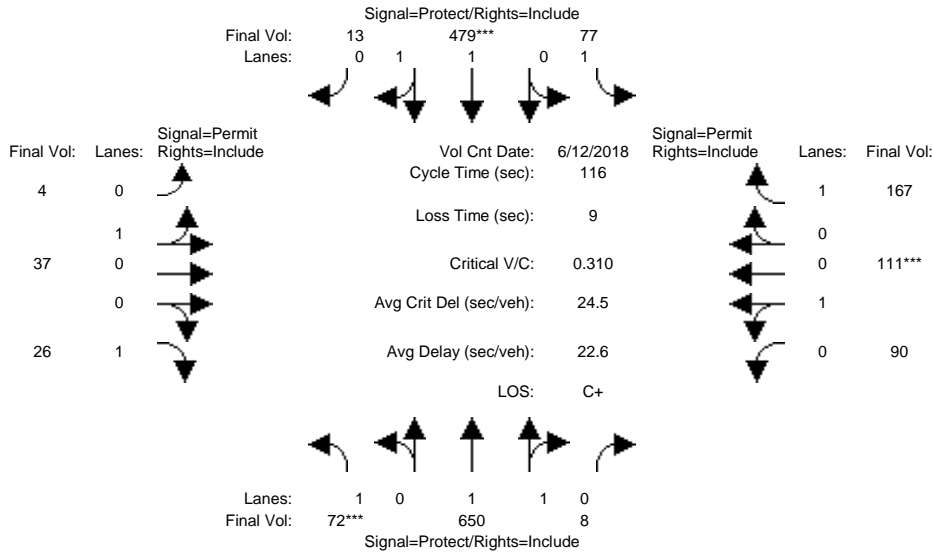
SIGNAL WARRANT DISCLAIMER

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Level Of Service Computation Report
 2000 HCM Operations (Future Volume Alternative)
 Existing AM

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



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

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

Volume Module: >> Count Date: 12 Jun 2018 << 8:00 to 9:00 AM

Base Vol:	72	650	8	77	479	13	4	37	26	90	111	167
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:	72	650	8	77	479	13	4	37	26	90	111	167
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:	72	650	8	77	479	13	4	37	26	90	111	167
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:	72	650	8	77	479	13	4	37	26	90	111	167
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	72	650	8	77	479	13	4	37	26	90	111	167
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:	72	650	8	77	479	13	4	37	26	90	111	167

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	1.95	0.05	0.10	0.90	1.00	0.45	0.55	1.00
Final Sat.:	1750	3655	45	1750	3602	98	176	1624	1750	806	994	1750

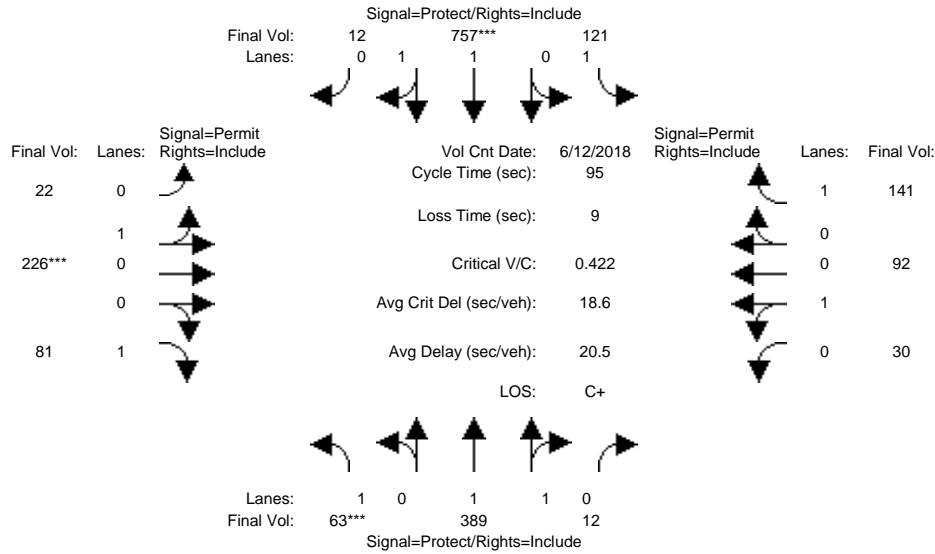
Capacity Analysis Module:

Vol/Sat:	0.04	0.18	0.18	0.04	0.13	0.13	0.02	0.02	0.01	0.11	0.11	0.10
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:	0.23	0.29	0.29	0.43	0.25	0.25	0.11	0.11	0.07	0.52	0.52	0.44
Uniform Del:	40.6	11.1	11.1	48.8	15.0	15.0	36.5	36.5	36.2	40.2	40.2	39.5
IncrcmntDel:	0.4	0.1	0.1	1.6	0.1	0.1	0.1	0.1	0.1	1.2	1.2	0.8
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:	40.9	11.2	11.2	50.4	15.1	15.1	36.6	36.6	36.3	41.4	41.4	40.3
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:	40.9	11.2	11.2	50.4	15.1	15.1	36.6	36.6	36.3	41.4	41.4	40.3
LOS by Move:	D	B+	B+	D	B	B	D+	D+	D+	D	D	D
HCM2kAvgQ:	2	6	6	3	5	5	1	1	1	7	7	6

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

Level Of Service Computation Report
 2000 HCM Operations (Future Volume Alternative)
 Existing PM

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



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

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

Volume Module: >> Count Date: 12 Jun 2018 << 5:00 to 6:00 PM

Base Vol:	63	389	12	121	757	12	22	226	81	30	92	141
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	389	12	121	757	12	22	226	81	30	92	141
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	389	12	121	757	12	22	226	81	30	92	141
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	389	12	121	757	12	22	226	81	30	92	141
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	63	389	12	121	757	12	22	226	81	30	92	141
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:	63	389	12	121	757	12	22	226	81	30	92	141

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	1.94	0.06	1.00	1.97	0.03	0.09	0.91	1.00	0.25	0.75	1.00
Final Sat.:	1750	3589	111	1750	3642	58	160	1640	1750	443	1357	1750

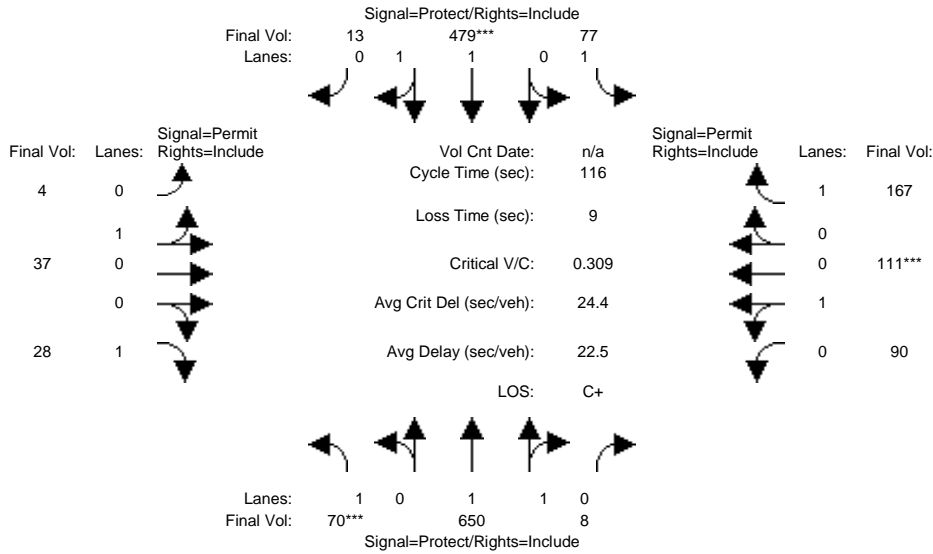
Capacity Analysis Module:

Vol/Sat:	0.04	0.11	0.11	0.07	0.21	0.21	0.14	0.14	0.05	0.07	0.07	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:	0.49	0.25	0.25	0.41	0.39	0.39	0.45	0.45	0.15	0.22	0.22	0.26
Uniform Del:	42.3	17.2	17.2	35.3	13.5	13.5	26.6	26.6	24.0	24.6	24.6	24.9
IncrcmntDel:	2.9	0.1	0.1	0.9	0.1	0.1	0.6	0.6	0.1	0.2	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:	45.2	17.3	17.3	36.2	13.6	13.6	27.2	27.2	24.2	24.8	24.8	25.2
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:	45.2	17.3	17.3	36.2	13.6	13.6	27.2	27.2	24.2	24.8	24.8	25.2
LOS by Move:	D	B	B	D+	B	B	C	C	C	C	C	C
HCM2kAvgQ:	2	4	4	4	7	7	6	6	2	3	3	3

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

Level Of Service Computation Report
 2000 HCM Operations (Future Volume Alternative)
 Existing +Project AM

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



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
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

Volume Module:												
Base Vol:	70	650	8	77	479	13	4	37	28	90	111	167
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:	70	650	8	77	479	13	4	37	28	90	111	167
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:	70	650	8	77	479	13	4	37	28	90	111	167
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:	70	650	8	77	479	13	4	37	28	90	111	167
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	70	650	8	77	479	13	4	37	28	90	111	167
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:	70	650	8	77	479	13	4	37	28	90	111	167

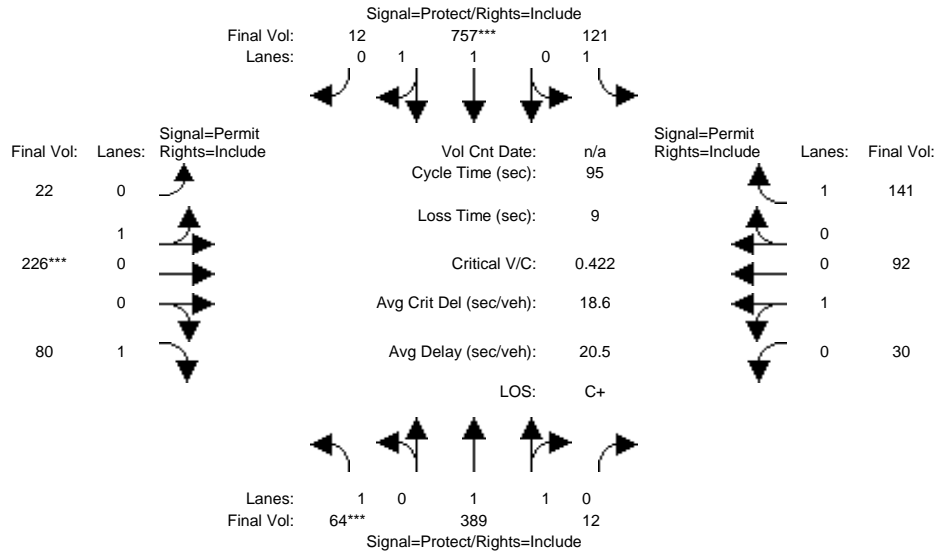
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.97	0.95	0.92	0.97	0.95	0.95	0.95	0.92	0.95	0.95	0.92
Lanes:	1.00	1.98	0.02	1.00	1.95	0.05	0.10	0.90	1.00	0.45	0.55	1.00
Final Sat.:	1750	3655	45	1750	3602	98	176	1624	1750	806	994	1750

Capacity Analysis Module:												
Vol/Sat:	0.04	0.18	0.18	0.04	0.13	0.13	0.02	0.02	0.02	0.11	0.11	0.10
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:	0.22	0.29	0.29	0.43	0.25	0.25	0.11	0.11	0.07	0.52	0.52	0.44
Uniform Del:	40.5	11.1	11.1	48.8	15.0	15.0	36.5	36.5	36.3	40.2	40.2	39.5
IncrcmntDel:	0.4	0.1	0.1	1.6	0.1	0.1	0.1	0.1	0.1	1.2	1.2	0.8
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:	40.9	11.2	11.2	50.4	15.1	15.1	36.6	36.6	36.4	41.4	41.4	40.3
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:	40.9	11.2	11.2	50.4	15.1	15.1	36.6	36.6	36.4	41.4	41.4	40.3
LOS by Move:	D	B+	B+	D	B	B	D+	D+	D+	D	D	D
HCM2kAvgQ:	2	6	6	3	5	5	1	1	1	7	7	6

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

Level Of Service Computation Report
 2000 HCM Operations (Future Volume Alternative)
 Existing +Project PM

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



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

Volume Module:												
Base Vol:	64	389	12	121	757	12	22	226	80	30	92	141
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:	64	389	12	121	757	12	22	226	80	30	92	141
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:	64	389	12	121	757	12	22	226	80	30	92	141
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:	64	389	12	121	757	12	22	226	80	30	92	141
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	64	389	12	121	757	12	22	226	80	30	92	141
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:	64	389	12	121	757	12	22	226	80	30	92	141

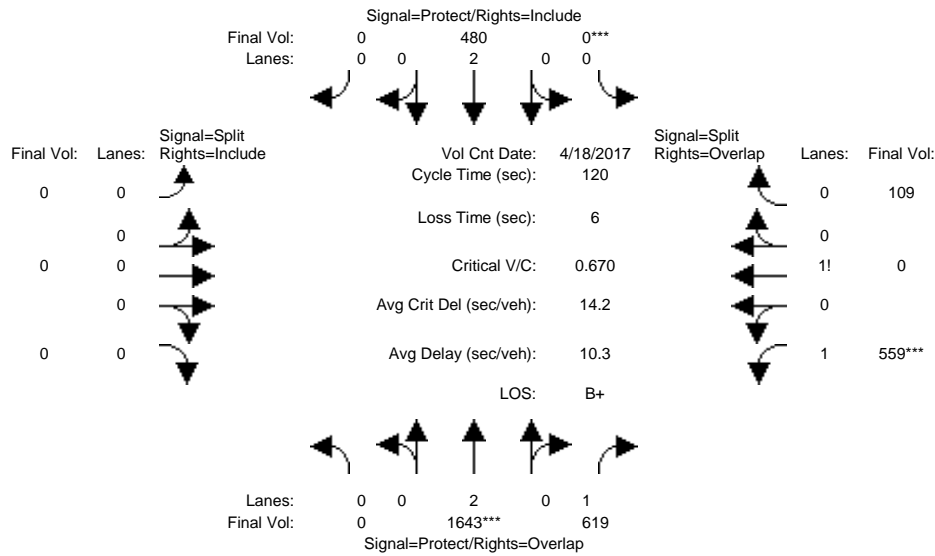
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.97	0.95	0.92	0.97	0.95	0.95	0.95	0.92	0.95	0.95	0.92
Lanes:	1.00	1.94	0.06	1.00	1.97	0.03	0.09	0.91	1.00	0.25	0.75	1.00
Final Sat.:	1750	3589	111	1750	3642	58	160	1640	1750	443	1357	1750

Capacity Analysis Module:												
Vol/Sat:	0.04	0.11	0.11	0.07	0.21	0.21	0.14	0.14	0.05	0.07	0.07	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	0.41	0.39	0.39	0.45	0.45	0.15	0.22	0.22	0.26
Uniform Del:	42.3	17.2	17.2	35.3	13.5	13.5	26.6	26.6	24.0	24.6	24.6	24.9
IncrcmntDel:	3.0	0.1	0.1	0.9	0.1	0.1	0.6	0.6	0.1	0.2	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:	45.3	17.3	17.3	36.2	13.6	13.6	27.2	27.2	24.2	24.8	24.8	25.2
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:	45.3	17.3	17.3	36.2	13.6	13.6	27.2	27.2	24.2	24.8	24.8	25.2
LOS by Move:	D	B	B	D+	B	B	C	C	C	C	C	C
HCM2kAvgQ:	2	4	4	4	7	7	6	6	2	3	3	3

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

Level Of Service Computation Report
 2000 HCM Operations (Future Volume Alternative)
 Existing AM

Intersection #5214: Foothill Expressway and San Antonio Road



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

Volume Module:	>>	Count	Date:	18 Apr 2017	<<	8:00 to 9:00 AM						
Base Vol:	0	1643	619	0	480	0	0	0	0	559	0	109
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	1643	619	0	480	0	0	0	0	559	0	109
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	1643	619	0	480	0	0	0	0	559	0	109
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	1643	619	0	480	0	0	0	0	559	0	109
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1643	619	0	480	0	0	0	0	559	0	109
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:	0	1643	619	0	480	0	0	0	0	559	0	109

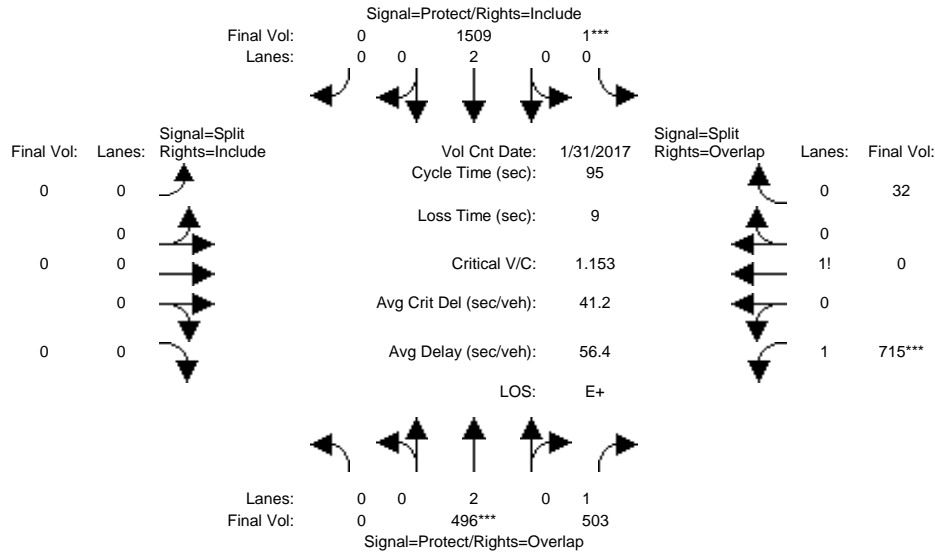
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.83	1.00	0.92
Lanes:	0.00	2.00	1.00	0.00	2.00	0.00	0.00	0.00	0.00	1.74	0.00	0.26
Final Sat.:	0	3800	1750	0	3800	0	0	0	0	2738	0	454

Capacity Analysis Module:												
Vol/Sat:	0.00	0.43	0.35	0.00	0.13	0.00	0.00	0.00	0.00	0.20	0.00	0.24
Crit Moves:	****			****						****		
Green Time:	0.0	77.0	120.0	0.0	77.0	0.0	0.0	0.0	0.0	43.0	0.0	43.0
Volume/Cap:	0.00	0.67	0.35	0.00	0.20	0.00	0.00	0.00	0.00	0.57	0.00	0.67
Uniform Del:	0.0	13.6	0.0	0.0	8.8	0.0	0.0	0.0	0.0	31.1	0.0	32.5
IncrcmntDel:	0.0	0.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	1.8
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	7.0	0.1	0.0	4.1	0.0	0.0	0.0	0.0	31.7	0.0	34.3
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	7.0	0.1	0.0	4.1	0.0	0.0	0.0	0.0	31.7	0.0	34.3
LOS by Move:	A	A	A	A	A	A	A	A	A	C	A	C-
HCM2kAvgQ:	0	11	1	0	2	0	0	0	0	10	0	14

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

Level Of Service Computation Report
 2000 HCM Operations (Future Volume Alternative)
 Existing PM

Intersection #5214: Foothill Expressway and San Antonio Road



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

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

Volume Module: >> Count Date: 31 Jan 2017 << 4:30 to 5:30 PM

Base Vol:	0	496	503	1	1509	0	0	0	0	715	0	32
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	496	503	1	1509	0	0	0	0	715	0	32
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	496	503	1	1509	0	0	0	0	715	0	32
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	496	503	1	1509	0	0	0	0	715	0	32
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	496	503	1	1509	0	0	0	0	715	0	32
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:	0	496	503	1	1509	0	0	0	0	715	0	32

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.95	0.65	0.92	0.92	1.00	0.92	0.62	1.00	0.92
Lanes:	0.00	2.00	1.00	0.01	1.99	0.00	0.00	0.00	0.00	1.94	0.00	0.06
Final Sat.:	0	3800	1750	2	2478	0	0	0	0	2279	0	99

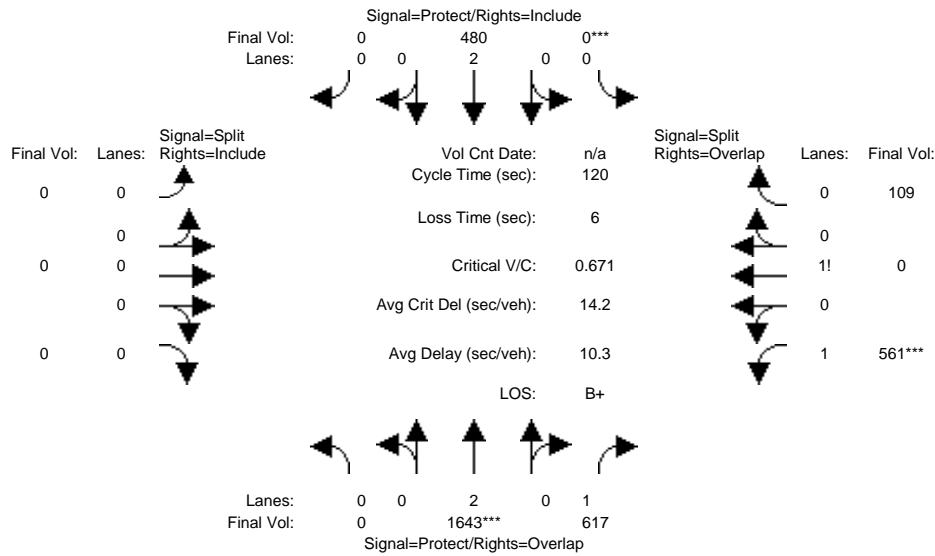
Capacity Analysis Module:

Vol/Sat:	0.00	0.13	0.29	0.61	0.61	0.00	0.00	0.00	0.00	0.31	0.00	0.32
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	0.20	0.31	xxxx	0.93	0.00	0.00	0.00	0.00	1.21	0.00	1.24
Uniform Del:	0.0	7.2	0.5	0.0	15.9	0.0	0.0	0.0	0.0	38.5	0.0	38.5
IncrcmntDel:	0.0	0.0	0.1	0.0	10.1	0.0	0.0	0.0	0.0	108.5	0.0	123.8
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	7.2	0.7	0.0	46.1	0.0	0.0	0.0	0.0	147.0	0.0	162.3
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	7.2	0.7	0.0	46.1	0.0	0.0	0.0	0.0	147.0	0.0	162.3
LOS by Move:	A	A	A	A	D	A	A	A	A	F	A	F
HCM2kAvgQ:	0	3	2	33	29	0	0	0	0	22	0	35

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

Level Of Service Computation Report
 2000 HCM Operations (Future Volume Alternative)
 Existing +Project AM

Intersection #5214: Foothill Expressway and San Antonio Road



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

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

Volume Module:

Base Vol:	0	1643	617	0	480	0	0	0	0	561	0	109
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	1643	617	0	480	0	0	0	0	561	0	109
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	1643	617	0	480	0	0	0	0	561	0	109
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	1643	617	0	480	0	0	0	0	561	0	109
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1643	617	0	480	0	0	0	0	561	0	109
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:	0	1643	617	0	480	0	0	0	0	561	0	109

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

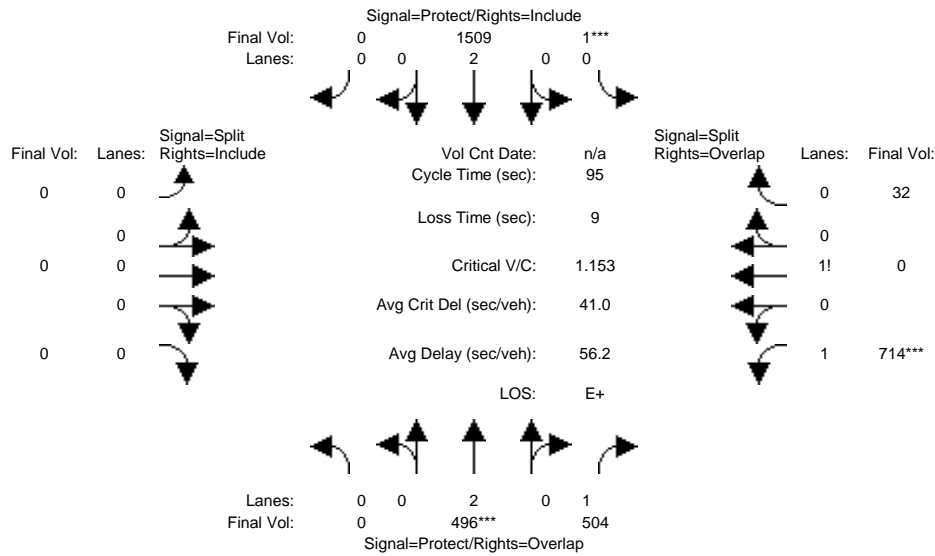
Capacity Analysis Module:

Vol/Sat:	0.00	0.43	0.35	0.00	0.13	0.00	0.00	0.00	0.00	0.20	0.00	0.24
Crit Moves:	****			****						****		
Green Time:	0.0	77.0	120.0	0.0	77.0	0.0	0.0	0.0	0.0	43.0	0.0	43.0
Volume/Cap:	0.00	0.67	0.35	0.00	0.20	0.00	0.00	0.00	0.00	0.57	0.00	0.67
Uniform Del:	0.0	13.6	0.0	0.0	8.8	0.0	0.0	0.0	0.0	31.0	0.0	32.5
IncemntDel:	0.0	0.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	1.8
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	7.0	0.1	0.0	4.1	0.0	0.0	0.0	0.0	31.7	0.0	34.3
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	7.0	0.1	0.0	4.1	0.0	0.0	0.0	0.0	31.7	0.0	34.3
LOS by Move:	A	A	A	A	A	A	A	A	A	C	A	C-
HCM2kAvgQ:	0	11	1	0	2	0	0	0	0	10	0	14

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

Level Of Service Computation Report
 2000 HCM Operations (Future Volume Alternative)
 Existing +Project PM

Intersection #5214: Foothill Expressway and San Antonio Road



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

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

Volume Module:

Base Vol:	0	496	504	1	1509	0	0	0	0	714	0	32
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	496	504	1	1509	0	0	0	0	714	0	32
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	496	504	1	1509	0	0	0	0	714	0	32
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	496	504	1	1509	0	0	0	0	714	0	32
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	496	504	1	1509	0	0	0	0	714	0	32
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:	0	496	504	1	1509	0	0	0	0	714	0	32

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.95	0.65	0.92	0.92	1.00	0.92	0.62	1.00	0.92
Lanes:	0.00	2.00	1.00	0.01	1.99	0.00	0.00	0.00	0.00	1.94	0.00	0.06
Final Sat.:	0	3800	1750	2	2478	0	0	0	0	2279	0	99

Capacity Analysis Module:

Vol/Sat:	0.00	0.13	0.29	0.61	0.61	0.00	0.00	0.00	0.00	0.31	0.00	0.32
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	0.20	0.32	xxxx	0.93	0.00	0.00	0.00	0.00	1.21	0.00	1.24
Uniform Del:	0.0	7.2	0.5	0.0	15.9	0.0	0.0	0.0	0.0	38.5	0.0	38.5
IncrementDel:	0.0	0.0	0.1	0.0	10.1	0.0	0.0	0.0	0.0	107.8	0.0	123.1
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:	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	7.2	0.7	0.0	46.1	0.0	0.0	0.0	0.0	146.3	0.0	161.6
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	7.2	0.7	0.0	46.1	0.0	0.0	0.0	0.0	146.3	0.0	161.6
LOS by Move:	A	A	A	A	D	A	A	A	A	F	A	F
HCM2kAvgQ:	0	3	2	33	29	0	0	0	0	22	0	35

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

Appendix C
Volume Summary Tables

Intersection Number: **1**
 Traffix Node Number: 1
 Intersection Name: First Street and Lyell Street
 Peak Hour: AM
 Count Date: 6/12/2018 2018 School Year Adjustment 1.1

Scenario:	Movements												Total
	North Approach			East Approach			South Approach			West Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Existing Conditions	1	62	39	18	0	4	16	150	2	0	1	0	293
Existing Conditions for School Yr 2018	1	68	43	20	0	4	18	165	2	0	1	0	322
Project Trips	0	0	-1	1	0	2	-2	0	0	0	0	0	0
Existing Plus Project Conditions	1	68	42	21	0	6	16	165	2	0	1	0	322

Intersection Number: **2**
 Traffix Node Number: 2
 Intersection Name: Alley and Lyell Street
 Peak Hour: AM
 Count Date: 6/12/2018

Scenario:	Movements												Total
	North Approach			East Approach			South Approach			West Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Existing Conditions	1	0	1	8	22	0	0	0	0	0	47	11	90
Existing Conditions for School Yr 2018	1	0	1	9	24	0	0	0	0	0	52	12	99
Project Trips	3	0	1	-2	0	0	0	0	0	0	0	-3	-1
Existing Plus Project Conditions	4	0	2	7	24	0	0	0	0	0	52	9	98

Intersection Number: **3**
 Traffix Node Number: 3
 Intersection Name: Second Street and Lyell Street
 Peak Hour: AM
 Count Date: 6/12/2018

Scenario:	Movements												Total
	North Approach			East Approach			South Approach			West Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Existing Conditions	6	0	31	91	23	2	0	1	0	1	45	3	203
Existing Conditions for School Yr 2018	7	0	34	100	25	2	0	1	0	1	50	3	223
Project Trips	0	0	0	0	-2	0	0	0	0	0	1	0	-1
Existing Plus Project Conditions	7	0	34	100	23	2	0	1	0	1	51	3	222

Intersection Number: 4
 Traffix Node Number: 4
 Intersection Name: San Antonio Road and Lyell Street
 Peak Hour: AM
 Count Date: 6/12/2018

Scenario:	Movements												Total
	North Approach			East Approach			South Approach			West Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Existing Conditions	17	469	33	27	5	4	9	643	96	53	8	12	1376
Existing Conditions for School Yr 2018	19	516	36	30	6	4	10	707	106	58	9	13	1514
Project Trips	-2	0	0	0	0	0	0	0	0	0	0	1	-1
Existing Plus Project Conditions	17	516	36	30	6	4	10	707	106	58	9	14	1513

Intersection Number: 5
 Traffix Node Number: 5
 Intersection Name: San Antonio Road and First Street/Cuesta Drive
 Peak Hour: AM
 Count Date: 6/12/2018

Scenario:	Movements												Total
	North Approach			East Approach			South Approach			West Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Existing Conditions	12	435	70	152	101	82	7	591	65	24	34	4	1577
Existing Conditions for School Yr 2018	13	479	77	167	111	90	8	650	72	26	37	4	1734
Project Trips	0	0	0	0	0	0	0	0	-2	2	0	0	0
Existing Plus Project Conditions	13	479	77	167	111	90	8	650	70	28	37	4	1734

Intersection Number: 6
 Traffix Node Number: 5214
 Intersection Name: San Antonio Road and Foothill Expressway
 Peak Hour: AM
 Count Date: 4/18/2017

Scenario:	Movements												Total
	North Approach			East Approach			South Approach			West Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Existing Conditions	0	480	0	109	0	559	619	1643	0	0	0	0	3410
Existing Conditions for School Yr	0	480	0	109	0	559	619	1643	0	0	0	0	3410
Project Trips	0	0	0	0	0	2	-2	0	0	0	0	0	0
Existing Plus Project Conditions	0	480	0	109	0	561	617	1643	0	0	0	0	3410

Intersection Number: **1**
 Traffix Node Number: 1
 Intersection Name: First Street and Lyell Street
 Peak Hour: PM
 Count Date: 6/12/2018

2018 School Year Adjustment 1.1

Scenario:	Movements												Total
	North Approach			East Approach			South Approach			West Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Existing Conditions	5	281	23	22	0	20	14	164	1	2	0	5	537
Existing Conditions for School Yr 2018	6	309	25	24	0	22	15	180	1	2	0	6	590
Net Project Trips	0	0	1	-1	0	-1	1	0	0	0	0	0	0
Existing Plus Project Conditions	6	309	26	23	0	21	16	180	1	2	0	6	590

Intersection Number: **2**
 Traffix Node Number: 2
 Intersection Name: Alley and Lyell Street
 Peak Hour: PM
 Count Date: 6/12/2018

Scenario:	Movements												Total
	North Approach			East Approach			South Approach			West Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Existing Conditions	10	0	11	2	18	1	3	0	3	1	27	2	78
Existing Conditions for School Yr 2018	11	0	12	2	20	1	3	0	3	1	30	2	85
Net Project Trips	-2	0	-1	1	0	0	0	0	0	0	0	2	0
Existing Plus Project Conditions	9	0	11	3	20	1	3	0	3	1	30	4	85

Intersection Number: **3**
 Traffix Node Number: 3
 Intersection Name: Second Street and Lyell Street
 Peak Hour: PM
 Count Date: 6/12/2018

Scenario:	Movements												Total
	North Approach			East Approach			South Approach			West Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Existing Conditions	6	1	78	51	14	8	0	2	0	1	20	21	202
Existing Conditions for School Yr 2018	7	1	86	56	15	9	0	2	0	1	22	23	222
Net Project Trips	0	0	0	0	1	0	0	0	0	0	-1	0	0
Existing Plus Project Conditions	7	1	86	56	16	9	0	2	0	1	21	23	222

Intersection Number: 4
 Traffix Node Number: 4
 Intersection Name: San Antonio Road and Lyell Street
 Peak Hour: PM
 Count Date: 6/12/2018

Scenario:	Movements												Total
	North Approach			East Approach			South Approach			West Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Existing Conditions	17	752	74	22	0	1	5	444	49	70	10	9	1453
Existing Conditions for School Yr 2018	19	827	81	24	0	1	6	488	54	77	11	10	1598
Net Project Trips	1	0	0	0	0	0	0	0	0	0	0	-1	0
Existing Plus Project Conditions	20	827	81	24	0	1	6	488	54	77	11	9	1598

Intersection Number: 5
 Traffix Node Number: 5
 Intersection Name: San Antonio Road and First Street/Cuesta Drive
 Peak Hour: PM
 Count Date: 6/12/2018

Scenario:	Movements												Total
	North Approach			East Approach			South Approach			West Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Existing Conditions	11	688	110	128	84	27	11	354	57	74	205	20	1769
Existing Conditions for School Yr 2018	12	757	121	141	92	30	12	389	63	81	226	22	1946
Net Project Trips	0	0	0	0	0	0	0	0	1	-1	0	0	0
Existing Plus Project Conditions	12	757	121	141	92	30	12	389	64	80	226	22	1946

Intersection Number: 6
 Traffix Node Number: 5214
 Intersection Name: San Antonio Road and Foothill Expressway
 Peak Hour: PM
 Count Date: 1/31/2017

Scenario:	Movements												Total
	North Approach			East Approach			South Approach			West Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Existing Conditions	0	1509	1	32	0	715	503	496	0	0	0	0	3256
Existing Conditions for School Yr	0	1509	1	32	0	715	503	496	0	0	0	0	3256
Net Project Trips	0	0	0	0	0	-1	1	0	0	0	0	0	0
Existing Plus Project Conditions	0	1509	1	32	0	714	504	496	0	0	0	0	3256