APPENDIX E

Traffic Report

HEXAGON TRANSPORTATION CONSULTANTS, INC.

Los Altos High School Field Lighting Project

Draft Transportation Impact Analysis

Prepared for:

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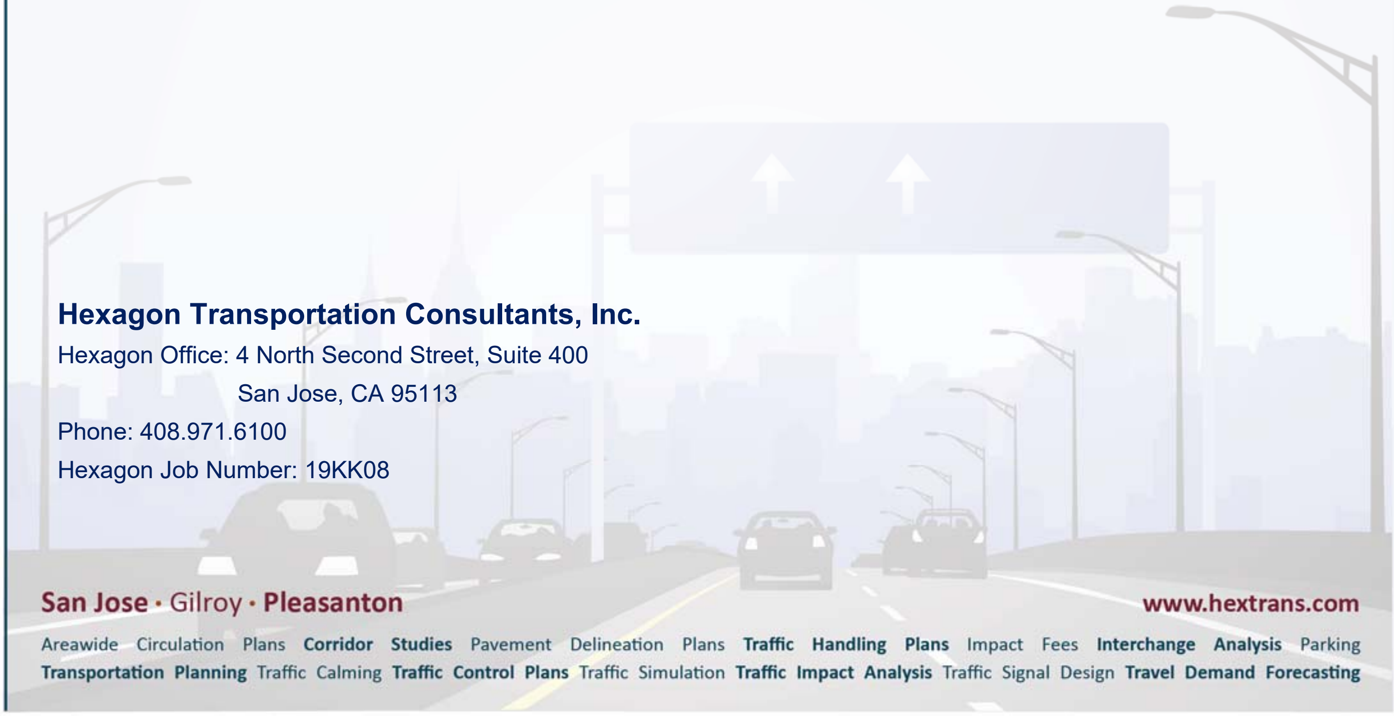

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Executive Summary

This report presents the results of the transportation impact analysis (TIA) conducted for the proposed installation of field lights at Los Altos High School. Los Altos High School (LAHS) is located at 3535 Truman Avenue in Mountain View, California. The project proposes to add lights at the existing track and athletic field at the southwest corner of the campus. Pedestrian access to the field is via the main parking lot on Almond Avenue.

The field lights would allow the school to provide flexible nighttime use of the field for various sporting and school events. LAHS currently hosts all sporting events during daylight hours. Football games with up to 1,500 attendees are played on Saturdays, or occasionally at Foothill College if played at night. The project is expected to increase the number of football games on campus, as existing night football games at Foothill College would be played on campus with the installation of the field lights. With the field lights, the number of attendees is expected to increase from 1,000 to 1,500 for most football games and from 1,500 to 2,200 for rivalry or homecoming games. For all other sporting events, marching band activities, and special events, the project would not result in an increase in the number of these events. However, attendance for these events is expected to increase from 200 to 500 attendees by having events at night as opposed to afternoon events. Because the new evening football games on campus are expected to generate the highest number of vehicle traffic near the school, the transportation study focuses on the potential impacts resulting from the new football games with 2,200 attendees. The impacts of all other events would be less.

Project Trip Estimates

Vehicle trips that would be generated by the evening football games at the school were estimated based on data collected for a homecoming football game on a Friday night at Mitty High School in San Jose, California. Based on the vehicle occupancy rate derived from the game, an evening football game would generate 617 inbound trips and 123 outbound trips during the PM peak hour.

Intersection Levels of Service

A level of service (LOS) analysis was conducted for 5 study intersections (one signalized intersection and 4 unsignalized intersections) in the vicinity of LAHS under existing and existing plus project conditions. The results of the level of service analysis show that most of the study intersections, except one, would operate at acceptable levels of service during the PM peak hour (see Table ES-1).

At the intersection of N. El Monte Avenue and Almond Avenue, the stop-controlled approach on Almond Avenue is expected to experience some delay with an undesirable LOS F due to inbound and outbound game traffic. However, this would occur infrequently in the evening when there is a homecoming football game at the school. The intersection operations would be acceptable during most football games with 1,500 attendees. Based on the significance criteria, the project is not expected to create a significant adverse impact as the intersection would operate at LOS F but would not meet the peak-hour volume signal warrant.

Table ES-1
Intersection Level of Service Summary

				Existing			
				No Project		with Project	
Intersection	Control	Peak Hour	Count Date	Avg. Delay[1] (sec)	LOS	Avg. Delay[1] (sec)	LOS
1 San Antonio Rd and Almond Ave	Signal	PM	11/08/19	24.1	B-	30.1	C
2 West Entrance and Almond Ave	OWSC	PM	11/08/19	11.4	B	14.8	B
3 East Entrance and Almond Ave	OWSC	PM	11/08/19	13.1	B	17.7	C
4 Staff Entrance/Gordon Way and Almond Ave	TWSC	PM	11/08/19	13.3	B	20.5	C
5 N. El Monte Ave and Almond Ave	OWSC	PM	11/08/19	21.7	C	**54.8** 37.4	**F**[2] E[2]

Notes:
Bold indicates unacceptable LOS
OWSC = One-Way Stop Control, TWSC = Two-Way Stop Control,
1 Average delay for a side-street stop controlled intersection is reported for the worst stop-controlled approach.
2 Eastbound traffic on Almond Avenue would experience some delay with LOS F when there is a homecoming game. The intersection operations would be acceptable LOS E during most football games with 1,500 attendees.

VMT Analysis

The project would result in an increase in attendance for the football games and other sporting events. Depending on the sporting seasons, the average trip increase per day from the increased attendees would range from 74 to 87 trips per day. According to the Governor's Office of Planning and Research (OPR), land use projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less-than-significant transportation impact. Using this definition, the project would cause a less-than-significant transportation impact on VMT.

Other Transportation Issues

The project would not have an adverse effect on vehicle access and circulation on the surrounding streets or on existing pedestrian or bicycle facilities in the study area.

Many game attendees would park off-site, so the project would increase the number of pedestrians using the nearby sidewalks and crosswalks. It is likely that attendees parked on surrounding streets south of the school would cross Almond Avenue where there is a crosswalk present at Gordon Way. To increase pedestrian safety, depending on the expected attendance, the school may need to have a crossing guard at the crosswalk at the Almond Avenue/Gordon Way intersection and have staff to direct attendees to use the crosswalk.

1.
Introduction

This report presents the results of the transportation impact analysis (TIA) conducted for the proposed installation of field lights at Los Altos High School. Los Altos High School (LAHS) is located at 201 Almond Avenue in Los Altos, California. The project proposes to add lights at the existing track and athletic field on the southwest corner of the campus. Pedestrian access to the field is via the main parking lot on Almond Avenue. The location of the LAHS field and the surrounding study area are shown on Figure 1. Figure 2 shows the LAHS campus and the location of the project site (track and athletic field).

The field lights would allow the school to provide flexible nighttime use of the field for various sporting and school events. LAHS currently hosts all sporting events during daylight hours. Football games with up to 1,500 attendees are played on Saturdays, or occasionally at Foothill College if played at night. The project is expected to increase the number of football games on campus, as existing night football games at Foothill College would be played on campus with the installation of the field lights. With the field lights, the number of attendees is expected to increase from 1,000 to 1,500 for most football games and from 1,500 to 2,200 for rivalry or homecoming games. Attendance for all other sporting events is expected to increase from 200 to 500 attendees by having events at night as opposed to afternoon events. Because the new evening football games on campus are expected to generate the highest number of vehicle traffic near the school, the transportation study is focused on the potential impacts resulting from the new football games with 2,200 attendees. All other field uses would have lesser impacts.

Scope of Study

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

The study analyzed the traffic impacts of the project on five key intersections in the vicinity of the school campus. The study intersections were selected in accordance with VTA's *Transportation Impact Analysis Guidelines* (October 2014). The study intersections are listed below and shown on Figure 1. The intersection of San Antonio Road and Almond Avenue is signalized, and the remaining four intersections are unsignalized.

1. San Antonio Road and Almond Avenue
2. West Entrance and Almond Avenue (unsignliazed)

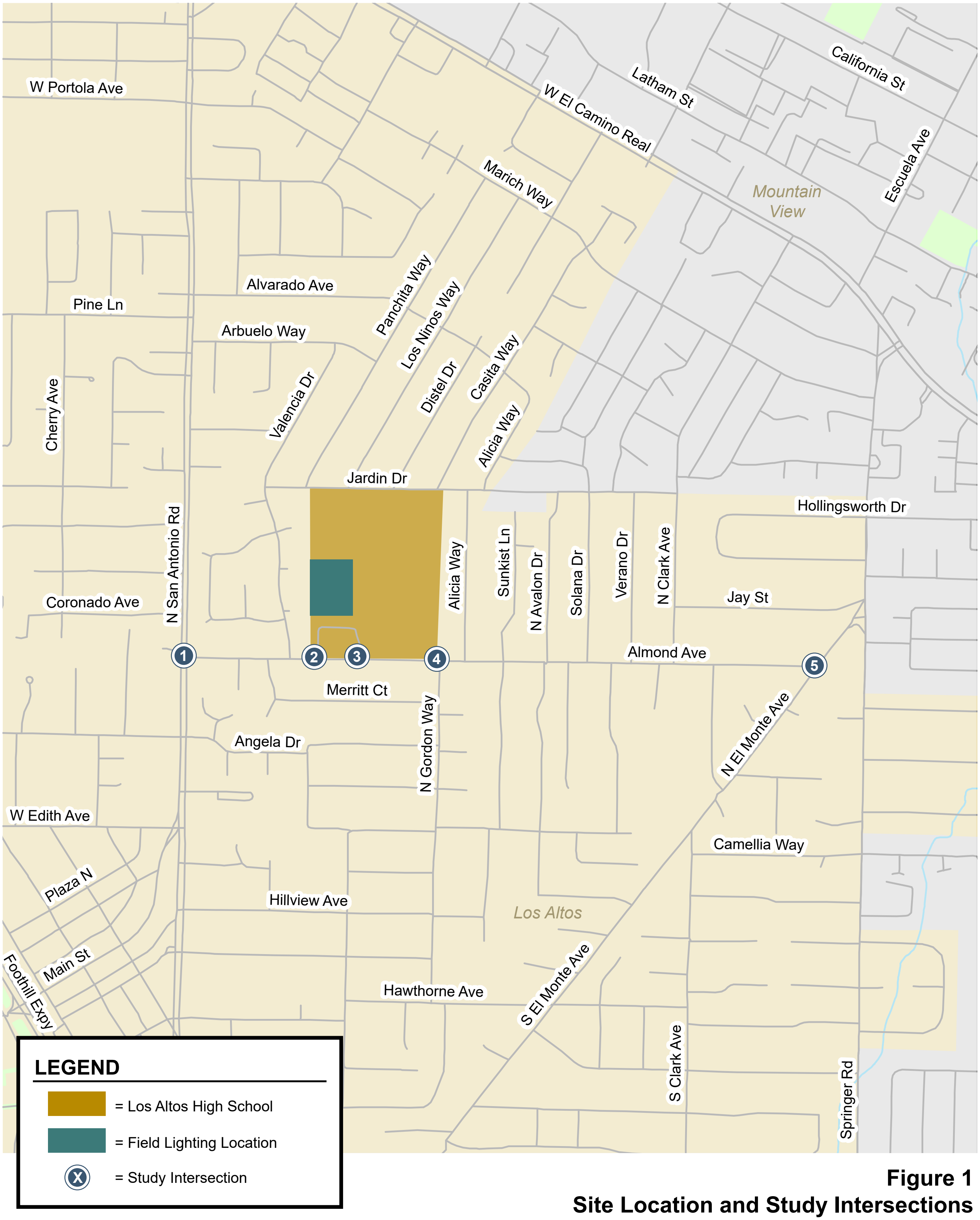


Figure 1
Site Location and Study Intersections

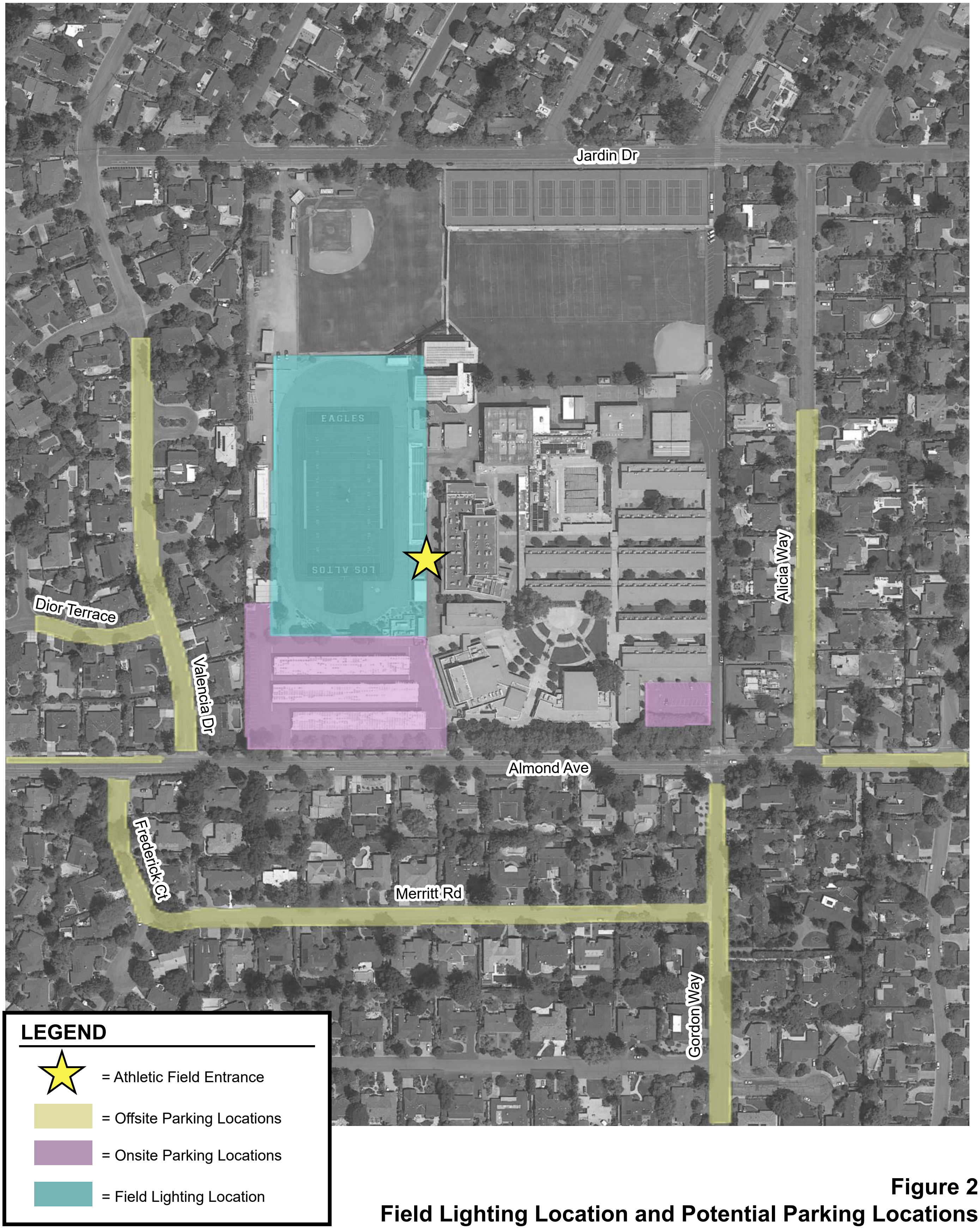


Figure 2
Field Lighting Location and Potential Parking Locations

NORTH
Not to Scale

3. East Entrance and Almond Avenue (unsignliazed)
4. Staff Entrance/Gordon Way and Almond Avenue (unsignliazed)
5. N. El Monte Avenue and Almond Avenue (unsignliazed)

Traffic conditions at the study intersections were analyzed for a Friday evening time period from 5:00 to 7:00 PM, which is when the traffic increase due to the project is expected to be the greatest.

Traffic conditions were evaluated for the following scenarios:

- ***Existing Conditions.*** Existing Friday PM peak-hour traffic volumes were obtained from turning-movement counts conducted during a typical Friday without sporting events on November 8, 2019. The study intersections were evaluated with a level of service analysis using TRAFFIX software in accordance with the *2000 Highway Capacity Manual* methodology.
- ***Existing Plus Project Conditions*.** Existing plus project conditions reflect the projected traffic volumes with a new football game occurring at the school with up to 2,200 attendees. Existing plus project traffic volumes were estimated by adding to existing traffic volumes the trips associated with the football game. Existing plus project conditions were evaluated relative to existing conditions in order to determine potential project impacts.

The study also includes a vehicle miles traveled (VMT) analysis, vehicle queuing analysis at selected intersections, an evaluation of potential impacts to pedestrian and bicycle facilities, and a review of site access.

Methodology

This section presents the methods used to determine traffic conditions at study intersections and the traffic impacts of the project. 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 traffic counts and field observations. The following data were collected from these sources:

- Intersection traffic volumes,
- Lane geometries, and
- Signal timing and phasing.

Intersection Level of Service Analysis Methodologies

Signalized Intersection Level 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.

For signalized intersections, the level of service method evaluates intersection operations on the basis of average control delay time for all vehicles at the intersection based on the methodology described the 2000 *Highway Capacity Manual* (HCM). Table 1 presents the level of service definitions for signalized intersections.

This study utilizes TRAFFIX software to determine intersection levels of service based on the 2000 HCM methodology. Since TRAFFIX is approved by VTA as the level of service analysis software for CMP signalized intersections, the City of Los Altos employs the CMP defaults values for the analysis parameters. This method evaluates intersection operations on the basis of average control delay time for all vehicles at the intersection.

The City of Los Altos level of service standard for signalized intersections is LOS D or better.

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

Level of Service	Description	Average Control Delay Per Vehicle (sec.)
A	Signal progression is extremely favorable. Most vehicles arrive during the green phase and do not stop at all. Short cycle lengths may also contribute to the very low vehicle delay.	10.0 or less
B+ B 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 12.1 to 18.0 18.1 to 20.0
C+ C 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 23.1 to 32.0 32.1 to 35.0
D+ D D-	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable signal progression, long cycle lenghts, or high volume-to-capacity (V/C) ratios. Many vehicles stop and individual cycle failures are noticeable.	35.1 to 39.0 39.1 to 51.0 51.1 to 55.0
E+ E 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 60.1 to 75.0 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 Level 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 and delays 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 side street stop-controlled 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 TRAFFIX software to determine intersection levels of service based on the 2000 HCM methodology for unsignalized intersection.

The City of Los Altos does not have an adopted level of service standard for unsignalized intersections.

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.

Intersection Vehicle Queuing Analysis

The analysis of intersection operations is typically supplemented with a vehicle queuing analysis at study intersections where the project would add a substantial number of vehicle trips to the left-turn movements or stop-controlled approaches. The analysis provides a basis for estimating future left-turn pocket storage requirements at the study intersections and is presented for informational purposes only, since the City of Los Altos have not defined a policy related to queuing. Vehicle queues were estimated using a Poisson probability distribution, which estimates the probability of “n” vehicles for a vehicle movement using the following formula:

$$P\ (x=n) = \frac{\lambda^n\ e^{-(\lambda)}}{n!}$$

Where:

P (x=n) = probability of “n” vehicles in queue per lane
n = number of vehicles in the queue per lane
λ = average # of vehicles in the queue per lane (vehicles per hr per lane/signal cycles per hr)

The basis of the analysis is as follows: (1) the Poisson probability distribution is used to estimate the 95th percentile maximum number of queued vehicles for a particular left-turn movement; (2) the estimated maximum number of vehicles in the queue is translated into a queue length, assuming 25 feet per vehicle; and (3) the estimated maximum queue length is compared to the existing or planned available storage capacity for the left-turn movement. This analysis thus provides a basis for estimating future turn pocket storage requirements at intersections.

For signalized intersections, the 95th percentile queue length value indicates that during the peak hour, a queue of this length or less would occur on 95 percent of the signal cycles. Or, a queue length larger than the 95th percentile queue would only occur on 5 percent of the signal cycles (about 3 cycles during the peak hour for a signal with a 60-second cycle length). Thus, turn pocket storage designs based on the 95th percentile queue length would ensure that storage space would be exceeded only 5 percent of the time for a signalized movement. Vehicle queuing at unsignalized intersections are evaluated based on the delay experienced at the specific study turn movement.

Significant Impact Criteria

Significance criteria are used to establish what constitutes an impact. Significance criteria for impacts on signalized intersections are based on the City of Los Altos level of service standard. Impacts to pedestrian and bicycle facilities and transit services were based on the VTA *TIA Guidelines* and professional judgment.

Signalized Intersections

According to the City of Los Altos level of service standards, 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 an increase in critical volume-to-capacity ratio (v/c) of one percent (0.01) or more when project traffic is added.

The exception to this threshold is when the addition of project traffic reduces the amount of average control delay for critical movements, i.e., the change in average control delay for critical movements are negative. In this case, the threshold is when the project increases the critical v/c value by 0.01 or more.

A significant impact is said to be satisfactorily mitigated when measures are implemented that would restore intersection conditions to its acceptable level of service or to an average delay that is better than no-project conditions.

Unsignalized Intersections

The City of Los Altos has not established significant impact criteria for unsignalized intersections. 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.

For this study, the following criteria applied in other traffic studies were used to determine if the project would create a significant adverse impact on traffic conditions at an unsignalized intersection:

1. The addition of project traffic causes the average intersection delay for all-way stop-controlled or the worst movement/approach for side-street stop-controlled intersections to degrade to LOS F, and

2. The intersection satisfies the California Manual of Uniform Traffic Control Devices (CA MUTCD) peak-hour volume signal warrant.

Transit Services

Significant impacts to transit service would occur if the project:

- Creates demand for public transit services above the capacity that is provided or planned; or
- Disrupts existing transit services or facilities; or
- Conflicts with an existing or planned transit facility; or
- Conflicts with transit policies adopted by the City of Los Altos, VTA, or Caltrans for their respective facilities in the study area.

Pedestrian and Bicycle Facilties

Significant impacts to pedestrian and bicycle facilities would occur when a project or an element of the project:

- Creates a hazardous condition that does not currently exist for pedestrians and bicyclists, or otherwise interferes with pedestrian accessibility to the site and adjoining areas; or
- Conflicts with an existing or planned pedestrian or bicycle facility; or
- Conflicts with policies related to bicycle and pedestrian activity adopted by the City of Mountain View, VTA, or Caltrans for their respective facilities in the study area.

Report Organization

This report has a total of four chapters. Chapter 2 describes existing conditions including the existing roadway network, transit service, bicycle and pedestrian facilities. Chapter 3 describes the method used to estimate project traffic, the intersection operations under existing plus project conditions, and the project's impact on the existing roadway network. Chapter 4 presents the analysis of other transportation-related issues, including VMT analysis, vehicle queuing at selected intersections, and vehicle, bicycle, and pedestrian access.

2.
Existing Conditions

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

Existing Roadway Network

Local access to the site is provided on El Camino Real, San Antonio Road, El Monte Avenue, and Almond Avenue. These roadways are described below.

El Camino Real (SR 82) is a six-lane arterial that extends from the City of Santa Clara northerly through San Mateo County. In the project vicinity, El Camino Real is oriented in an approximately east-west direction. Within the project vicinity, El Camino Real has a raised median with left-turn pockets provided at intersections. The speed limit on El Camino Real is 35 miles per hour (mph). El Camino Real provides access to the project via its intersections with San Antonio Road and El Monte Avenue.

San Antonio Road is a four-lane arterial that is aligned in a north-south orientation in the vicinity of the project site. The speed limit on San Antonio Road is 35 mph. On-street parking is prohibited on both sides of the street in the project vicinity. Bike lanes exist on both sides of the street in the project vicinity. San Antonio Road provides access to the project site via its intersection with Almond Avenue.

El Monte Avenue is a two-lane roadway in the vicinity of the project site. It begins at El Camino Real and extends south to Springer Road, and then changes direction to run in a northeast–southwest orientation, crosses Foothill Expressway, and includes a full interchange at I-280. The speed limit on El Monte Avenue between El Camino Real and Foothill Expressway is 25 mph. On-street parking is prohibited on both sides of the street in the project vicinity. Bike lanes exist on both sides of the street in the project vicinity. El Monte Avenue provides access to the project site via its intersection with Almond Avenue.

Almond Avenue is a two-lane collector that runs east-west between San Antonio Road and El Monte Avenue. The speed limit on Almond Avenue is 25 mph, and it includes 15 mph school speed limit zones for both LAHS and Almond Elementary School further to the east. On-street parking is prohibited on both sides of the street in front of the school between Valencia Drive and Gordon Way any time and east of Gordon Way between 8 AM and 2 PM. On-street parking is permitted on the north side of the street west of Valencia Drive. Bike lanes exist on both sides of the street for the entire length. Almond Avenue provides direct access to Los Altos High School via its driveways to the main parking lot and the staff parking lot (at the Gordon Way intersection).

Existing Bicycle Facilities

The bicycle facilities that provide access to Los Altos High School include numerous striped bike lanes (Class II bikeways) and shared bike routes (Class III bikeways). The existing bicycle facilities are shown on Figure 3.

Bike lanes are present on the following roadways in the project vicinity:

- San Antonio Road, between Foothill Expressway and California Avenue
- El Monte Avenue, between Voorhees Drive and El Camino Real
- Springer Road, for the entire street
- Almond Avenue, for the entire street
- Jardin Drive, between Valencia Avenue and Alicia Way

Class III bike routes are present on the following roadways in the LAHS vicinity:

- Escuela Avenue, between El Camino Real and California Street
- W. Edith Avenue, between Frist Street and San Antonio Road

Numerous residential streets near the LAHS campus are not marked as bike routes, but they carry low traffic volumes and are conducive to bicycling. Overall, the school is well-served by the existing bicycle facilities, which provide good connectivity between the project site and the surrounding neighborhoods.

Existing Pedestrian Facilities

LAHS is adequately served by the existing pedestrian facilities in the vicinity of the campus. A continuous sidewalk is present along the north side of Almond Avenue between San Antonio Road and El Monte Avenue, including the street frontage adjacent to the LAHS campus. A sidewalk is also present on the south side of Jardin Drive, adjacent to the campus.

Sidewalks are mostly present on both sides of San Antonio Road between Foothill Expressway and California Avenue, although there are segments where there are no sidewalks. There is also a sidewalk on the northwest side of El Monte Avenue, between Almond Avenue and Springer Road, and sidewalks on both sides of El Monte Avenue between Springer Road and El Camino Real. Most residential streets in Los Altos, however, do not include sidewalks.

Pedestrian-activated push buttons with countdown walk signals and ramps are present at the signalized study intersection of San Antonio Road and Almond Avenue. There is a crosswalk across Almond Avenue at Gordon Avenue with a speed hump and push-button actuated in-pavement warning lights.

Pedestrian access to the field is via a gate on the east side of the field, accessed by the main parking lot.

Existing Transit Services

Existing transit services in the project vicinity are provided by the VTA (see Figure 4). LAHS is served by local bus routes 40 and 52.

Route 40 provides service between Foothill College and Mountain View Transit Center via San Antonio Road daily. It runs from 6:30 AM to 10:30 PM on weekdays and from 8:30 AM to 7:00 PM on Saturdays. The bus headways are approximately 30 to 50-minute during the weekday evening period from 5:00 to 10:00 PM. The closest bus stop to the project site is located on San Antonio Road at Almond Avenue, approximately 0.25 mile from LAHS.

Figure 3
Existing Bicycle Facilities

NORTH
Not to Scale

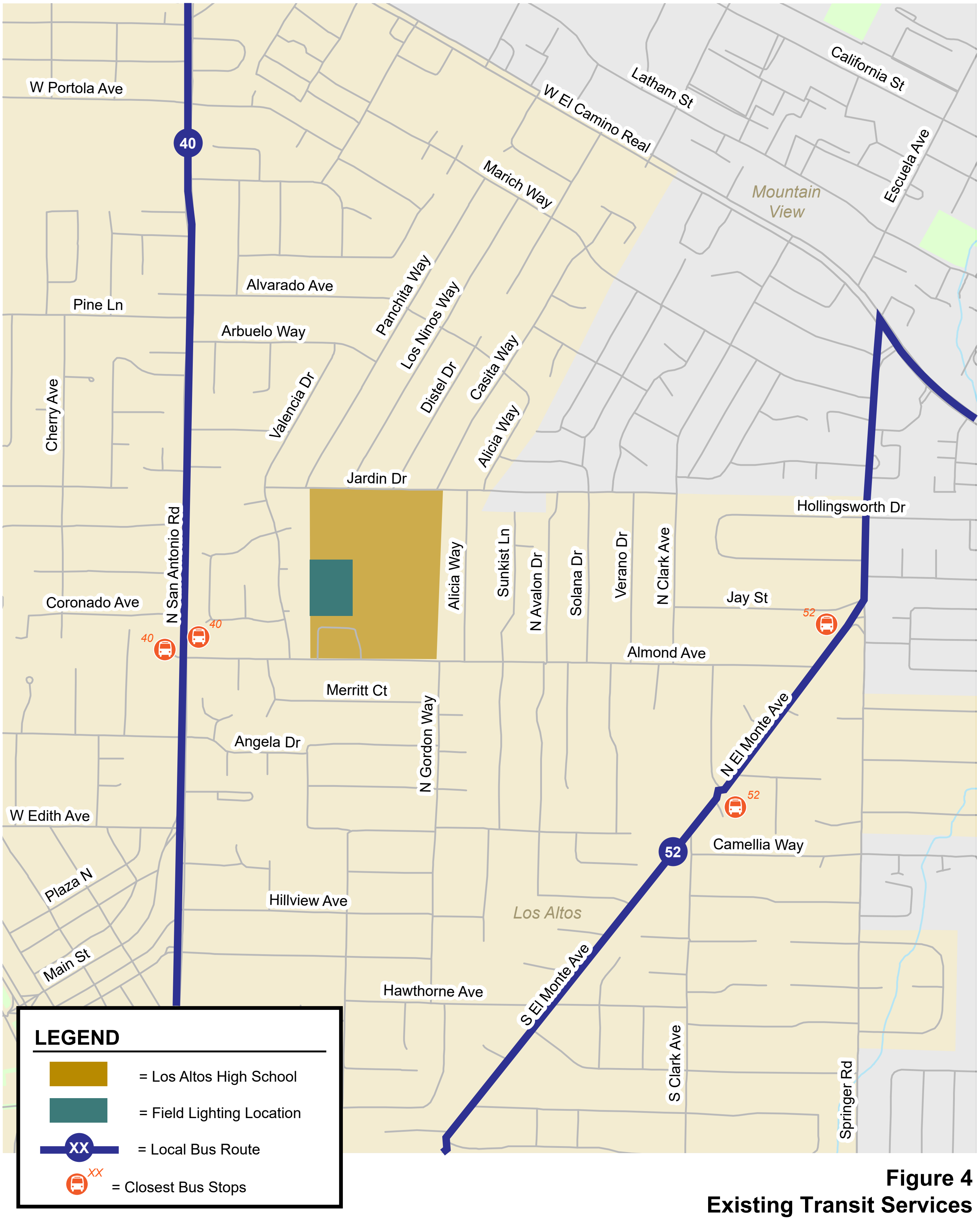


Figure 4
Existing Transit Services

Route 52 provides service between Foothill College and Mountain View Transit Center via El Monte Avenue on weekdays from 7:30 AM to 8:30 PM, with approximately 60 to 70-minute headways during the evening period from 5:00 to 8:30 PM. The closest bus stops are located on El Monte Avenue, south of Jay Street and at Higgins Avenue, approximately 0.6 mile from LAHS.

Existing Intersection Lane Configurations

The existing lane configurations at the study intersections were determined by observations in the field and are shown on Figure 5.

Existing Traffic Volumes

Existing traffic volumes were obtained from Friday evening (5:00 – 7:00 PM) counts collected on November 8, 2019, which is when night game traffic would be highest. The existing PM peak-hour intersection volumes are shown in Figure 6. The peak-hour of traffic occurred from 5:00 to 6:00 PM at most study intersections. Intersection turning-movement counts conducted for this analysis are presented in Appendix A.

Existing Intersection Levels of Service

Intersection levels of service (see Table 3) were evaluated against the City of Los Altos standard. The results of the analysis show that all intersections are currently operating at an acceptable level of service during the PM peak hour on a typical Friday without sporting events. The intersection levels of service calculation sheets are included in Appendix B.

Table 3
Existing Intersection Levels of Service

Intersection	Control	Peak Hour	Count Date	Avg. Delay[1] (sec)	LOS
1 San Antonio Rd and Almond Ave	Signal	PM	11/08/19	24.1	B-
2 West Entrance and Almond Ave	OWSC	PM	11/08/19	11.4	B
3 East Entrance and Almond Ave	OWSC	PM	11/08/19	13.1	B
4 Staff Entrance/Gordon Way and Almond Ave	TWSC	PM	11/08/19	13.3	B
5 N. El Monte Ave and Almond Ave	OWSC	PM	11/08/19	21.7	C

Notes:
OWSC = One-Way Stop Control, TWSC = Two-Way Stop Control,
1 Average delay for an signalized or AWSC intersection is reported for the entire intersection.
Average delay for a OWSC/TWSC intersection is reported for the worst stop-controlled approach.

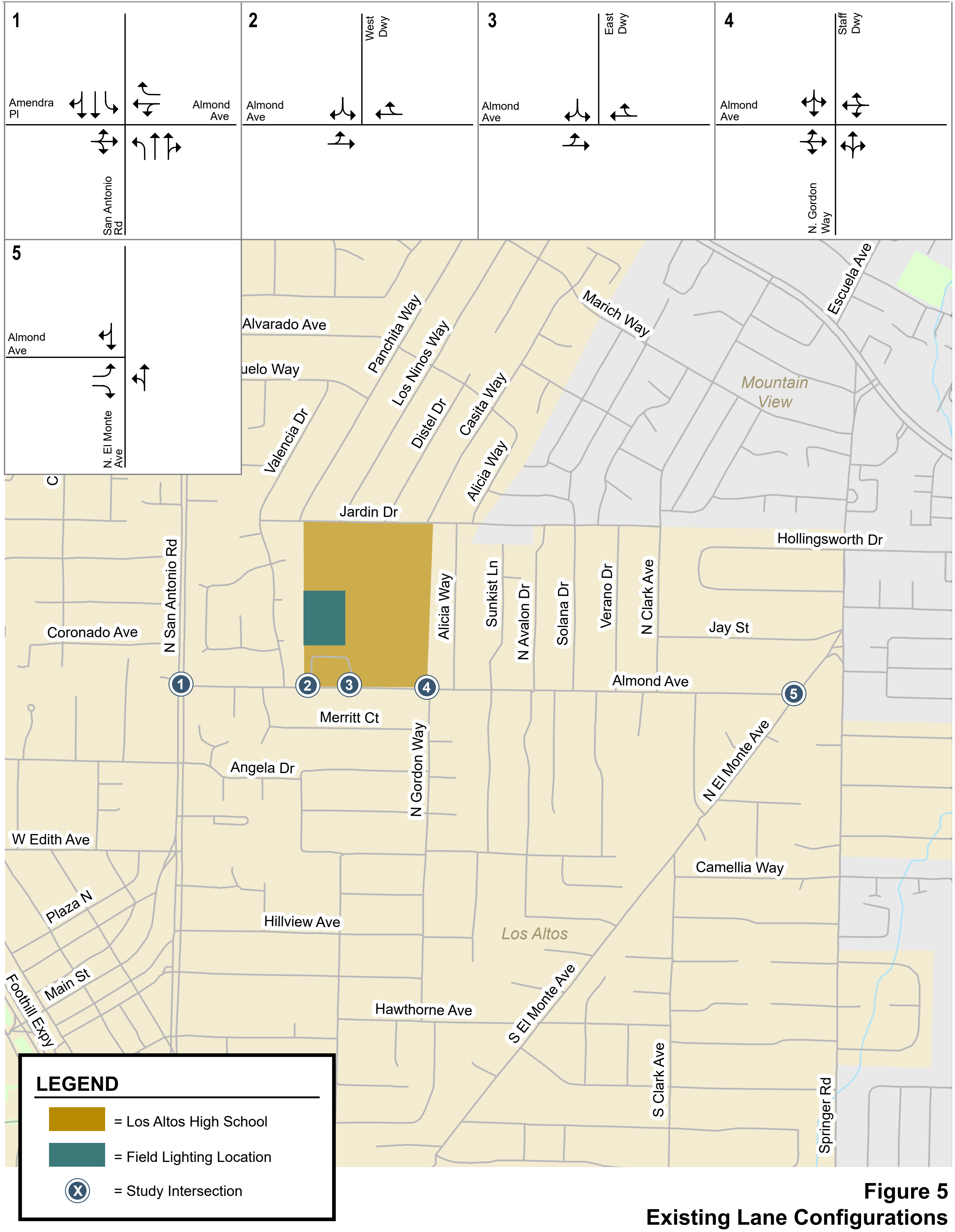


Figure 5
Existing Lane Configurations

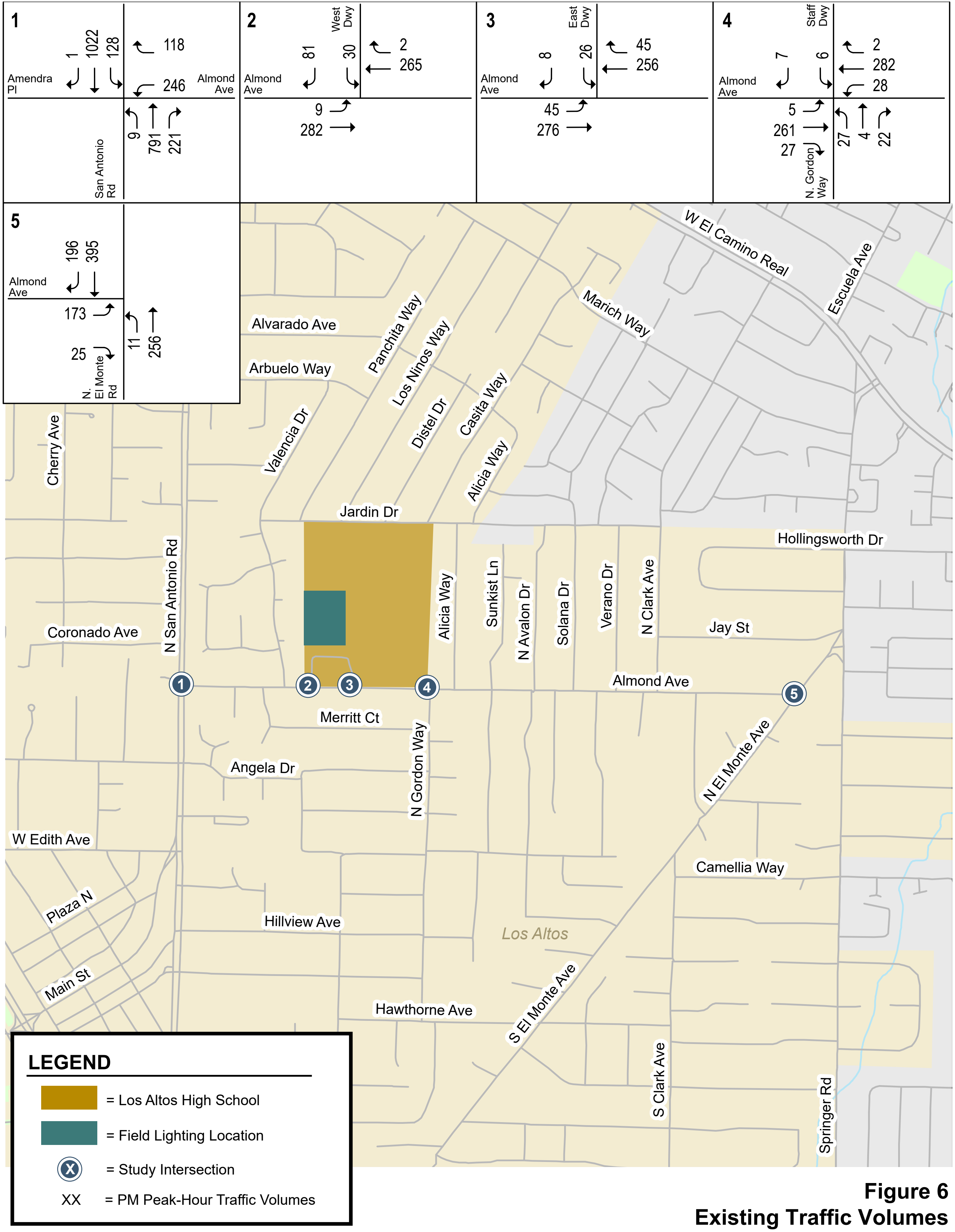


Figure 6
Existing Traffic Volumes

HEXAGON

NORTH
Not to Scale

Observed Existing Traffic Conditions

Traffic conditions were observed in the field in order to identify existing operational deficiencies and to confirm the accuracy of calculated levels of service. The purpose of this effort was (1) to identify any existing traffic problems that may not be directly related to intersection level of service, and (2) to identify any locations where the level of service analysis does not accurately reflect level of service in the field.

Overall, the level of service analysis appears to reflect actual existing traffic conditions at the study intersections. No significant intersection operational deficiencies were observed during the PM peak hour of traffic.

3.
Existing Plus Project Conditions

This chapter describes existing plus project traffic conditions, including the method by which project traffic is estimated. Existing plus project traffic conditions Existing plus project conditions reflect the projected traffic volumes a new football game occurring at the school with up to 2,200 attendees.

Roadway Network under Existing Plus Project Conditions

The roadway network under existing plus project conditions would be the same as the existing roadway network because the project would not alter the existing intersection lane configurations.

Project Trip Estimates

The magnitude of traffic produced by a new development and the locations where that traffic would appear were estimated using a three-step process: (1) trip generation, (2) trip distribution, and (3) trip assignment. In determining project trip generation, the traffic related to the proposed field light installation at Los Altos High School was estimated for the PM peak hour. As part of the project trip distribution, an estimate is made of the directions to and from which the project trips would travel. In the project trip assignment, the project trips were assigned to specific streets and intersections. These procedures are described below.

Trip Generation

Typically, the magnitude of traffic generated by a project can be estimated by applying to the size of the development the applicable trip generation rates published in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual* for the proposed land uses. However, the ITE *Trip Generation Manual* does not have trip generation rates for sporting events/games. Therefore, vehicle trips that would be generated by the evening sporting events at the school were estimated based on data collected for a homecoming football game on a Friday night at Mitty High School in San Jose, California.

Hexagon counted the number of vehicles parked at Mitty High School, at an adjacent church, and on the surrounding streets during the homecoming game on Friday, October 5, 2018 and on a regular Friday night on October 26, 2018.The difference between the two parking counts represents Mitty game night traffic. Based on the number of additional parked vehicles and the estimated attendance at the Friday night game, the vehicle occupancy rate was an average of 3.24 persons per vehicle for the game attendees.

The vehicle occupancy rate was used to estimate the number of vehicle trips that that would be generated by the new evening football games. With the proposed field lighting, the school would be able to hold the football games in the evening with up to 2,200 attendees. These evening/night games typically would have the junior varsity (JV) games played prior to the varsity game, and the JV games typically have fewer attendees.

Under project conditions, it was assumed that there would be 600 attendees for the JV game with 200 attendees staying for the varsity game. Therefore, before the varsity game starts, there would be an additional 2,000 inbound attendees for the varsity game (for a total of 2,200 attendees) and 400 outbound attendees leaving after the JV game. Based on the rate of 3.24 persons per vehicle, the football games are expected to generate 617 inbound trips and 123 outbound trips (see Table 4) from 6:30 to 7:30 PM for games starting at 7:00 PM, which occurs after the peak hour of local traffic (5:00 to 6:00 PM). Therefore, the traffic analysis is conservative by evaluating the traffic conditions during the peak hour with the project trips.

Table 4
Trip Generation Estimate

		Peak Friday Evening			
Land Use	**Size**	**Rate[1] (persons/veh)**	**In**	**Out**	**Total Trips**
Proposed Field Lighting[2]					
Junior Varsity Game	400 outbound attendees	3.24	--	123	93
Varsity Game	2,000 inbound attendees	3.24	617	--	556
Total Trips			**617**	**123**	**741**

Notes:
1. Average rate based on counts conducted in October 2018 for a Friday night football game at Mitty High School in San Jose.
2. Under project conditions, it was assumed that 400 out of 600 attendees would leave after the JV game, 200 attendees stay for the varsity game, and 2,000 additional attendees attend the varsity game for a total of 2,200 attendees for the varsity game.

Trip Distribution and Assignment

The trip distribution patterns for the project were estimated based on existing travel patterns on the surrounding roadway network and the locations of complementary land uses (see Figure 7). The net peak-hour vehicle trips generated by the project were assigned to the roadway network in accordance with the trip distribution pattern and potential parking locations.

The trip assignment (see Figure 8) reflects the fact that event attendees are most likely to park their vehicles closest to the entrance of the track and athletic field at the main school parking lot, directly south of the field. Because the school does not provide enough parking spaces for game attendees, according to the School District, the event attendees would continue to park on the surrounding neighborhood streets, such as Almond Avenue, Gordon Way, Merritt Road, Valencia Drive and Alicia Way. Figure 2 shows the potential parking locations.

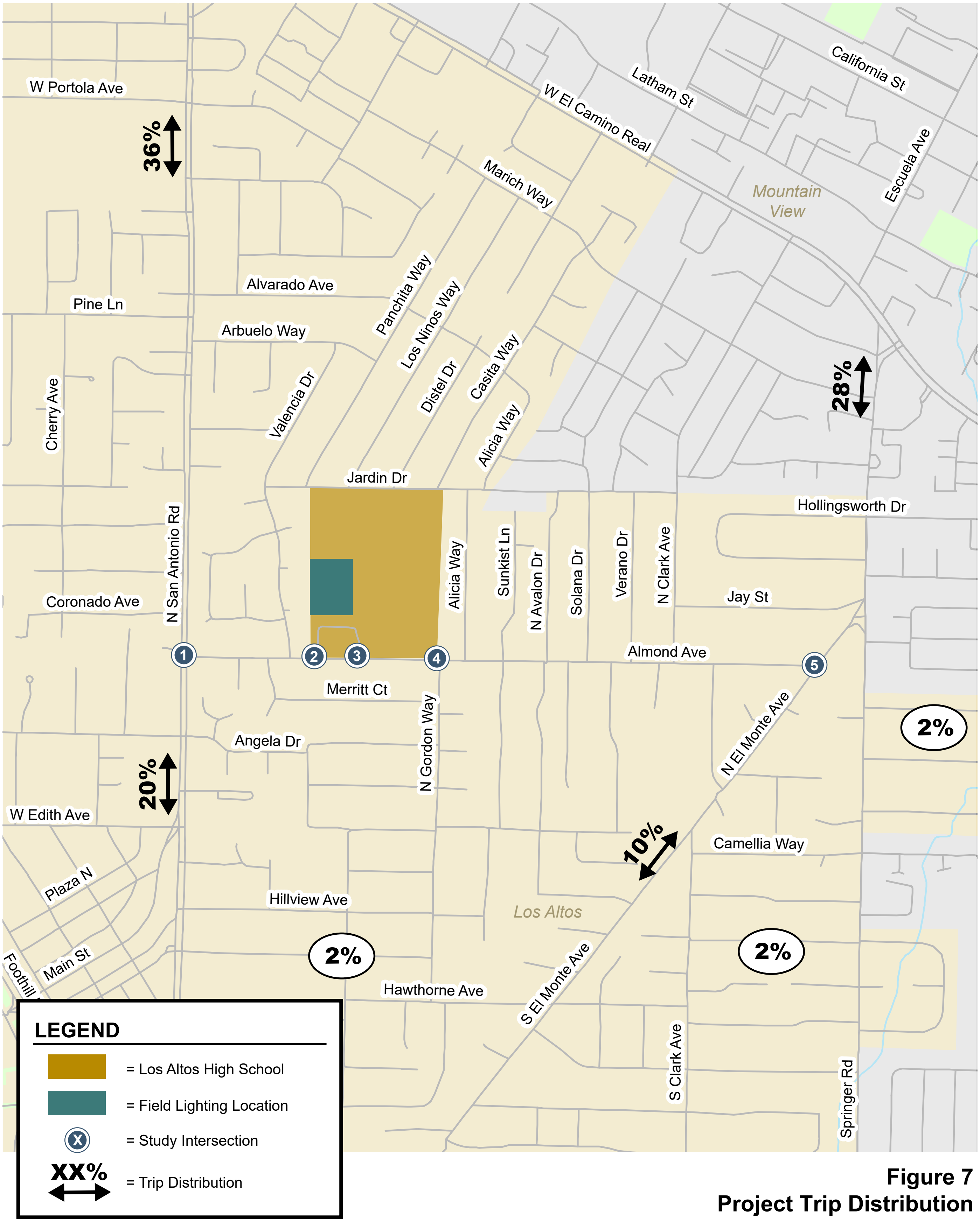


Figure 7
Project Trip Distribution

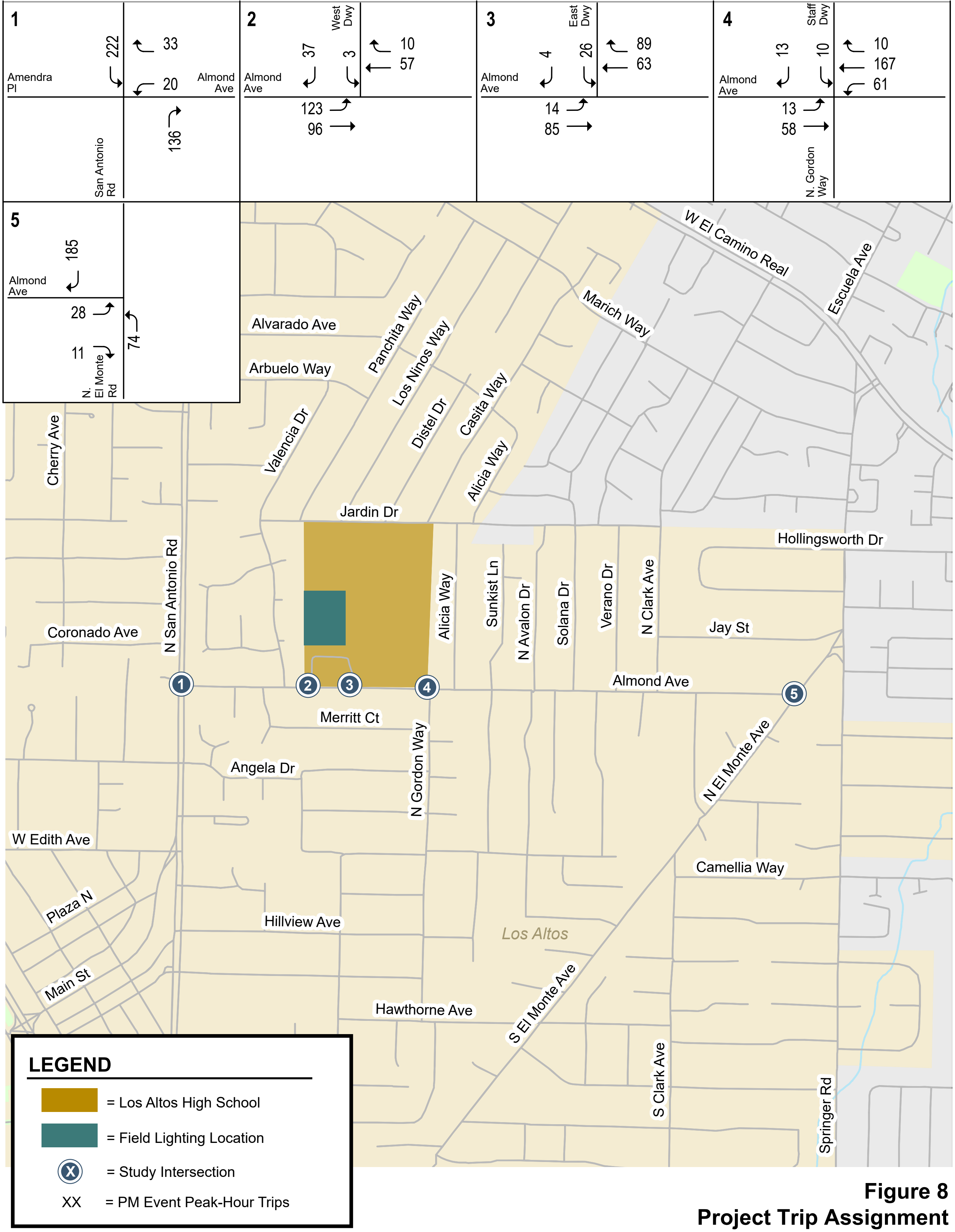


Figure 8
Project Trip Assignment

Existing Plus Project Traffic Volumes

Project trips, as represented in the above project trip assignment, were added to existing traffic volumes to obtain existing plus project traffic volumes (see Figure 9).

Existing Plus Project Intersection Analysis

The results of the level of service analysis (see Table 5) show that, measured against the City of Los Altos level of service standards, most of the study intersections, except one, would operate at an acceptable level of service during the PM peak hour of traffic under existing plus project conditions. The intersection level of service calculation sheets are included in Appendix B.

At the intersection of N. El Monte Avenue and Almond Avenue, the stop-controlled approach on Almond Avenue is expected to experience some delay with an undesirable LOS F due to inbound and outbound game traffic. However, this would occur infrequently in the evening when there is a homecoming football game at the school. The intersection operations would be acceptable during most football games with 1,500 attendees. A peak-hour volume signal warrant analysis was conducted to determine if the project would create a significant adverse impact at the intersection. Based on the significance criteria, the project is not expected to create a significant adverse impact as the intersection would operate at LOS F but would not meet the peak-hour volume signal warrant, as discussed in Chapter 4.

Table 5
Existing Plus Project Intersection Levels of Service

Intersection	Control	Peak Hour	Count Date	Existing			
				No Project		with Project	
				Avg. Delay[1] (sec)	LOS	Avg. Delay[1] (sec)	LOS
1 San Antonio Rd and Almond Ave	Signal	PM	11/08/19	24.1	B-	30.1	C
2 West Entrance and Almond Ave	OWSC	PM	11/08/19	11.4	B	14.8	B
3 East Entrance and Almond Ave	OWSC	PM	11/08/19	13.1	B	17.7	C
4 Staff Entrance/Gordon Way and Almond Ave	TWSC	PM	11/08/19	13.3	B	20.5	C
5 N. El Monte Ave and Almond Ave	OWSC	PM	11/08/19	21.7	C	**54.8**	**F**[2]
						37.4	E[2]

Notes:
Bold indicates unacceptable LOS
OWSC = One-Way Stop Control, TWSC = Two-Way Stop Control,
1 Average delay for a side-street stop controlled intersection is reported for the worst stop-controlled approach.
2 Eastbound traffic on Almond Avenue would experience some delay with LOS F when there is a homecoming game. The intersection operations would be acceptable LOS E during most football games with 1,500 attendees.

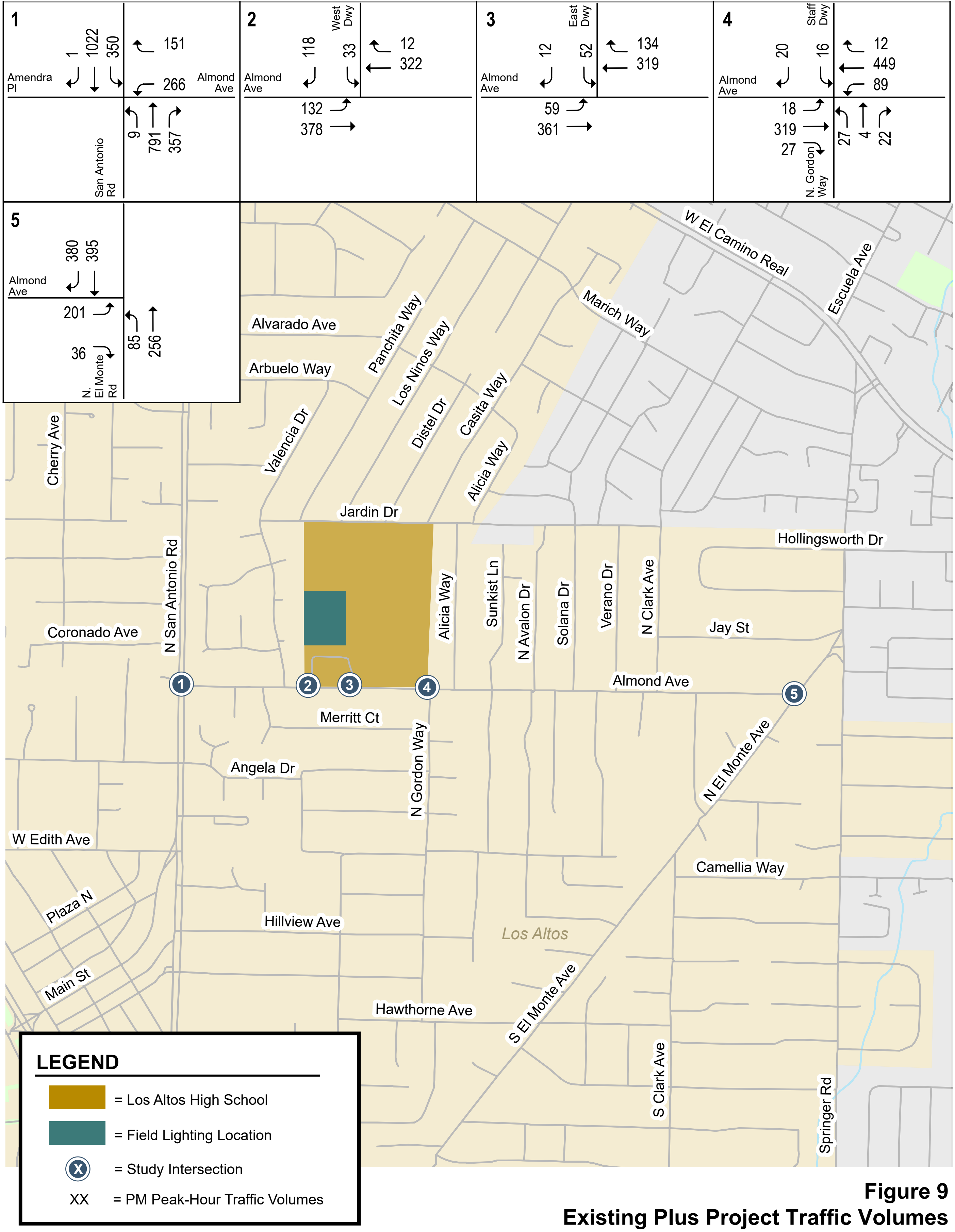


Figure 9
Existing Plus Project Traffic Volumes

NORTH
Not to Scale

4.
Other Transportation Issues

This chapter presents other transportation issues associated with the project. These include an analysis of:

- Vehicle miles traveled (VMT),
- Vehicle queuing at selected intersections,
- Signal warrant analysis, and
- Potential effects to vehicle, bicycle, and pedestrian access

Unlike the level of service impact methodology, which is adopted by the City Council of the City of Los Altos, the analyses in this chapter are based on professional judgement in accordance with the standards and methods employed by the traffic engineering community.

VMT Analysis

Per California Senate Bill 743, the California Natural Resources Agency, with assistance from the Governor's Office of Planning and Research (OPR), adopted new CEQA guidelines in December 2018. The new guidelines state that automobile delay, as measured by LOS, will no longer constitute a significant environmental impact under CEQA, and that VMT is considered the most appropriate metric to evaluate a project's transportation impacts. Local agencies have until July 2020 to adopt the new policy that establishes the thresholds and procedures for evaluating transportation impacts based on VMT.

The School District has not yet adopted any analysis procedures, standards, or guidelines related to VMT. Therefore, an analysis of VMT for this project is presented for informational purposes only to aid decision makers during this transition period from LOS to VMT.

The project would result in an increase in attendance for the football games and other sporting events. An increase of the number of attendees would result in an increase in VMT generated by the additional attendees. Currently, football games with up to 1,500 attendees are played on Saturdays, or occasionally at Foothill College if played at night. The project would increase the attendance of the football games by up to 700 attendees. Football season typically last for 7 weeks between September and November with 3 or 4 games hosted by LAHS. Therefore, the average trip increase per day would be approximately 87 trips (700 attendees / 3.24 persons per vehicle x 2 trips (inbound and outbound) x 1 event per week / 5 days per week = 87 trips per day) when there is a football game during the week. It should be noted that evening football games have been previously held at Foothill College once or twice per season. Therefore, attendees would be making shorter trips by having the football games on campus.

The project would increase the attendance of other sporting events, such as soccer in winter and lacrosse in spring, by up to 300 attendees. These games typically are held twice per week. Therefore, the average trip increase per day would be approximately 74 trips (300 attendees / 3.24 persons per vehicle x 2 trips (inbound and outbound) x 2 events per week / 5 days per week = 74 trips per day) during the sporting seasons.

Therefore, as a result of the project, the average trip increase per day would range from 74 trips to 87 trips per day depending on the sporting seasons. According to the OPR's Technical Advisory on Evaluating Transportation Impacts in CEQA (December 2018), land use projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less-than-significant transportation impact. Using this definition, the project would cause a less-than-significant transportation impact on VMT.

Queuing Analysis

The analysis of intersection levels of service was supplemented with a vehicle queuing analysis for intersections where the project would add a substantial number of trips to the left-turn movements or stop-controlled movements. Vehicle queues were estimated using a Poisson probability distribution, described in Chapter 1. The analysis was conducted for the following movements:

- San Antonio Road and Almond Avenue: Southbound left turn
- West School Driveway and Almond Avenue: Eastbound movement
- East School Driveway and Almond Avenue Eastbound movement
- Staff Driveway/Gordon Way and Almond Avenue: Eastbound movement
- N. El Monte Avenue and Almond Avenue: Eastbound left turn

The analysis (see Table 6) found that the existing storage capacity would be inadequate for the existing plus project condition at the intersection of San Antonio Road and Almond Avenue. The following discusses the intersection where the storage capacity was found to be inadequate for the 95th percentile queue during the PM peak hour.

San Antonio Road and Almond Avenue

The southbound left-turn lane on San Antonio Road is approximately 150 feet long and provides storage for approximately 6 vehicles. The queuing analysis found that it is not adequate to serve existing traffic volumes. The 95th percentile queue length (9 vehicles) is longer than the length of the left-turn lane by 3 vehicles. However, field observations showed that all left-turn vehicles were able to clear the intersection in one cycle.

The project is estimated to add 9 vehicles to the 95th percentile queue under the existing plus project condition, which would cause the queue to extend past the storage capacity by 12 vehicles. However, this would occur infrequently in the evening when there is a football game at the school. There are two southbound through lanes at the intersection, so although the football game traffic would extend past the left-turn pocket and block one of the though lane momentarily, the southbound through traffic would still be able to use the outside lane to pass the intersection. Although the southbound through traffic flow would be affected during the peak hour of the football game traffic, the level of service analysis shows that the intersection would operate adequately with the project traffic. It should also be noted that by definition, the 95th percentile queue only occurs on 5 percent of the signal cycles (about one cycle for the intersection with a 123-second cycle length), and the 95th percentile queue only occurs for a very brief period at the end of the signal cycle (an estimated 5 to 10 seconds).

Table 6
Queuing Analysis Summary

	San Antonio Rd & Almond Ave	West School Dwy & Almond Ave	East School Dwy & Almond Ave	Staff Dwy/Gordon Way & Almond Ave	N. El Monte Ave & Almond Ave
	SBL	EBL/EBT	EBL/EBT	EBL/EBT/EBR	EBL
Analysis Scenario	**PM**	**PM**	**PM**	**PM**	**PM**
Existing					
Cycle/Delay[1] (sec)	123	7.8	7.9	7.8	23.1
Volume (vphpl)	128	291	321	293	173
95th %. Queue (veh/ln)	8	2	2	2	3
95th %. Queue[2] (ft/ln)	200	50	50	50	75
Storage (ft/ln)	150	200	325	550	775
Adequate (Y/N)	**N**	Y	Y	Y	Y
Existing Plus Project					
Cycle/Delay[1] (sec)	123	8.3	8.4	8.3	62.4
Volume (vph)	350	510	420	364	201
95th %. Queue (veh/ln)	18	3	3	3	7
95th %. Queue[2] (ft/ln)	450	75	75	75	175
Storage (ft/ln)	150	200	325	550	775
Adequate (Y/N)	**N**	Y	Y	Y	Y

Notes:

SBL = southbound left-turn movement; EBL = eastbound left-turn movement; EBT = eastbound through movement; EBR = eastbound right-turn movement

[1] Cycle length used for signalized intersections, delay of movement used for unsignalized intersections

[2] Assumes 25 feet per vehicle queued.

Signal Warrant Analysis

In conjunction with the level of service analysis, a signal warrant analysis was performed to determine if the unsignalized intersection of N. El Monte Avenue and Almond Avenue would warrant a traffic signal. The study intersection was analyzed on the basis of peak-hour traffic volumes and was checked against the peak-hour signal warrant described in Section 4C.04 (Warrant 3) of the *California Manual of Uniform Traffic Control Devices (CA MUTCD)*, 2014 Edition. This method provides an indication of whether traffic conditions and peak-hour traffic levels are, or would be, sufficient to justify installation of a traffic signal. Note that this is just one tool used to evaluate whether installation of a traffic signal would be justified. Additional analysis is recommended and may include unsignalized level of service analysis and/or operational analysis such as evaluating vehicle queuing and delay. Other types of traffic control devices, signage, or geometric changes may be preferable based on existing field conditions.

The results of the signal warrant checks indicate that the PM peak-hour traffic conditions and volumes at the intersection would fall below the thresholds that warrant signalization under existing and project conditions. The peak-hour signal warrant worksheets are contained in Appendix C.

Vehicle Access

It is expected that a majority of attendees would park their vehicles at the campus parking lots and off-site along Almond Avenue, Merritt Road, N. Gordon Way, Alicia Way, and Valencia Drive. Due to low traffic volumes on all of these streets, game attendees accessing/exiting on-street parking spaces or on-site parking lots are not expected to substantially disrupt traffic flow on these streets.

Bicycle and Pedestrian Access

There are a number of existing bicycle facilities that provide good bicycle access to the school. Given that the sporting events would start and end after dark, it is expected that there would be minimal bicycle usage.

Approximately half of the game attendees would park off-site, so the project would increase the number of pedestrians using the nearby sidewalks and crosswalks. It is likely that attendees parked on surrounding streets south of the school would cross Almond Avenue where there is a crosswalk present at Gordon Way. The project would also increase the amount of vehicle traffic on Almond Avenue, which would increase conflict between vehicles and pedestrians. To increase pedestrian safety, depending on the expected attendance, the school may need to have a crossing guard at the crosswalk at the Almond Avenue/Gordon Way intersection and have staff to direct attendees to use the crosswalk.

Transit Access

There are two bus routes serving the school in the evening with approximately 30 to 70-minute headways. Given that the sporting events typically do not end on the same time and the long bus headways, it is expected that there would be minimal attendees taking buses to these events.

Los Altos High School
Field Lighting Project TIA

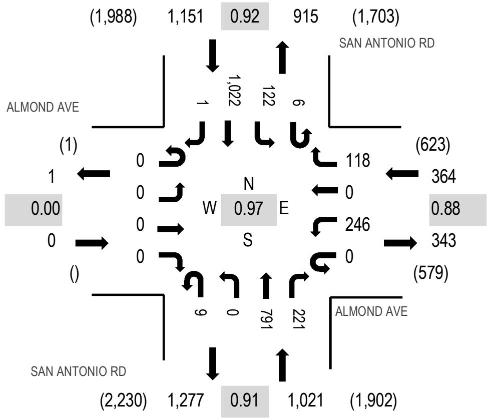
Technical Appendices

Appendix A
Traffic Counts

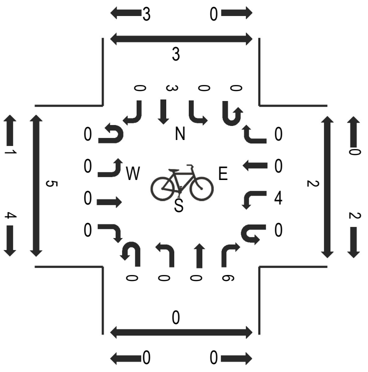
All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

Location: 1 SAN ANTONIO RD & ALMOND AVE PM
Date: Friday, November 8, 2019
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:45 PM - 06:00 PM

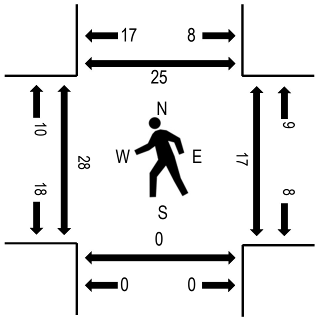
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	ALMOND AVE Eastbound				ALMOND AVE 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
5:00 PM	0	0	0	0	0	51	0	13	2	0	203	47	1	39	272	0	628	2,536	15	8	0	13
5:15 PM	0	0	0	0	0	59	0	32	3	0	163	47	2	34	266	0	606	2,449	10	5	0	6
5:30 PM	0	0	0	0	0	71	0	29	2	0	220	58	2	21	245	0	648	2,338	1	2	0	2
5:45 PM	0	0	0	0	0	65	0	44	2	0	205	69	1	28	239	1	654	2,185	2	2	0	4
6:00 PM	0	0	0	0	0	56	0	28	2	0	172	44	1	25	213	0	541	1,977	7	4	0	4
6:15 PM	0	0	0	0	0	45	0	14	0	0	191	43	4	18	180	0	495		18	2	0	22
6:30 PM	0	0	0	0	0	43	0	17	1	0	178	48	1	9	198	0	495		2	0	0	0
6:45 PM	0	0	0	0	0	44	0	12	0	0	168	34	2	15	171	0	446		0	0	0	0

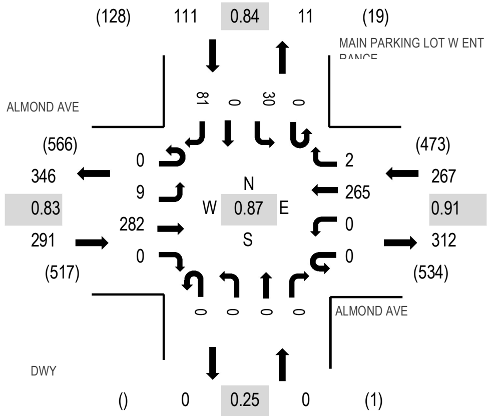
Peak Rolling Hour Flow Rates

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	0	0	0	0	246	0	118	9	0	783	221	6	121	1,019	1	2,524
Mediums	0	0	0	0	0	0	0	0	0	0	8	0	0	1	3	0	12
Total	0	0	0	0	0	246	0	118	9	0	791	221	6	122	1,022	1	2,536

All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

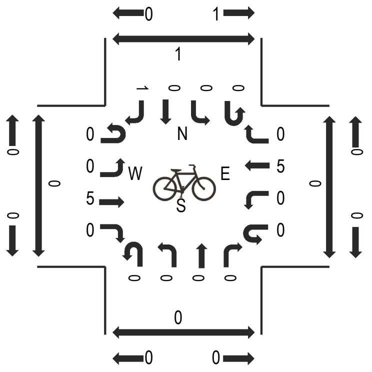
Location: 2 DWY & ALMOND AVE PM
Date: Friday, November 8, 2019
Peak Hour: 05:15 PM - 06:15 PM
Peak 15-Minutes: 05:45 PM - 06:00 PM

Peak Hour - Motorized Vehicles

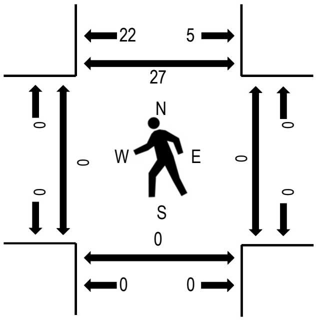


Note: Total study counts contained in parentheses.

Peak Hour - Bicycles



Peak Hour - Pedestrians



Traffic Counts - Motorized Vehicles

Interval Start Time	ALMOND AVE Eastbound U-Turn	Left	Thru	Right	ALMOND AVE Westbound U-Turn	Left	Thru	Right	DWY Northbound U-Turn	Left	Thru	Right	MAIN PARKING LOT W ENTRANCE Southbound U-Turn	Left	Thru	Right	Total	Rolling Hour	Pedestrian Crossings West	East	South	North
5:00 PM	0	3	70	0	0	0	55	0	0	0	1	0	0	0	0	4	133	662	0	0	0	8
5:15 PM	0	2	67	0	0	0	74	0	0	0	0	0	0	8	0	15	166	669	0	0	0	6
5:30 PM	0	0	68	0	0	0	69	1	0	0	0	0	0	6	0	27	171	613	0	0	0	2
5:45 PM	0	4	86	0	0	0	70	0	0	0	0	0	0	9	0	23	192	556	0	0	0	5
6:00 PM	0	3	61	0	0	0	52	1	0	0	0	0	0	7	0	16	140	457	0	0	0	14
6:15 PM	0	0	49	0	0	0	57	0	0	0	0	0	0	1	0	3	110		0	0	0	6
6:30 PM	0	2	61	0	0	0	42	1	0	0	0	0	0	1	0	7	114		0	0	1	2
6:45 PM	0	1	40	0	0	0	51	0	0	0	0	0	0	0	0	1	93		0	0	0	1

Peak Rolling Hour Flow Rates

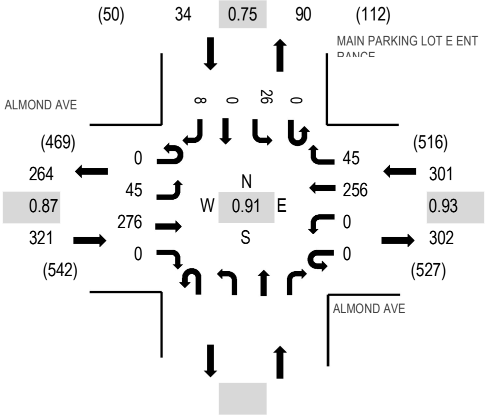
Vehicle Type	Eastbound U-Turn	Left	Thru	Right	Westbound U-Turn	Left	Thru	Right	Northbound U-Turn	Left	Thru	Right	Southbound U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Lights	0	9	281	0	0	0	262	2	0	0	0	0	0	29	0	81	664
Mediums	0	0	1	0	0	0	2	0	0	0	0	0	0	1	0	0	4
Total	0	9	282	0	0	0	265	2	0	0	0	0	0	30	0	81	669

All Traffic Data
Services Inc.

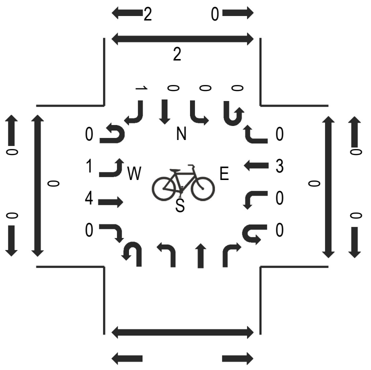
(303) 216-2439
www.alltrafficdata.net

Location: 3 MAIN PARKING LOT E ENTRANCE & ALMOND AVE PM
Date: Friday, November 8, 2019
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:45 PM - 06:00 PM

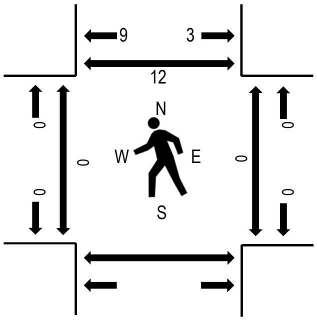
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	ALMOND AVE Eastbound				ALMOND AVE Westbound				Northbound				MAIN PARKING LOT E ENTRANCE 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
5:00 PM	0	6	75	0	0	0	58	6					0	2	0	0	147	656	0	0		3
5:15 PM	0	10	63	0	0	0	65	16					0	3	0	5	162	654	0	0		2
5:30 PM	0	9	66	0	0	0	66	10					0	13	0	2	166	599	0	0		3
5:45 PM	0	20	72	0	0	0	67	13					0	8	0	1	181	544	0	0		4
6:00 PM	0	6	64	0	0	0	55	7					0	12	0	1	145	452	0	0		6
6:15 PM	0	2	53	0	0	0	50	1					0	0	0	1	107		0	0		4
6:30 PM	0	1	56	0	0	0	49	4					0	1	0	0	111		0	0		0
6:45 PM	0	1	38	0	0	0	49	0					0	1	0	0	89		0	0		1

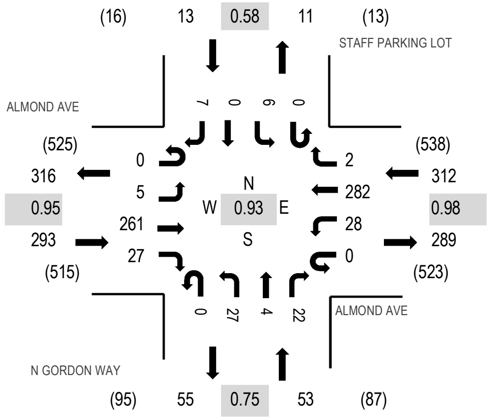
Peak Rolling Hour Flow Rates

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
Lights	0	45	274	0	0	0	255	45					0	26	0	8	653
Mediums	0	0	2	0	0	0	1	0					0	0	0	0	3
Total	0	45	276	0	0	0	256	45					0	26	0	8	656

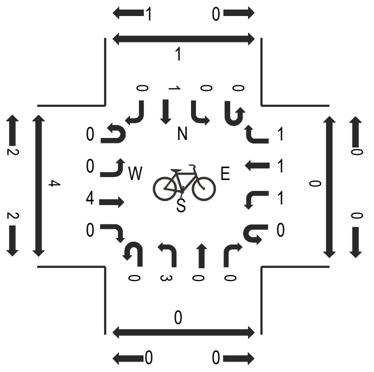
All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

Location: 4 N GORDON WAY & ALMOND AVE PM
Date: Friday, November 8, 2019
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:45 PM - 06:00 PM

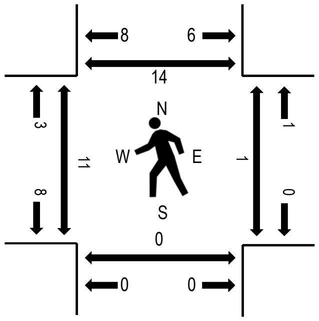
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	ALMOND AVE Eastbound				ALMOND AVE Westbound				N GORDON WAY Northbound				STAFF PARKING LOT 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
5:00 PM	0	0	68	5	0	9	66	1	0	4	0	5	0	2	0	0	160	671	4	0	0	6
5:15 PM	0	1	56	11	0	4	73	0	0	7	1	6	0	0	0	0	159	652	3	1	0	2
5:30 PM	0	2	69	4	0	10	70	0	0	6	0	6	0	3	0	2	172	618	3	0	0	2
5:45 PM	0	2	68	7	0	5	73	1	0	10	3	5	0	1	0	5	180	563	1	0	0	4
6:00 PM	0	0	68	6	0	4	51	1	0	4	0	6	0	1	0	0	141	485	3	0	0	4
6:15 PM	0	1	49	2	0	10	53	0	0	1	0	7	0	0	2	0	125		2	0	0	3
6:30 PM	0	0	58	0	0	5	47	0	0	3	0	4	0	0	0	0	117		0	0	2	0
6:45 PM	0	0	34	4	0	7	48	0	0	2	0	7	0	0	0	0	102		2	0	0	2

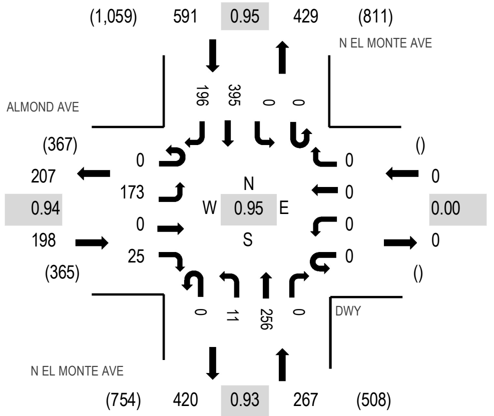
Peak Rolling Hour Flow Rates

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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	5	258	27	0	28	282	2	0	27	4	22	0	6	0	7	668
Mediums	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Total	0	5	261	27	0	28	282	2	0	27	4	22	0	6	0	7	671

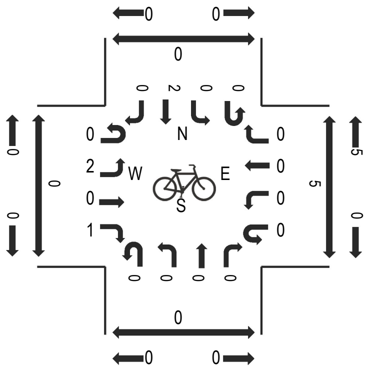
All Traffic Data
Services Inc.
(303) 216-2439
www.alltrafficdata.net

Location: 5 N EL MONTE AVE & DWY PM
Date: Friday, November 8, 2019
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:45 PM - 06:00 PM

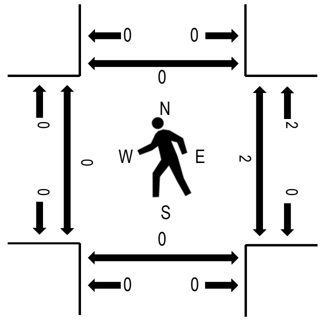
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	ALMOND AVE Eastbound				DWY Westbound				N EL MONTE AVE Northbound				N EL MONTE AVE 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
5:00 PM	0	41	0	8	0	0	0	0	0	1	55	0	0	0	88	50	243	1,056	0	0	0	0
5:15 PM	0	45	0	6	0	0	0	0	0	3	57	0	0	0	107	45	263	1,045	0	2	0	0
5:30 PM	0	42	0	7	0	0	0	0	0	1	76	0	0	0	97	49	272	1,008	0	0	0	0
5:45 PM	0	45	0	4	0	0	0	0	0	6	68	0	0	0	103	52	278	964	0	0	0	0
6:00 PM	0	52	0	2	0	0	0	0	0	0	66	0	0	0	76	36	232	876	0	0	0	0
6:15 PM	0	34	0	3	0	0	0	0	0	3	65	0	0	0	85	36	226		0	0	0	0
6:30 PM	1	38	0	5	0	0	0	0	0	1	51	0	0	0	91	41	228		0	0	0	0
6:45 PM	0	24	0	8	0	0	0	0	0	4	51	0	1	0	64	38	190		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	172	0	25	0	0	0	0	0	11	254	0	0	0	393	196	1,051
Mediums	0	1	0	0	0	0	0	0	0	0	2	0	0	0	2	0	5
Total	0	173	0	25	0	0	0	0	0	11	256	0	0	0	395	196	1,056

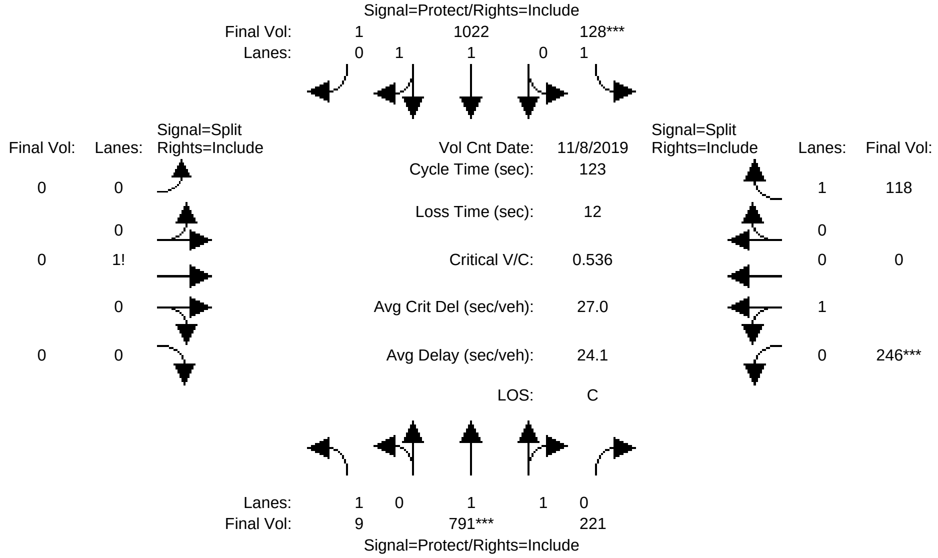
Appendix B

Level of Service Calculations

Los Altos High School
Hexagon Transportation Consultants, Inc.
San Jose, CA

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

Intersection #9: San Antonio Rd and Almond Ave



Signal=Protect/Rights=Include
Final Vol: 1 1022 128***
Lanes: 0 1 1 0 1

Signal=Split
Rights=Include

Final Vol:	Lanes:
0	0
	0
0	1!
	0
0	0

Vol Cnt Date: 11/8/2019
Cycle Time (sec): 123
Loss Time (sec): 12
Critical V/C: 0.536
Avg Crit Del (sec/veh): 27.0
Avg Delay (sec/veh): 24.1
LOS: C

Signal=Split
Rights=Include

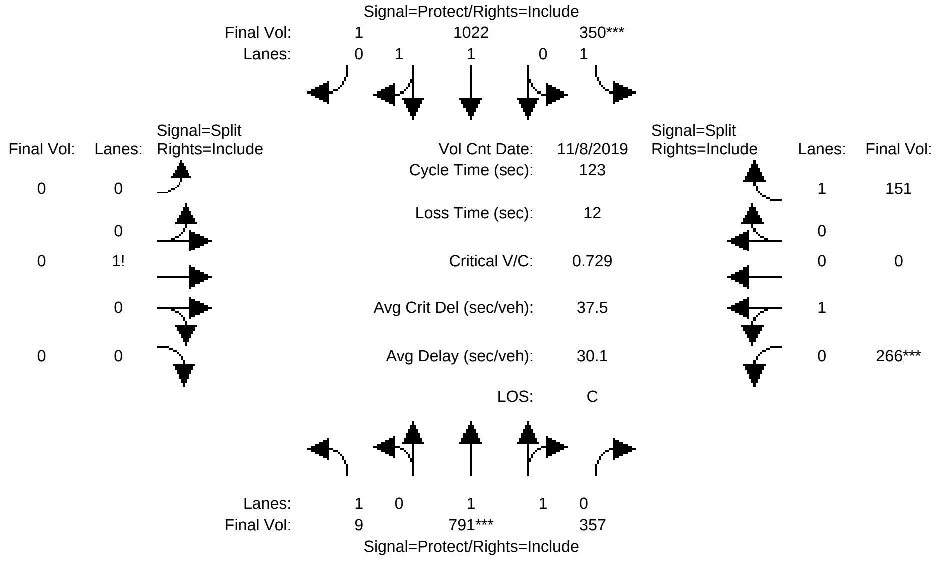
Lanes:	Final Vol:
1	118
0	
0	0
1	
0	246***

Lanes: 1 0 1 1 0
Final Vol: 9 791*** 221
Signal=Protect/Rights=Include

```
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   10    10     7   10    10    10   10    10    10   10    10
Y+R:          4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 8 Nov 2019 << 5-6P
Base Vol:       9  791   221   128 1022     1     0    0     0   246    0   118
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:    9  791   221   128 1022     1     0    0     0   246    0   118
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:    9  791   221   128 1022     1     0    0     0   246    0   118
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:     9  791   221   128 1022     1     0    0     0   246    0   118
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    9  791   221   128 1022     1     0    0     0   246    0   118
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:    9  791   221   128 1022     1     0    0     0   246    0   118
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.92 0.98  0.95  0.92 0.97  0.95  0.92 0.92  0.92  0.95 0.95  0.92
Lanes:       1.00 1.55  0.45  1.00 1.99  0.01  0.00 1.00  0.00  1.00 0.00  1.00
Final Sat.:  1750 2891   808  1750 3696     4     0 1750     0  1800    0  1750
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.01 0.27  0.27  0.07 0.28  0.28  0.00 0.00  0.00  0.14 0.00  0.07
Crit Moves:       ****        ****                               ****
Green Time:  13.6 62.8  62.8  16.8 66.0  66.0   0.0  0.0   0.0  31.4  0.0  31.4
Volume/Cap:  0.05 0.54  0.54  0.54 0.52  0.52  0.00 0.00  0.00  0.54 0.00  0.26
Delay/Veh:   49.0 20.6  20.6  51.8 18.5  18.5   0.0  0.0   0.0  40.8  0.0  36.9
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:  49.0 20.6  20.6  51.8 18.5  18.5   0.0  0.0   0.0  40.8  0.0  36.9
LOS by Move:    D   C+    C+    D-   B-    B-     A    A     A     D    A    D+
HCM2kAvgQ:      0   13    13     5   13    13     0    0     0     9    0     4
Note: Queue reported is the number of cars per lane.
```

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

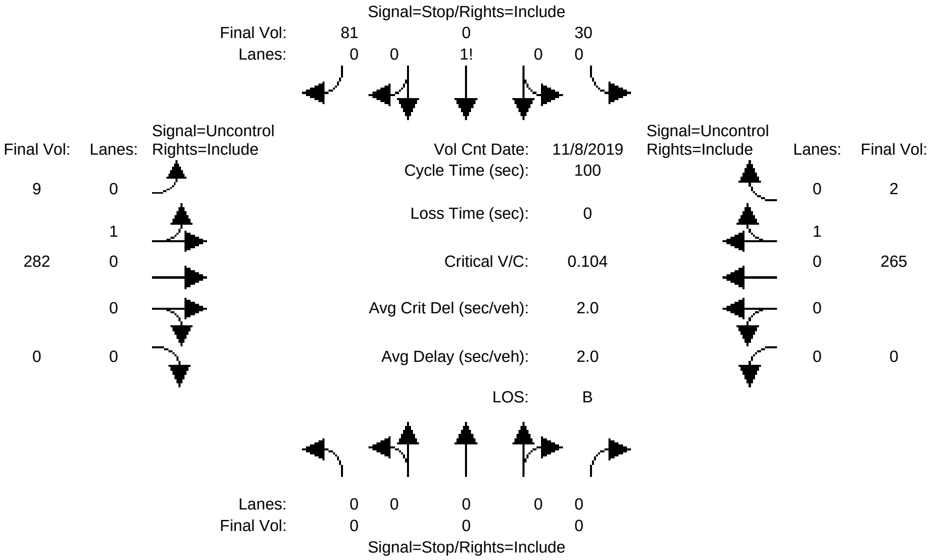
Intersection #9: San Antonio Rd and Almond Ave



```
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   10    10     7   10    10    10   10    10    10   10    10
Y+R:          4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 8 Nov 2019 << 5-6P
Base Vol:       9  791   221   128 1022     1     0    0     0   246    0   118
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:    9  791   221   128 1022     1     0    0     0   246    0   118
Added Vol:      0    0   136   222    0     0     0    0     0    20    0    33
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    9  791   357   350 1022     1     0    0     0   266    0   151
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:     9  791   357   350 1022     1     0    0     0   266    0   151
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    9  791   357   350 1022     1     0    0     0   266    0   151
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:    9  791   357   350 1022     1     0    0     0   266    0   151
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.92 0.99  0.95  0.92 0.97  0.95  0.92 0.92  0.92  0.95 0.95  0.92
Lanes:       1.00 1.36  0.64  1.00 1.99  0.01  0.00 1.00  0.00  1.00 0.00  1.00
Final Sat.:  1750 2549  1150  1750 3696     4     0 1750     0  1800    0  1750
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.01 0.31  0.31  0.20 0.28  0.28  0.00 0.00  0.00  0.15 0.00  0.09
Crit Moves:       ****        ****                              ****
Green Time:  14.7 52.3  52.3  33.7 71.4  71.4   0.0  0.0   0.0  24.9  0.0  24.9
Volume/Cap:  0.04 0.73  0.73  0.73 0.48  0.48  0.00 0.00  0.00  0.73 0.00  0.43
Delay/Veh:   48.0 31.2  31.2  46.1 15.1  15.1   0.0  0.0   0.0  53.2  0.0  43.6
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:  48.0 31.2  31.2  46.1 15.1  15.1   0.0  0.0   0.0  53.2  0.0  43.6
LOS by Move:    D    C     C     D    B     B     A    A     A    D-    A     D
HCM2kAvgQ:      0   19    19    14   11    11     0    0     0    11    0     6
Note: Queue reported is the number of cars per lane.
```

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

Intersection #10: West Entrance and Almond Ave



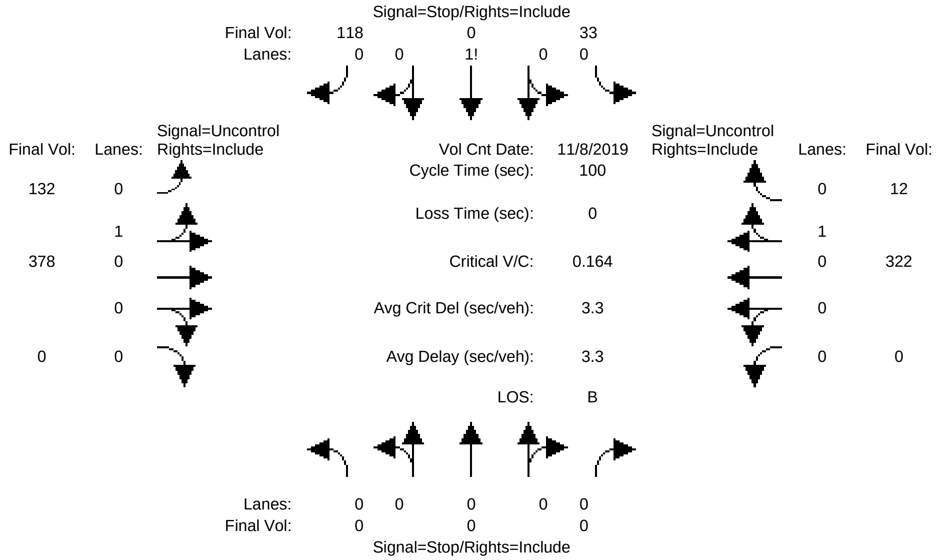
Vol Cnt Date: 11/8/2019
Cycle Time (sec): 100
Loss Time (sec): 0
Critical V/C: 0.104
Avg Crit Del (sec/veh): 2.0
Avg Delay (sec/veh): 2.0
LOS: B

```
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: 8 Nov 2019 << 5:15-6:15P
Base Vol:       0    0     0    30    0    81     9  282     0     0  265     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
Initial Bse:    0    0     0    30    0    81     9  282     0     0  265     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:    0    0     0    30    0    81     9  282     0     0  265     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
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    30    0    81     9  282     0     0  265     2
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0    0     0    30    0    81     9  282     0     0  265     2
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.4  6.5   6.2   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5  4.0   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   566  566   266   267 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx   489  436   778  1308 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx   486  433   778  1308 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  0.06 0.00  0.10  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   7.8 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     *     A    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx  669 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx  0.6 xxxxx   0.0 xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx 11.4 xxxxx   7.8 xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    B     *     A    *     *     *    *     *
ApproachDel:    xxxxxx            11.4            xxxxxx            xxxxxx
ApproachLOS:         *               B                 *                 *
Note: Queue reported is the number of cars per lane.
                     Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #10 West Entrance and Almond Ave
********************************************************************************
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  0  0  0    0  0  1! 0  0    0  1  0  0  0    0  0  0  1  0
Initial Vol:    0    0     0    30    0    81     9  282     0     0  265     2
ApproachDel:    xxxxxx            11.4            xxxxxx           xxxxxx
------------|---------------||---------------||---------------||---------------|
Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.4]
   FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=111]
   SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=669]
   SUCCEED - Total volume greater than or equal to 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 #10 West Entrance and Almond Ave
********************************************************************************
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  0  0  0    0  0  1! 0  0    0  1  0  0  0    0  0  0  1  0
Initial Vol:    0    0     0    30    0    81     9  282     0     0  265     2
------------|---------------||---------------||---------------||---------------|
Major Street Volume:             558
Minor Approach Volume:           111
Minor Approach Volume Threshold: 375
--------------------------------------------------------------------------------
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 + Prj PM

Intersection #10: West Entrance and Almond Ave

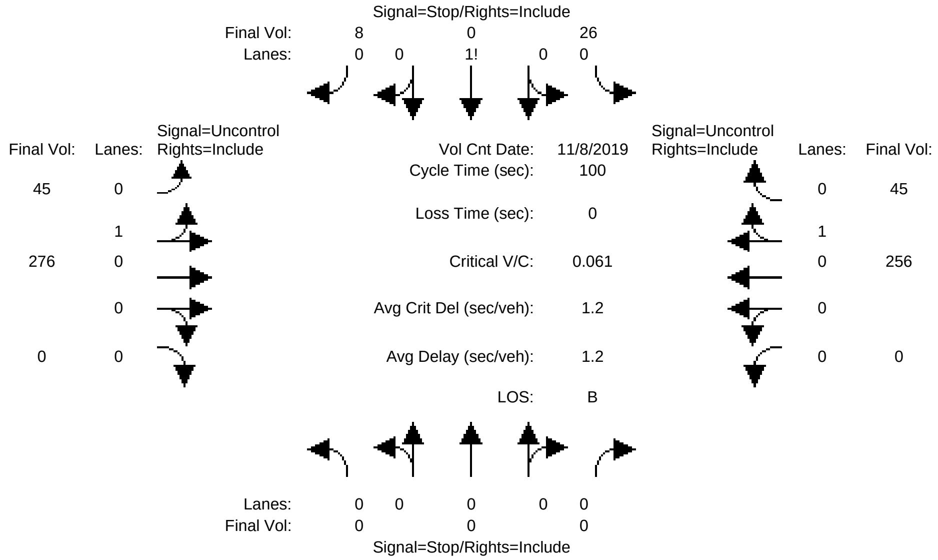


```
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 8 Nov 2019 << 5:15-6:15P
Base Vol:       0    0     0    30    0    81     9  282     0     0  265     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
Initial Bse:    0    0     0    30    0    81     9  282     0     0  265     2
Added Vol:      0    0     0     3    0    37   123   96     0     0   57    10
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0    0     0    33    0   118   132  378     0     0  322    12
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    33    0   118   132  378     0     0  322    12
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0    0     0    33    0   118   132  378     0     0  322    12
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.4  6.5   6.2   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5  4.0   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   970  970   328   334 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx   283  255   718  1237 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx   258  226   718  1237 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  0.13 0.00  0.16  0.11 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.4 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx   8.3 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     *     A    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx  517 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx  1.2 xxxxx   0.4 xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx 14.8 xxxxx   8.3 xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    B     *     A    *     *     *    *     *
ApproachDel:      xxxxxx            14.8             xxxxxx           xxxxxx
ApproachLOS:           *               B                  *                *
Note: Queue reported is the number of cars per lane.
                     Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #10 West Entrance and Almond Ave
********************************************************************************
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  0  0  0    0  0  1! 0  0    0  1  0  0  0    0  0  0  1  0
Initial Vol:    0    0     0    33    0   118   132  378     0     0  322    12
ApproachDel:    xxxxxx             14.8           xxxxxx           xxxxxx
------------|---------------||---------------||---------------||---------------|
Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.6]
   FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=151]
   SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=995]
   SUCCEED - Total volume greater than or equal to 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 #10 West Entrance and Almond Ave
********************************************************************************
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  0  0  0    0  0  1! 0  0    0  1  0  0  0    0  0  0  1  0
Initial Vol:    0    0     0    33    0   118   132  378     0     0  322    12
------------|---------------||---------------||---------------||---------------|
Major Street Volume:             844
Minor Approach Volume:           151
Minor Approach Volume Threshold: 265
--------------------------------------------------------------------------------
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 #11: East Entrance and Almond Ave



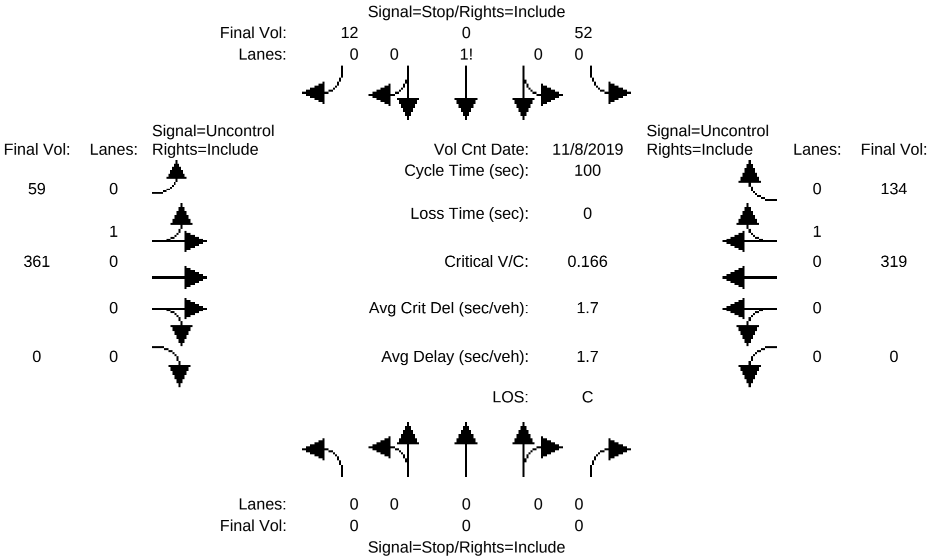
```
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 8 Nov 2019 << 5-6P
Base Vol:       0    0     0    26    0     8    45  276     0     0  256    45
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    26    0     8    45  276     0     0  256    45
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    26    0     8    45  276     0     0  256    45
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    26    0     8    45  276     0     0  256    45
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0    0     0    26    0     8    45  276     0     0  256    45
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.4  6.5   6.2   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5  4.0   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   645  645   279   301 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx   440  394   765  1272 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx   428  379   765  1272 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  0.06 0.00  0.01  0.04 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.1 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx   7.9 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     *     A    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx  477 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx  0.2 xxxxx   0.1 xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx 13.1 xxxxx   7.9 xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    B     *     A    *     *     *    *     *
ApproachDel:    xxxxxx            13.1            xxxxxx            xxxxxx
ApproachLOS:         *                B                 *                *
Note: Queue reported is the number of cars per lane.
                     Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #11 East Entrance and Almond Ave
********************************************************************************
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  0  0  0    0  0  1! 0  0    0  1  0  0  0    0  0  0  1  0
Initial Vol:    0    0     0   26    0     8    45  276     0     0  256    45
ApproachDel:    xxxxxx             13.1            xxxxxx           xxxxxx
------------|---------------||---------------||---------------||---------------|
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=34]
   FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=656]
   SUCCEED - Total volume greater than or equal to 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 #11 East Entrance and Almond Ave
********************************************************************************
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  0  0  0    0  0  1! 0  0    0  1  0  0  0    0  0  0  1  0
Initial Vol:    0    0     0   26    0     8    45  276     0     0  256    45
------------|---------------||---------------||---------------||---------------|
Major Street Volume:            622
Minor Approach Volume:          34
Minor Approach Volume Threshold: 346
--------------------------------------------------------------------------------
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.
```

Los Altos High School
Hexagon Transportation Consultants, Inc.
San Jose, CA

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

Intersection #11: East Entrance and Almond Ave



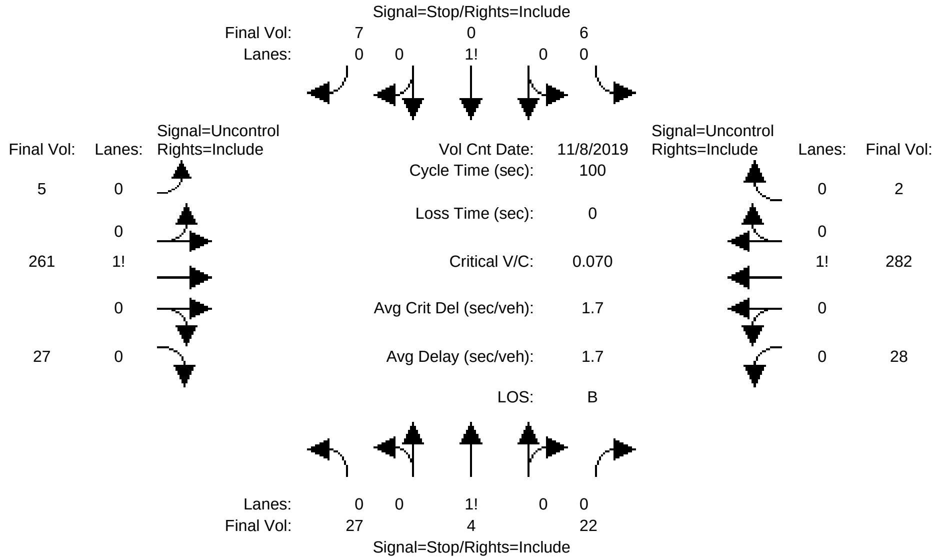
```
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 8 Nov 2019 << 5-6P
Base Vol:       0    0     0    26    0     8    45  276     0     0  256    45
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    26    0     8    45  276     0     0  256    45
Added Vol:      0    0     0    26    0     4    14   85     0     0   63    89
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0    0     0    52    0    12    59  361     0     0  319   134
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0    0     0    52    0    12    59  361     0     0  319   134
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0    0     0    52    0    12    59  361     0     0  319   134
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.4  6.5   6.2   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5  4.0   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   865  865   386   453 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx   327  294   666  1118 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx   313  278   666  1118 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  0.17 0.00  0.02  0.05 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.2 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx   8.4 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     *     A    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx  348 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx  0.7 xxxxx   0.2 xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx 17.7 xxxxx   8.4 xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    C     *     A    *     *     *    *     *
ApproachDel:    xxxxxx             17.7            xxxxxx           xxxxxx
ApproachLOS:         *                C                 *                *
Note: Queue reported is the number of cars per lane.
                     Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #11 East Entrance and Almond Ave
********************************************************************************
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  0  0  0    0  0  1! 0  0    0  1  0  0  0    0  0  0  1  0
Initial Vol:    0    0     0    52    0    12    59  361     0     0  319   134
ApproachDel:    xxxxxx             17.7           xxxxxx           xxxxxx
------------|---------------||---------------||---------------||---------------|
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=64]
   FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=937]
   SUCCEED - Total volume greater than or equal to 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 #11 East Entrance and Almond Ave
********************************************************************************
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  0  0  0    0  0  1! 0  0    0  1  0  0  0    0  0  0  1  0
Initial Vol:    0    0     0    52    0    12    59  361     0     0  319   134
------------|---------------||---------------||---------------||---------------|
Major Street Volume:             873
Minor Approach Volume:           64
Minor Approach Volume Threshold: 256
--------------------------------------------------------------------------------
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.
```

Los Altos High School
Hexagon Transportation Consultants, Inc.
San Jose, CA

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

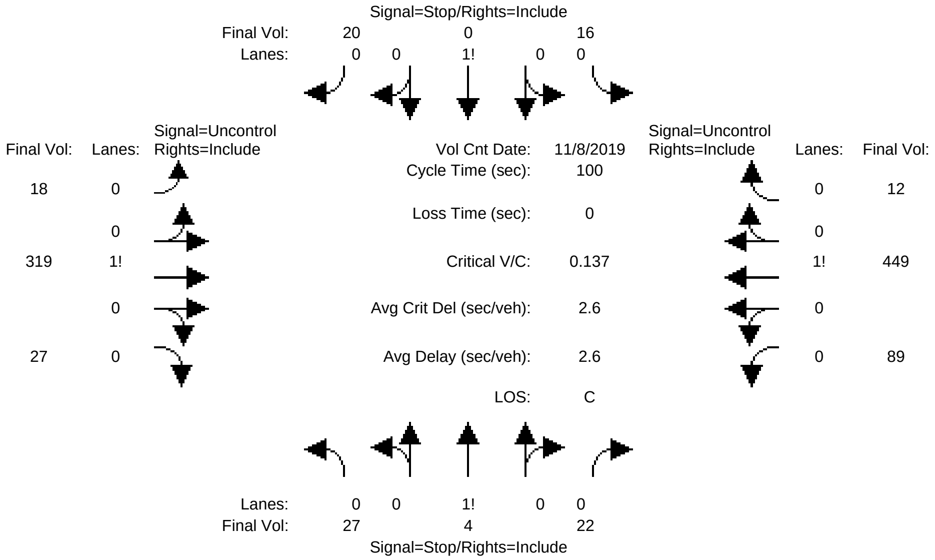
Intersection #12: Staff Entrance/Gordon Way and Almond Ave



```
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:  8 Nov 2019 << 5-6P
Base Vol:      27    4    22     6    0     7     5  261    27    28  282     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
Initial Bse:   27    4    22     6    0     7     5  261    27    28  282     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:   27    4    22     6    0     7     5  261    27    28  282     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
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:    27    4    22     6    0     7     5  261    27    28  282     2
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:   27    4    22     6    0     7     5  261    27    28  282     2
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  7.1  6.5   6.2   7.1  6.5   6.2   4.1 xxxx xxxxx   4.1 xxxx xxxxx
FollowUpTim:  3.5  4.0   3.3   3.5  4.0   3.3   2.2 xxxx xxxxx   2.2 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  627  625   275   637  637   283   284 xxxx xxxxx   288 xxxx xxxxx
Potent Cap.:  399  404   769   393  398   761  1290 xxxx xxxxx  1286 xxxx xxxxx
Move Cap.:    387  394   769   371  387   761  1290 xxxx xxxxx  1286 xxxx xxxxx
Volume/Cap:  0.07 0.01  0.03  0.02 0.00  0.01  0.00 xxxx  xxxx  0.02 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.0 xxxx xxxxx   0.1 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx   7.8 xxxx xxxxx   7.9 xxxx xxxxx
LOS by Move:    *    *     *     *    *     *     A    *     *     A    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx  489 xxxxx  xxxx  513 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx  0.4 xxxxx xxxxx  0.1 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 13.3 xxxxx xxxxx 12.2 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    B     *     *    B     *     *    *     *     *    *     *
ApproachDel:      13.3             12.2            xxxxxx           xxxxxx
ApproachLOS:         B                B                *                *
Note: Queue reported is the number of cars per lane.
                     Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #12 Staff Entrance/Gordon Way and Almond Ave
********************************************************************************
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:   27    4    22     6    0     7     5  261    27    28  282     2
ApproachDel:      13.3             12.2            xxxxxx           xxxxxx
------------|---------------||---------------||---------------||---------------|
Approach[northbound][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=53]
   FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=671]
   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=0.0]
   FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=13]
   FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=671]
   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 #12 Staff Entrance/Gordon Way and Almond Ave
********************************************************************************
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:   27    4    22     6    0     7     5  261    27    28  282     2
------------|---------------||---------------||---------------||---------------|
Major Street Volume:             605
Minor Approach Volume:           53
Minor Approach Volume Threshold: 353
--------------------------------------------------------------------------------
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.
```

Intersection #12: Staff Entrance/Gordon Way and Almond Ave

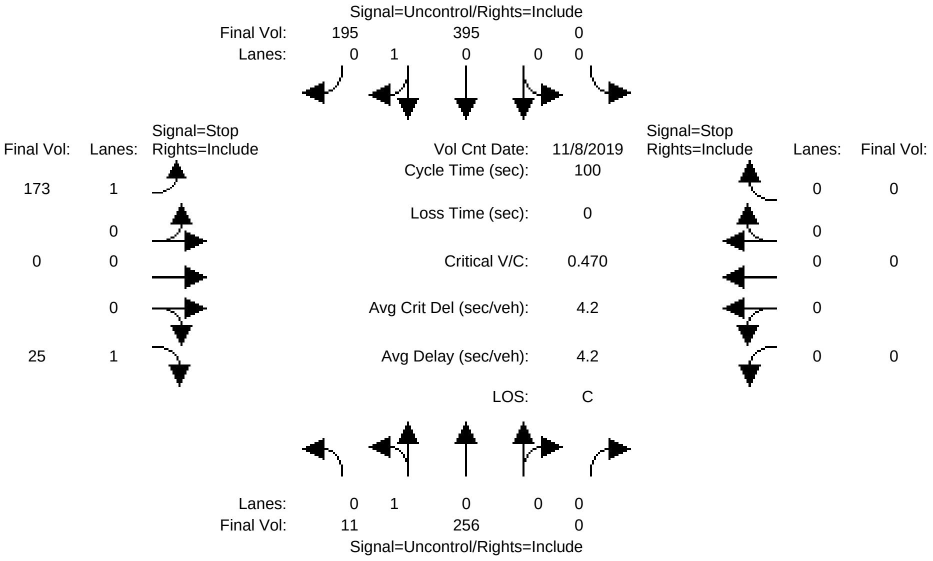


```
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date:  8 Nov 2019 << 5-6P
Base Vol:       27    4     22     6    0      7     5  261     27    28  282      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
Initial Bse:    27    4     22     6    0      7     5  261     27    28  282      2
Added Vol:       0    0      0    10    0     13    13   58      0    61  167     10
PasserByVol:     0    0      0     0    0      0     0    0      0     0    0      0
Initial Fut:    27    4     22    16    0     20    18  319     27    89  449     12
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:     27    4     22    16    0     20    18  319     27    89  449     12
Reduct Vol:      0    0      0     0    0      0     0    0      0     0    0      0
FinalVolume:    27    4     22    16    0     20    18  319     27    89  449     12
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:   7.1  6.5    6.2   7.1  6.5    6.2   4.1 xxxx xxxxx   4.1 xxxx xxxxx
FollowUpTim:   3.5  4.0    3.3   3.5  4.0    3.3   2.2 xxxx xxxxx   2.2 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: 1012 1008    333  1015 1015    455   461 xxxx xxxxx   346 xxxx xxxxx
Potent Cap.:  220  243    714   219  240    609  1111 xxxx xxxxx  1224 xxxx xxxxx
Move Cap.:    198  220    714   194  218    609  1111 xxxx xxxxx  1224 xxxx xxxxx
Volume/Cap:  0.14 0.02   0.03  0.08 0.00   0.03  0.02 xxxx  xxxx  0.07 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:    xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.0 xxxx xxxxx   0.2 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx   8.3 xxxx xxxxx   8.2 xxxx xxxxx
LOS by Move:     *    *      *     *    *      *     A    *      *     A    *      *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx  286 xxxxx  xxxx  313 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx  0.7 xxxxx xxxxx  0.4 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 20.5 xxxxx xxxxx 18.0 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:      *    C      *     *    C      *     *    *      *     *    *      *
ApproachDel:        20.5              18.0             xxxxxx           xxxxxx
ApproachLOS:           C                 C                 *                *
Note: Queue reported is the number of cars per lane.
                     Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #12 Staff Entrance/Gordon Way and Almond Ave
********************************************************************************
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:   27    4    22    16    0    20    18  319    27    89  449    12
ApproachDel:      20.5             18.0           xxxxxx           xxxxxx
------------|---------------||---------------||---------------||---------------|
Approach[northbound][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=53]
   FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1003]
   SUCCEED - Total volume greater than or equal to 800 for intersection
             with four or more approaches.
--------------------------------------------------------------------------------
Approach[southbound][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=36]
   FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1003]
   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).

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 #12 Staff Entrance/Gordon Way and Almond Ave
********************************************************************************
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:   27    4    22    16    0    20    18  319    27    89  449    12
------------|---------------||---------------||---------------||---------------|
Major Street Volume:             914
Minor Approach Volume:           53
Minor Approach Volume Threshold: 243
--------------------------------------------------------------------------------
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 #13: N. El Monte Ave and Almond Ave



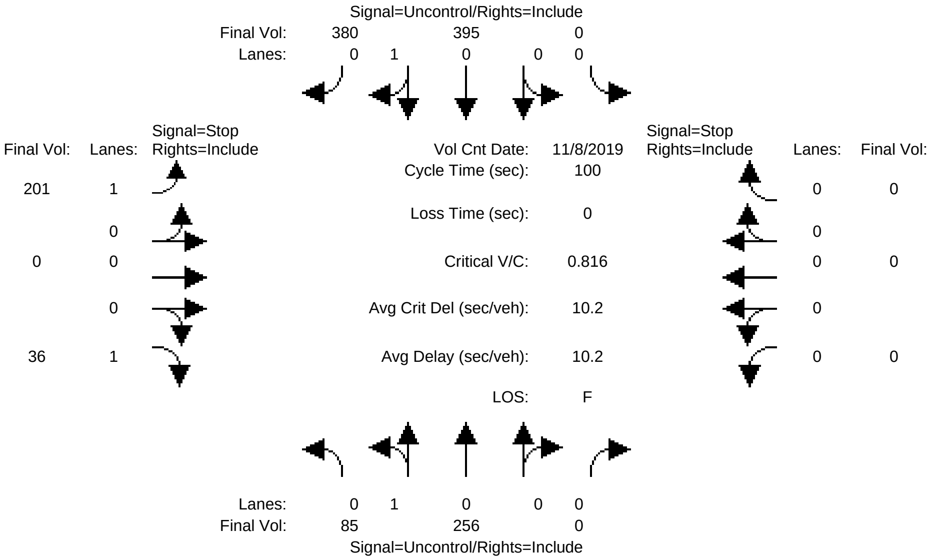
```
Approach:      North Bound      South Bound       East Bound        West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 8 Nov 2019 << 5-6PM
Base Vol:      11  256     0     0  395   195   173    0    25     0    0     0
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:   11  256     0     0  395   195   173    0    25     0    0     0
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:   11  256     0     0  395   195   173    0    25     0    0     0
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:    11  256     0     0  395   195   173    0    25     0    0     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:   11  256     0     0  395   195   173    0    25     0    0     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4 xxxx   6.2 xxxxx xxxx xxxxx
FollowUpTim:  2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5 xxxx   3.3 xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  590 xxxx xxxxx  xxxx xxxx xxxxx   771 xxxx   493  xxxx xxxx xxxxx
Potent Cap.:  995 xxxx xxxxx  xxxx xxxx xxxxx   371 xxxx   580  xxxx xxxx xxxxx
Move Cap.:    995 xxxx xxxxx  xxxx xxxx xxxxx   368 xxxx   580  xxxx xxxx xxxxx
Volume/Cap:  0.01 xxxx  xxxx  xxxx xxxx  xxxx  0.47 xxxx  0.04  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:    0.0 xxxx xxxxx  xxxx xxxx xxxxx   2.4 xxxx   0.1  xxxx xxxx xxxxx
Control Del:  8.7 xxxx xxxxx xxxxx xxxx xxxxx  23.1 xxxx  11.5 xxxxx xxxx xxxxx
LOS by Move:    A    *     *     *    *     *     C    *     B     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:  0.0 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:  8.7 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     A    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:     xxxxxx           xxxxxx             21.7            xxxxxx
ApproachLOS:        *                *                C                 *
Note: Queue reported is the number of cars per lane.
                     Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #13 N. El Monte Ave and Almond Ave
********************************************************************************
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  1  0  0  0    0  0  0  1  0    1  0  0  0  1    0  0  0  0  0
Initial Vol:   11  256     0     0  395   195   173    0    25     0    0     0
ApproachDel:    xxxxxx           xxxxxx             21.7           xxxxxx
------------|---------------||---------------||---------------||---------------|
Approach[eastbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=1.2]
   FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=198]
   SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1055]
   SUCCEED - Total volume greater than or equal to 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 #13 N. El Monte Ave and Almond Ave
********************************************************************************
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  1  0  0  0    0  0  0  1  0    1  0  0  0  1    0  0  0  0  0
Initial Vol:   11  256     0     0  395   195   173    0    25     0    0     0
------------|---------------||---------------||---------------||---------------|
Major Street Volume:             857
Minor Approach Volume:           198
Minor Approach Volume Threshold: 341
--------------------------------------------------------------------------------
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.
```

Los Altos High School
Hexagon Transportation Consultants, Inc.
San Jose, CA

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

Intersection #13: N. El Monte Ave and Almond Ave



```
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: 8 Nov 2019 << 5-6PM
Base Vol:      11  256     0     0  395   195   173    0    25     0    0     0
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:   11  256     0     0  395   195   173    0    25     0    0     0
Added Vol:     74    0     0     0    0   185    28    0    11     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   85  256     0     0  395   380   201    0    36     0    0     0
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:    85  256     0     0  395   380   201    0    36     0    0     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:   85  256     0     0  395   380   201    0    36     0    0     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4 xxxx   6.2 xxxxx xxxx xxxxx
FollowUpTim:  2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5 xxxx   3.3 xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  775 xxxx xxxxx  xxxx xxxx xxxxx  1011 xxxx   585  xxxx xxxx xxxxx
Potent Cap.:  850 xxxx xxxxx  xxxx xxxx xxxxx   268 xxxx   515  xxxx xxxx xxxxx
Move Cap.:    850 xxxx xxxxx  xxxx xxxx xxxxx   246 xxxx   515  xxxx xxxx xxxxx
Volume/Cap:  0.10 xxxx  xxxx  xxxx xxxx  xxxx  0.82 xxxx  0.07  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:    0.3 xxxx xxxxx  xxxx xxxx xxxxx   6.3 xxxx   0.2  xxxx xxxx xxxxx
Control Del:  9.7 xxxx xxxxx xxxxx xxxx xxxxx  62.4 xxxx  12.5 xxxxx xxxx xxxxx
LOS by Move:    A    *     *     *    *     *     F    *     B     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:  0.3 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:  9.7 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     A    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:     xxxxxx           xxxxxx             54.8           xxxxxx
ApproachLOS:         *                *                F                *
Note: Queue reported is the number of cars per lane.
                     Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #13 N. El Monte Ave and Almond Ave
********************************************************************************
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  1  0  0  0    0  0  0  1  0    1  0  0  0  1    0  0  0  0  0
Initial Vol:   85  256     0     0  395   380   201    0    36     0    0     0
ApproachDel:    xxxxxx           xxxxxx             54.8            xxxxxx
------------|---------------||---------------||---------------||---------------|
Approach[eastbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=3.6]
   FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=237]
   SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1353]
   SUCCEED - Total volume greater than or equal to 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 #13 N. El Monte Ave and Almond Ave
********************************************************************************
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  1  0  0  0    0  0  0  1  0    1  0  0  0  1    0  0  0  0  0
Initial Vol:   85  256     0     0  395   380   201    0    36     0    0     0
------------|---------------||---------------||---------------||---------------|
Major Street Volume:             1116
Minor Approach Volume:           237
Minor Approach Volume Threshold: 258
--------------------------------------------------------------------------------
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.
```

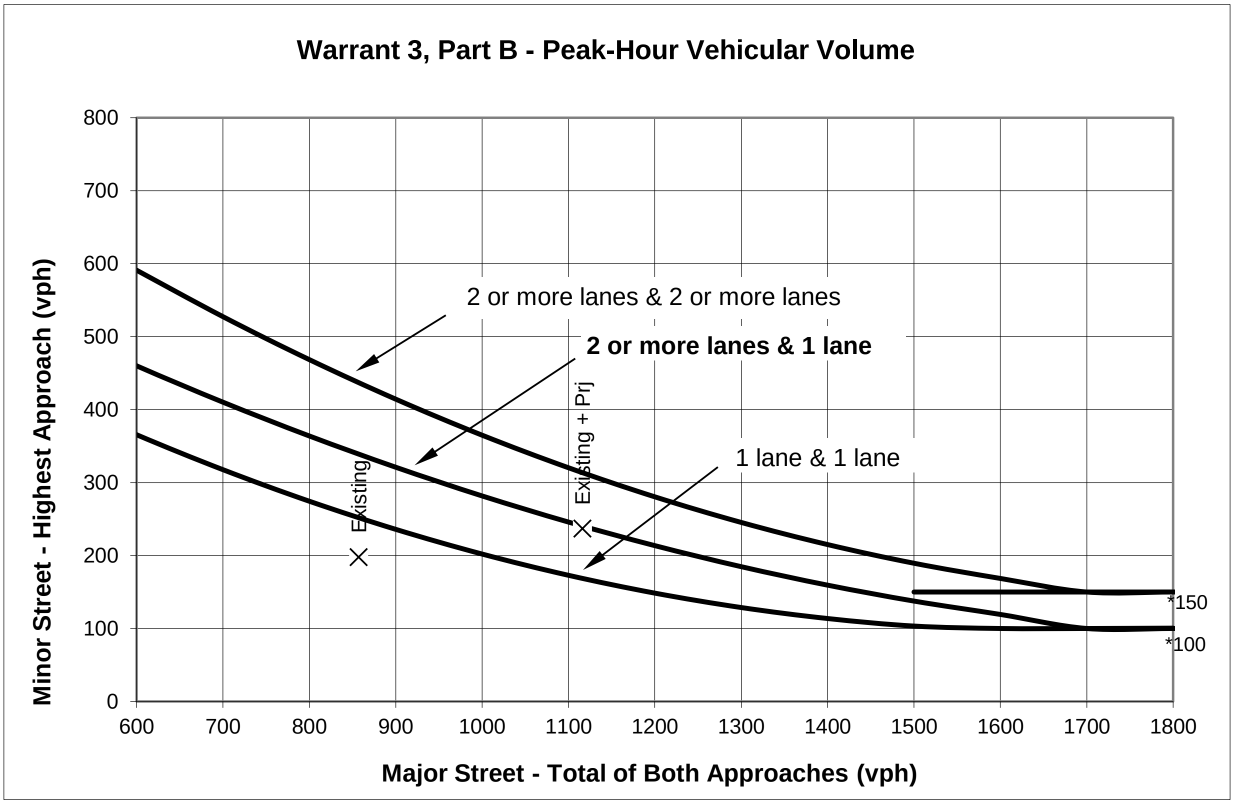
Appendix C

Peak-Hour Signal Warrant Analysis

Los Altos Field Lighting

El Monte Ave & Almond Ave

PM PEAK HOUR



Source: Figure 4C-3 *California Manual on Uniform Traffic Control Devices for Streets and Highways (FHWA's MUTCD 2010 Edition, as amended for use in California)* .

* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Warrant 3, Part B - Peak-Hour Vehicular Volume

		Approach Lanes		PM PEAK HOUR							
		One	2 or More	Existing	Existing + Prj						
Major Street - Both Approaches	El Monte Ave	X		857	1116						
Minor Street - Highest Approach	Almond Ave		X	198	237						
Signal Warranted Based on Part B - Peak-Hour Volumes?				**No**	**No**						

*Warrant is satisfied if plotted points fall above the appropriate curve in graph above.

Los Altos Field Lighting

TRAFFIC SIGNAL WARRANTS WORKSHEET

Analyst: JL date: 2/28/20

Major Street: El Monte Ave
Minor Street: Almond Ave

Critical Approach Speed* (mph) 25
Critical Approach Speed* (mph) 25
**Posted Speed.*

Critical speed of major street traffic > 50 mph (64 km/h)…………………………… ☐ or
In built up area of isolated community of < 10,000 population…………………… ☐ } **Rural (R)**

☑ **Urban (U)**

PM PEAK HOUR

Warrant 3 - Peak Hour

PART A
(All parts 1, 2, and 3 below must be satisfied)

PM PEAK HOUR

	Existing	Existing + Prj						
Minor Street Approach Direction w/ Highest Delay	EB	EB						
Highest Minor Street Average Delay (sec/veh)	21.7	54.8						
Corresponding Minor Street Approach Volume (veh/hr)	198	237						
Minor Street Total Delay (veh-hrs)	1.2	3.6						
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds 4 vehicle-hours for a 1-lane approach and 5 vehicle-hours for a 2-lane approach; <u>AND</u>	No	No						
2. The volume on the same minor street approach equals or exceeds 100 vph for 1 moving lane of traffic or 150 vph for 2 moving lanes; <u>AND</u>	Yes	Yes						
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with 4 or more approaches or 650 vph for intersections with 3 approaches.	Yes	Yes						
Signal Warranted based on Part A?	**No**	**No**						

PART B

PM PEAK HOUR

		Approach Lanes One	Approach Lanes 2 or More	Existing	Existing + Prj						
Major Street - Both Approaches	El Monte Ave	X		857	1116						
Minor Street - Highest Approach	Almond Ave		X	198	237						
Signal Warranted based on Part B?				**No**	**No**						

The Warrant is satisfied if the plotted point for vehicles per hour on the major street (both approaches) and the corresponding per hour higher vehicle volume minor street approach (one direction only) for one hour (any four consecutive 15-minute periods) fall above the applicable curves in California MUTCD Figure 4C-3 or 4C-4.

Source: California Manual on Uniform Traffic Control Devices for Streets and Highways (FHWA's MUTCD 2010 Edition, as amended for use in California).
Notes: