HEXAGON TRANSPORTATION CONSULTANTS, INC.

Cambrianna Drive
Residential Development

Transportation Analysis

Prepared for:

Robson Homes, LLC

November 11, 2021

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Executive Summary

This report presents the results of the transportation analysis conducted for the proposed residential development at 1975 Cambrianna Drive in San Jose, California. This study was conducted for the purpose of identifying the potential transportation impacts and potential adverse operational effects related to the proposed residential development.

The project site is located in the field of the school north of the Browning Avenue/Cambrianna Drive intersection. The school would remain. The proposed project would construct 21 homes, 14 of which are projected to include accessory dwelling units (ADUs), for a total of 35 residential units. Access to the project site would be provided via Cambrianna Drive.

The potential impacts of the project were evaluated in accordance with the standards and methodologies set forth by the City of San Jose. Based on the City of San Jose's Transportation Analysis Policy (Policy 5-1) and the *Transportation Analysis Handbook*, the transportation analysis report for the project includes a CEQA transportation analysis (TA) and a local transportation analysis (LTA). The CEQA transportation analysis comprises an evaluation of Vehicle Miles Traveled (VMT). VMT is defined in Chapter 1 of this report. The LTA supplements the CEQA transportation analysis by identifying potential transportation operational issues via an evaluation of weekday AM and PM peak-hour traffic conditions for selected study intersections. The LTA also includes an analysis of site access, on-site circulation, parking, intersection vehicle queuing analysis, signal warrant analysis, stop warrant analysis, and effects on pedestrian, bicycle, and transit facilities.

CEQA Transportation Analysis

Residential Project VMT Analysis Results

Hexagon calculated the VMT for the proposed project using the City of San Jose's VMT Evaluation Tool, which calculates VMT based on the project location, type of development, and project description. The project VMT estimated by the VMT Evaluation Tool is 9.34 VMT per capita. The project VMT, therefore, is below the threshold of 10.12 VMT per capita. Therefore, the proposed project would not have a VMT impact.

Local Transportation Analysis

Project Trip Generation

After applying the ITE trip rates to the proposed project and applying the appropriate trip adjustments, it is estimated that the project would generate 261 new daily vehicle trips, with 19 new trips occurring during the AM peak hour and 26 new trips occurring during the PM peak hour. Using the inbound/outbound splits contained in the ITE *Trip Generation Manual*, the project would produce 4 new inbound and 15 new outbound trips during the AM peak hour, and 16 new inbound and 10 new outbound trips during the PM peak hour.

Intersection Traffic Operations

Based on the City of San Jose and CMP intersection operations analysis criteria, none of the study intersections would be adversely affected by the project.

Other Transportation Issues

The proposed site plan shows adequate site access and on-site circulation. The project would not have an adverse effect on the existing pedestrian, bicycle, or transit facilities in the study area.

Recommendations

Hexagon has the following recommendations.

- The project driveway is shown to be 27 feet wide. Unless otherwise directed by City staff, it is recommended that the project driveway be constructed per the City standard of 26 feet wide with a standard cut to indicate the private street/public street interface.
- It is recommended that parking be prohibited for 10 feet on either side of the proposed project driveway to reduce obstructions to the sight distance for exiting drivers.
- It is recommended that parking be prohibited within the circular area of the cul-de-sac to aid the circulation of garbage trucks and emergency vehicles.
- Although the peak-hour signal warrant analysis shows the Union Avenue and Cambrianna Drive traffic volumes would meet the warrant threshold under the PM peak hour project conditions and cumulative conditions, it is not recommended that a signal be installed. Field observations and collision history data do not indicate that a signal should be installed at this location. In addition, there are other nearby routes out of the neighborhood for vehicles to take to avoid making a westbound left-turn at the Union Avenue/Cambrianna Drive intersection.
- Based on the multi-way stop analysis for the intersection of Taper Avenue and Cambrianna Drive, installation of stop signs is not warranted and it is recommended that the intersection control remain as is.

1. Introduction

This report presents the results of the transportation analysis conducted for the proposed residential development at 1975 Cambrianna Drive in San Jose, California. This study was conducted for the purpose of identifying the potential transportation impacts and potential adverse operational effects related to the proposed residential development.

The transportation impacts of the project were evaluated following the standards and methodologies established in the City of San Jose's *Transportation Analysis Handbook*, adopted in April 2018. Based on the City of San Jose's Transportation Analysis Policy (Policy 5-1) and the *Transportation Analysis Handbook*, the transportation analysis report for this project includes a California Environmental Quality Act (CEQA) transportation analysis (TA) and a local transportation analysis (LTA).

Project Description

The project site is located in the field of the school north of the Browning Avenue/Cambrianna Drive intersection. The school would remain. The proposed project would construct 21 homes, 14 of which are projected to include accessory dwelling units (ADUs), for a total of 35 residential units. Access to the project site would be provided via Cambrianna Drive. The project site location and study intersections are shown on Figure 1. The project site plan is shown on Figure 2.

Transportation Policies

As established in Council Policy 5-1, San Jose evaluates transportation impacts under CEQA based on vehicle miles traveled (VMT). All new projects are required to analyze transportation impacts using the VMT metric and conform to Policy 5-1. The Policy aligns with the *Envision San Jose 2040 General Plan* (2040 General Plan) which seeks to focus new development growth within Planned Growth Areas, bringing together office, residential, and service land uses to internalize trips and reduce VMT. VMT-based policies support dense, mixed-use, infill projects as established in the 2040 General Plan's Planned Growth Areas.

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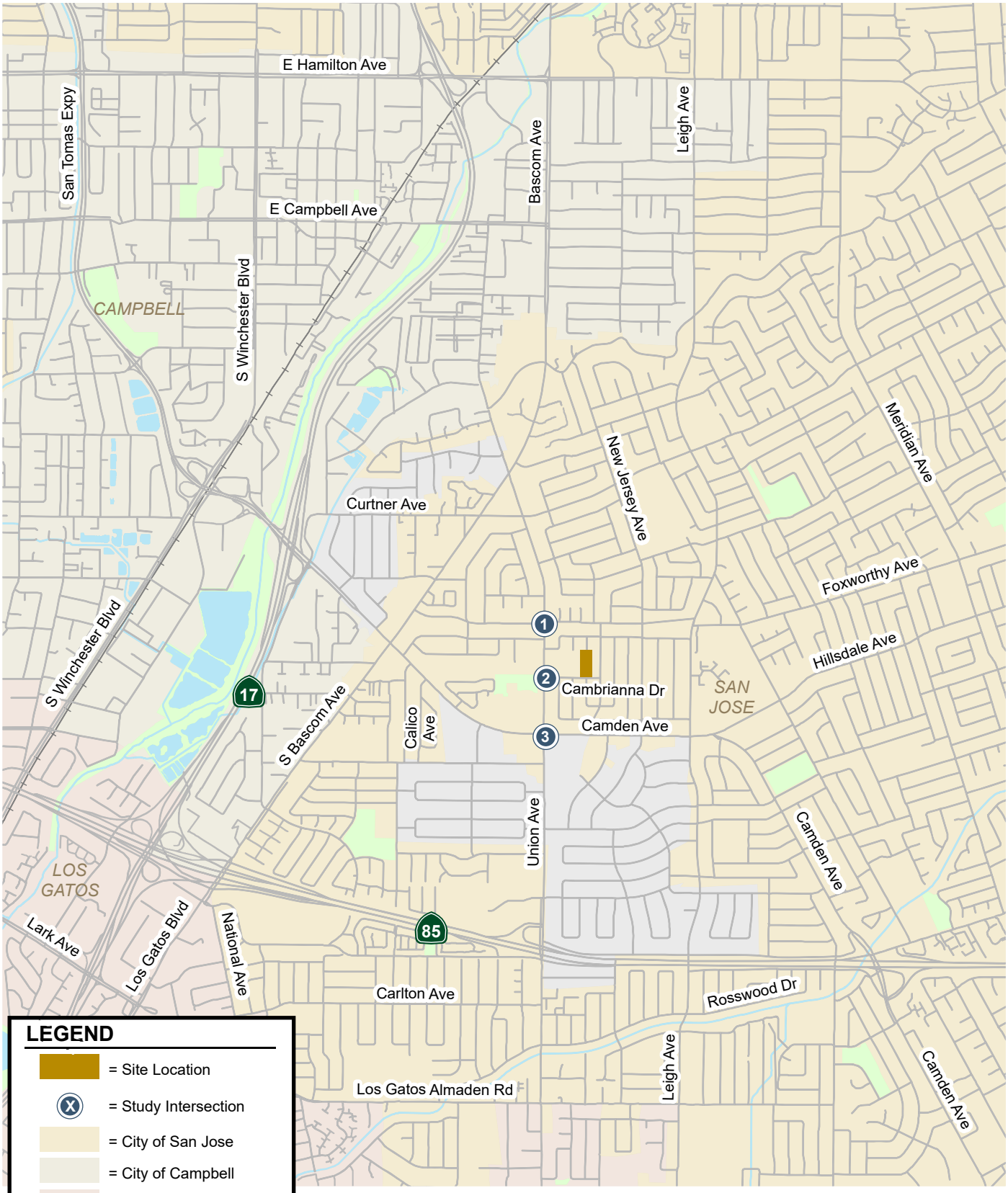


Figure 1
Site Location and Study Intersections

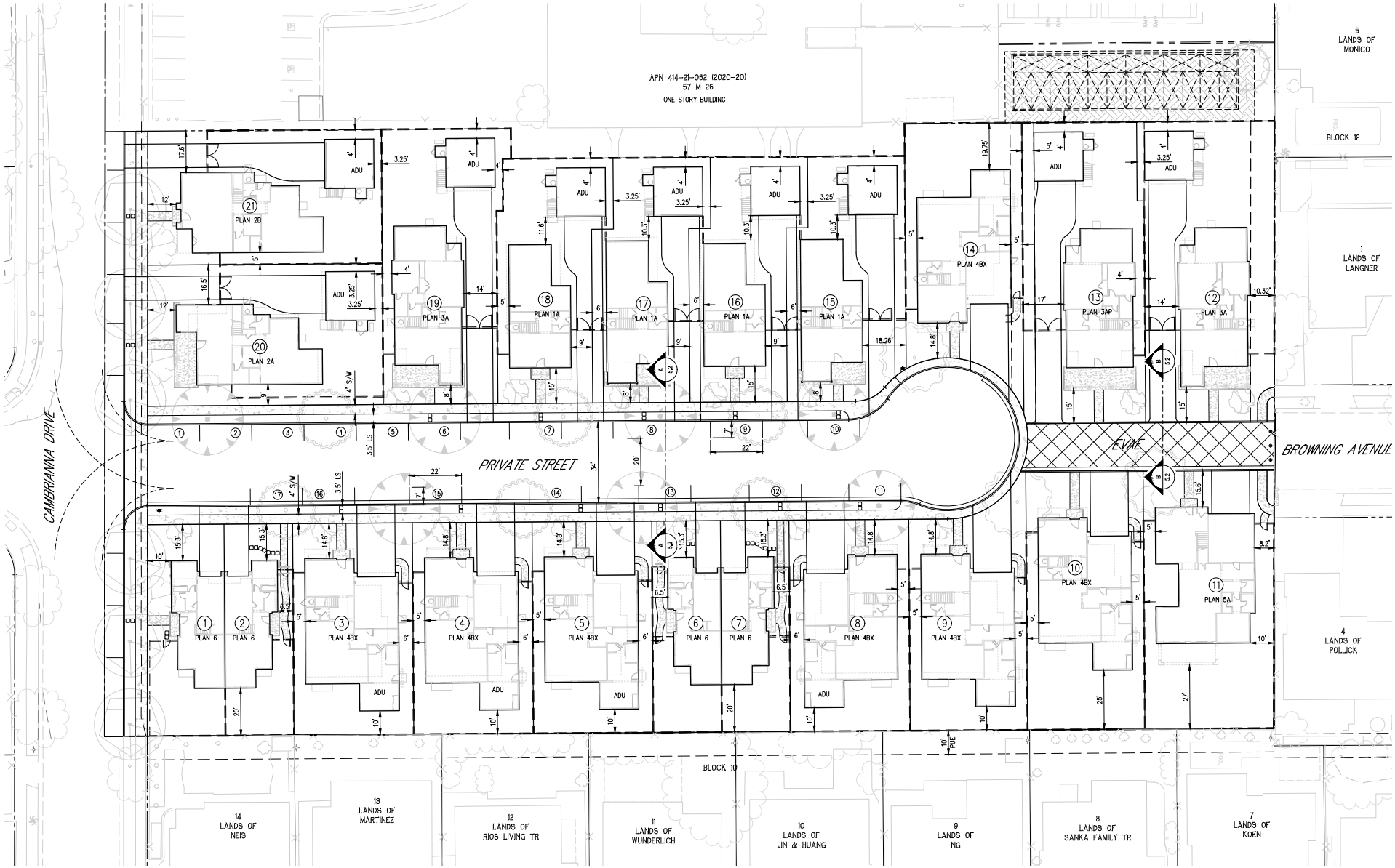


Figure 2
Site Plan

NORTH
Not to Scale

The 2040 General Plan contains policies to encourage the use of non-automobile transportation modes to minimize vehicle trip generation and reduce VMT, including the following:

- Accommodate and encourage the use of non-automobile transportation modes to achieve San Jose's mobility goals and reduce vehicle trip generation and VMT (TR-1.1);
- Consider impacts on overall mobility and all travel modes when evaluating transportation impacts of new developments or infrastructure projects (TR-1.2);
- Increase substantially the proportion of commute travel using modes other than the single-occupant vehicle in order to meet the City's mode split targets for San Jose residents and workers (TR-1.3);
- Through the entitlement process for new development, projects shall be required to fund or construct needed transportation improvements for all transportation modes, giving first consideration to improvement of bicycling, walking and transit facilities and services that encourage reduced vehicle travel demand (TR-1.4);
- Actively coordinate with regional transportation, land use planning, and transit agencies to develop a transportation network with complementary land uses that encourage travel by bicycling, walking and transit, and ensure that regional greenhouse gas emissions standards are met (TR-1.8);
- Give priority to the funding of multimodal projects that provide the most benefit to all users. Evaluate new transportation projects to make the most efficient use of transportation resources and capacity (TR-1.9);
- Coordinate the planning and implementation of citywide bicycle and pedestrian facilities and supporting infrastructure. Give priority to bicycle and pedestrian safety and access improvements at street crossings and near areas with higher pedestrian concentrations (school, transit, shopping, hospital, and mixed-use areas) (TR-2.1);
- Provide a continuous pedestrian and bicycle system to enhance connectivity throughout the City by completing missing segments. Eliminate or minimize physical obstacles and barriers that impede pedestrian and bicycle movement on City streets. Include consideration of grade-separated crossings at railroad tracks and freeways. Provide safe bicycle and pedestrian connections to all facilities regularly accessed by the public, including the Mineta San Jose International Airport (TR-2.2);
- Integrate the financing, design and construction of pedestrian and bicycle facilities with street projects. Build pedestrian and bicycle improvements at the same time as improvements for vehicular circulation (TR-2.5);
- Require new development where feasible to provide on-site facilities such as bicycle storage and showers, provide connections to existing and planned facilities, dedicate land to expand existing facilities or provide new facilities such as sidewalks and/or bicycle lanes/paths, or share in the cost of improvements (TR-2.8);
- Coordinate and collaborate with local School Districts to provide enhanced, safer bicycle and pedestrian connections to school facilities throughout San Jose (TR-2.10);
- As part of the development review process, require that new development along existing and planned transit facilities consist of land use and development types and intensities that contribute towards transit ridership, and require that new development is designed to accommodate and provide direct access to transit facilities (TR-3.3);
- Support the development of amenities and land use and development types and intensities that increase daily ridership on the VTA, BART, Caltrain, ACE and Amtrak California systems and provide positive fiscal, economic, and environmental benefits to the community (TR-4.1);
- Require large employers to develop and maintain TDM programs to reduce the vehicle trips generated by their employees (TR-7.1);

- Promote transit-oriented development with reduced parking requirements and promote amenities around appropriate transit hubs and stations to facilitate the use of available transit services (TR-8.1);
- Balance business viability and land resources by maintaining an adequate supply of parking to serve demand while avoiding excessive parking supply that encourages automobile use (TR-8.2);
- Support using parking supply limitations and pricing as strategies to encourage the use of non-automobile modes (TR-8.3);
- Discourage, as part of the entitlement process, the provision of parking spaces significantly above the number of spaces required by code for a given use (TR-8.4);
- Allow reduced parking requirements for mixed-use developments and for developments providing shared parking or a comprehensive transportation demand management (TDM) program, or developments located near major transit hubs or within Urban Villages and other Growth Areas (TR-8.6);
- Within new development, create and maintain a pedestrian-friendly environment by connecting the internal components with safe, convenient, accessible, and pleasant pedestrian facilities and by requiring pedestrian connections between building entrances, other site features, and adjacent public streets (CD-3.3);
- Create a pedestrian-friendly environment by connecting new residential development with safe, convenient, accessible, and pleasant pedestrian facilities. Provide such connections between new development, its adjoining neighborhood, transit access points, schools, parks, and nearby commercial areas (LU-9.1);
- Facilitate the development of housing close to jobs to provide residents with the opportunity to live and work in the same community (LU-10.5);
- Encourage all developers to install and maintain trails when new development occurs adjacent to a designated trail location. Use the City's Parkland Dedication Ordinance and Park Impact Ordinance to have residential developers build trails when new residential development occurs adjacent to a designated trail location, consistent with other parkland priorities. Encourage developers or property owners to enter into formal agreements with the City to maintain trails adjacent to their properties (PR-8.5).

CEQA Transportation Analysis Scope

The City of San Jose's Transportation Analysis Policy (Policy 5-1) establishes procedures for determining project impacts on Vehicle Miles Traveled (VMT) based on project description, characteristics, and/or location. VMT is the total miles of travel by personal motorized vehicles a project is expected to generate in a day. VMT measures the full distance of personal motorized vehicle-trips with one end within the project. Typically, development projects that are farther from other, complementary land uses (such as a business park far from housing) and in areas without transit or active transportation infrastructure (bike lanes, sidewalks, etc.) generate more driving than development near complementary land uses with more robust transportation options. Therefore, developments located in a central business district with high density and diversity of complementary land uses and frequent transit services are expected to internalize trips and generate shorter and fewer vehicle trips than developments located in a suburban area with low density of residential developments and no transit service in the project vicinity.

A project's VMT is compared to the appropriate thresholds of significance based on the project location and type of development. When assessing a residential project, the project's VMT is divided by the number of residents expected to occupy the project to determine the VMT per capita. The project's

VMT is then compared to the VMT thresholds of significance established based on the average area VMT.

To determine whether a project would result in CEQA transportation impacts related to VMT, the City has developed the San Jose VMT Evaluation Tool to streamline the analysis for residential, office, and industrial projects with local traffic. The tool estimates a project's VMT and compares it to the appropriate thresholds of significance based on the project location and type of development.

The thresholds of significance for development projects, as established in the Transportation Analysis Policy, are based on the existing citywide average VMT level for residential uses and the existing regional average VMT level for employment uses. Figures 3 and 4 show the current VMT levels estimated by the City for residents and workers, respectively, based on the locations of residences and jobs. Developments in the green-colored areas are estimated to have VMT levels that are below the thresholds of significance, while the orange- and pink-colored areas are estimated to have VMT levels that are above the thresholds of significance.

The CEQA transportation analysis of the project includes a project-level VMT impact analysis using the City's VMT Evaluation Tool and a cumulative impact analysis that demonstrates the project's consistency with the Envision San Jose 2040 General Plan.

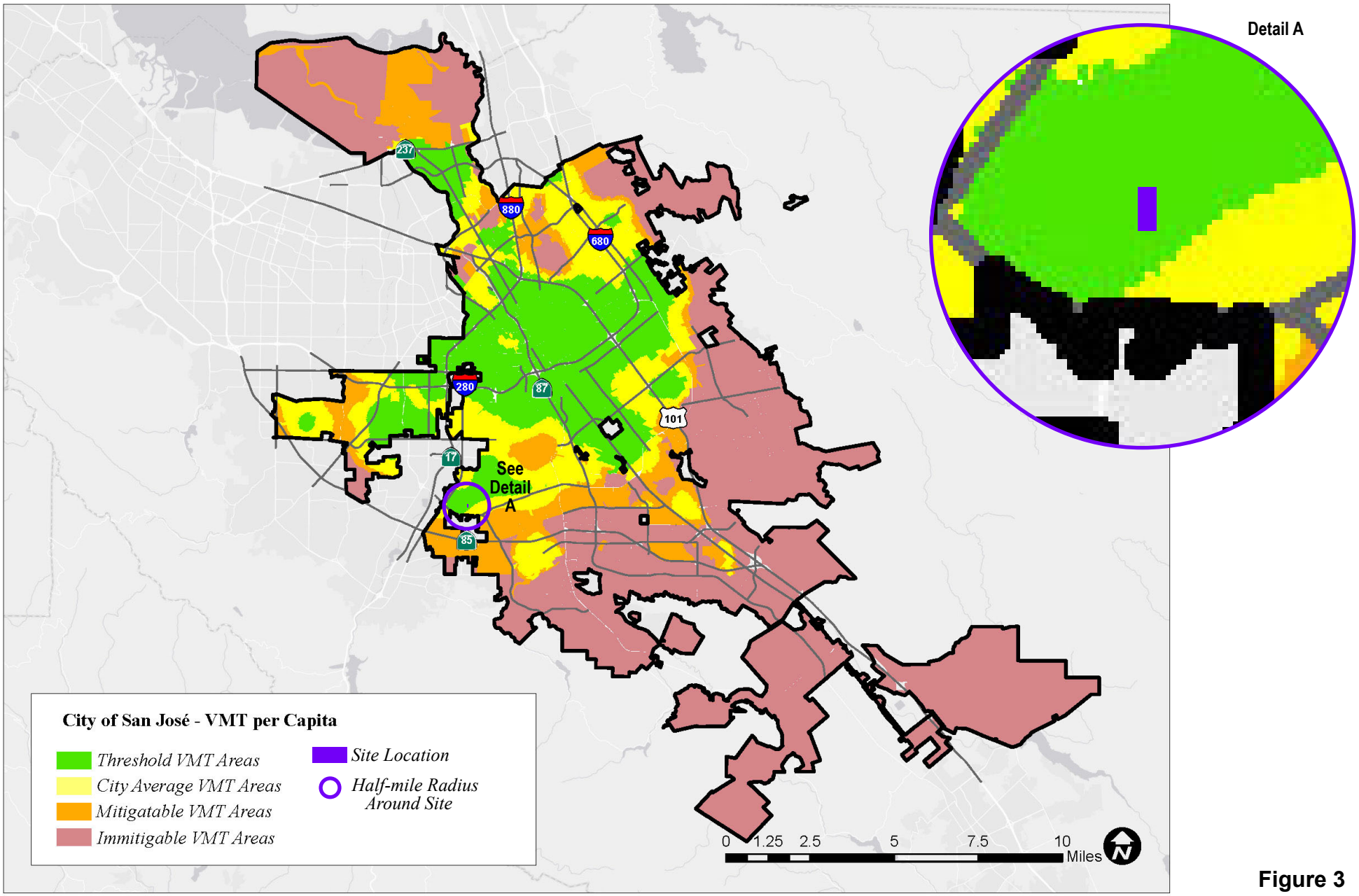


Figure 3
VMT Heat Map for Residents in San Jose

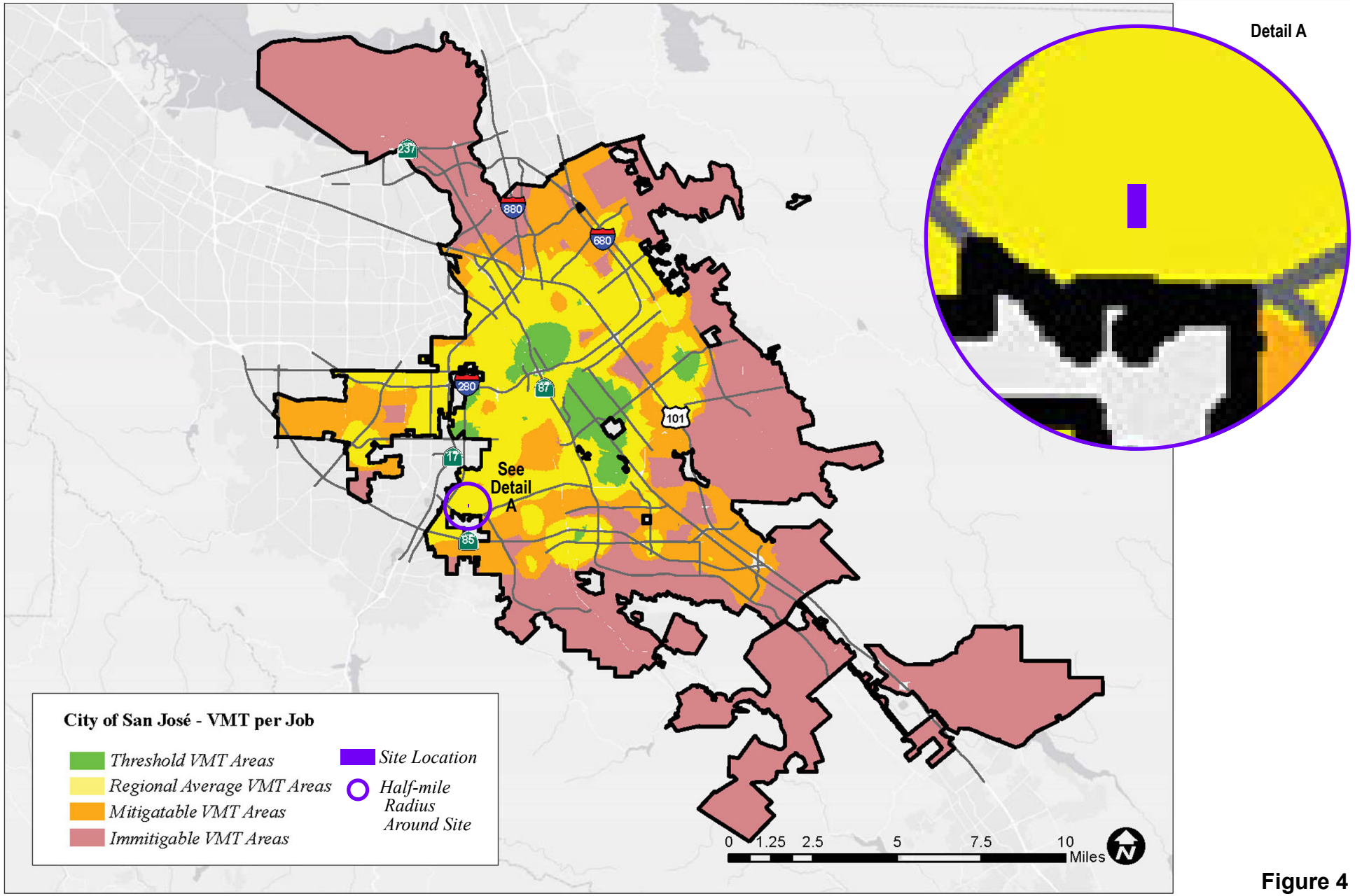


Figure 4
VMT Heat Map for Workers in San Jose

VMT Analysis Methodology

Methodology

To determine whether a project would result in CEQA transportation impacts related to VMT, the City has developed the San Jose VMT Evaluation Tool to streamline the analysis for residential, office, and industrial projects with local traffic. Because the proposed project is a relatively small residential development that would generate local traffic, the VMT Evaluation Tool was used to estimate the project VMT and determine whether the project would result in a significant VMT impact.

Based on the assessor's parcel number (APN) of a project, the VMT Evaluation Tool identifies the existing average VMT per capita and VMT per employee for the area. Based on the project location, type of development, project description, and proposed trip reduction measures, the VMT Evaluation Tool calculates the project VMT. Projects located in areas where the existing VMT is above the established threshold are referred to as being in "high-VMT areas." Projects in high-VMT areas are required to include a set of VMT reduction measures that would reduce the project VMT to the extent possible.

The VMT Evaluation Tool evaluates a list of selected VMT reduction measures that can be applied to a project to reduce the project VMT. There are four strategy tiers whose effects on VMT can be calculated with the VMT Evaluation Tool:

1. Project characteristics (e.g. density, diversity of uses, design, and affordability of housing) that encourage walking, biking and transit uses;
2. Multimodal network improvements that increase accessibility for transit users, bicyclists, and pedestrians;
3. Parking measures that discourage personal motorized vehicle-trips; and
4. Transportation demand management (TDM) measures that provide incentives and services to encourage alternatives to personal motorized vehicle-trips.

The first three strategies – land use characteristics, multimodal network improvements, and parking – are physical design strategies that can be incorporated into the project design. TDM includes programmatic measures that aim to reduce VMT by decreasing personal motorized vehicle mode share and by encouraging more walking, biking, and riding transit. TDM measures should be enforced through annual trip monitoring to assess the project's status in meeting the VMT reduction goals.

Thresholds of Significance

Table 1 shows the VMT thresholds of significance for development projects, as established in the Transportation Analysis Policy. The VMT impact threshold is 15 percent below the citywide average for residential developments. Thus, projects that include residential uses are said to create a significant adverse impact when the estimated project-generated VMT exceeds the existing citywide average VMT per capita minus 15 percent. Currently, the reported citywide average is 11.91 VMT per capita. This equates to a significant impact threshold of 10.12 VMT per capita.

Projects that trigger a significant VMT impact can assess a variety of the four strategies described above to reduce the impact. A significant impact is said to be satisfactorily mitigated when the strategies and VMT reductions implemented render the VMT impact less than significant.

Table 1
VMT Thresholds of Significance for Development Projects (March 2018)

Project Types	Significance Criteria	Current Level	Threshold
Residential Uses	Project VMT per capita exceeds existing citywide average VMT per capita minus 15 percent, or existing regional average VMT per capita minus 15 percent, whichever is lower.	11.91 VMT per capita (Citywide Average)	10.12 VMT per capita
General Employment Uses	Project VMT per employee exceeds existing regional average VMT per employee minus 15 percent.	14.37 VMT per employee (Regional Average)	12.21 VMT per employee
Industrial Employment Uses	Project VMT per employee exceeds existing regional average VMT per employee.	14.37 VMT per employee (Regional Average)	14.37 VMT per employee
Retail / Hotel / School Uses	Net increase in existing regional total VMT.	Regional Total VMT	Net Increase
Public / Quasi-Public Uses	In accordance with most appropriate type(s) as determined by Public Works Director.	Appropriate levels listed above	Appropriate thresholds listed above
Mixed-Uses	Evaluate each land use component of a mixed-use project independently, and apply the threshold of significance for each land use type included.	Appropriate levels listed above	Appropriate thresholds listed above
Change of Use / Additions to Existing Development	Evaluate the full site with the change of use or additions to existing development, and apply the threshold of significance for each project type included.	Appropriate levels listed above	Appropriate thresholds listed above
Area Plans	Evaluate each land use component of the Area Plan independently, and apply the threshold of significance for each land use type included.	Appropriate levels listed above	Appropriate thresholds listed above

Source: City of San Jose, *2018 Transportation Analysis Handbook* , Table 2.

Local Transportation Analysis Scope

The Local Transportation Analysis (LTA) supplements the VMT analysis by identifying potential adverse operational effects that may arise due to a new development, as well as evaluating the effects of a new development on site access, circulation, and other safety-related elements in the proximate area of the project.

As part of the LTA, a project is required to conduct an intersection operations analysis if the project is expected to add 10 or more vehicle trips per hour per lane to any signalized intersection that is located within a half-mile of the project site and is currently operating at LOS D or worse. Based on these criteria, as outlined in the City's *Transportation Analysis Handbook*, a list of study intersections is developed. Note that signalized intersections that do not meet all the criteria may be added to the list of study intersections at the City's discretion. The LTA comprises an analysis of AM and PM peak hour traffic conditions at the three intersections (two signalized and one unsignalized) listed below.

Study Intersections

1. Union Avenue and Foxworthy Avenue
2. Union Avenue and Cambrianna Drive (unsignalized)
3. Union Avenue and Camden Avenue (CMP)

Traffic conditions at the study intersections were analyzed for the weekday AM and PM peak hours. The weekday AM peak hour is generally between 7:00 AM and 9:00 AM and the weekday PM peak hour is typically between 4:00 PM and 6:00 PM. It is during these periods that the most congested traffic conditions occur on a typical weekday on the roadways in the study area. Traffic conditions were evaluated for the scenarios described below.

- ***Existing Conditions.*** Existing conditions are based on traffic counts from previous studies and from the CMP monitoring database. For traffic counts that were older than two years, a 1% growth factor per year was applied until 2021.
- ***Background Conditions*****.** Background traffic volumes were estimated by adding to existing peak-hour volumes the projected volumes from approved but not yet completed developments. The added traffic from approved but not yet completed developments was provided by the City of San Jose in the form of the Approved Trips Inventory (ATI). Background conditions represent the baseline conditions to which project conditions are compared for the purpose of determining potential adverse operational effects of the project. The ATI sheets are contained in Appendix A.
- ***Background Plus Project Conditions.*** Background plus project conditions reflect projected traffic volumes on the planned roadway network with completion of the project and approved developments. Project traffic volumes were estimated by adding to background traffic volumes the additional traffic generated by the project.
- ***Cumulative Conditions.*** Cumulative conditions represent future traffic volumes on the future transportation network. Cumulative conditions include traffic growth projected to occur due to the approved development project, the proposed project, and other proposed but not yet approved (pending) development projects in the study area. Note that a cumulative analysis is not typically included within an LTA but it is included in this analysis because there are some nearby proposed projects that would affect the study intersections.

The LTA also includes an analysis of site access and on-site circulation, neighborhood interface , effects on pedestrian, bicycle, and transit facilities, intersection vehicle queuing analysis, parking, signal warrant analysis, and stop warrant analysis.

Intersection Operations Analysis Methodology

This section presents the methods used to determine the traffic conditions at the study intersections and the potential adverse operational effects due to the project. It includes descriptions of the data requirements, the analysis methodologies, the applicable intersection level of service standards, and the criteria used to determine adverse effects on intersection operations. The intersection operations analysis is intended to quantify the operations of the study intersections and to identify potential negative effects due to the addition of project traffic. However, a potential adverse effect at a study intersection is not considered a CEQA impact metric.

Data Requirements

The data required for the analysis were obtained from previous traffic studies, new traffic counts, the City of San Jose, the 2018 CMP Annual Monitoring Report, and field observations. The following data were collected from these sources:

- existing traffic volumes,
- lane configurations,
- collision history data,
- signal timing and phasing, and
- approved and pending trip information.

Analysis Methodologies and Level of Service Standard

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

Signalized Intersections

The two signalized study intersections were evaluated based on the 2000 *Highway Capacity Manual (HCM)* level of service methodology using the TRAFFIX software. This method evaluates signalized intersection operations on the basis of average control delay time for all vehicles at the intersection. Since TRAFFIX is also the CMP-designated intersections level of service methodology, the City of San Jose methodology employs the CMP defaults values for the analysis parameters. The City of San Jose level of service standard for intersections is LOS D or better. The CMP level of service standard for signalized intersections is LOS E or better. The correlation between average delay and level of service is shown in Table 2.

Unsignalized Intersections

The City of San Jose has not established a level of service standard for unsignalized intersections. For unsignalized intersections, the level of service depends on the average control delay experience by vehicles that must stop or yield to on-coming traffic. Thus, for 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 the minor streets or from left-turn movements on major streets. The unsignalized study intersection of Union Avenue and Cambrianna Drive was evaluated using the 2000 HCM level of service methodology using the TRAFFIX software. The correlation between average delay and level of service for unsignalized intersections is shown on Table 3.

Table 2
Signalized Intersection Level of Service Definitions Based on Control Delay

Level of Service	Description	Average Contorl Delay Per Vehicle (sec)
A	Operations with very low delay occurring with favorable progression and/or short cycle lengths.	Up to 10.0
B	Operations with low delay occurring with good progression and/or short cycle lengths.	10.0 to 20.0
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.1 to 35.0
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	35.1 to 55.0
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences.	55.1 to 80.0
F	Operation with delays unacceptable to most drivers occurring due to oversaturation, poor progression, or very long cycle lengths.	Greater than 80.0

Source: Transportation Research Board, *2000 Highway Capacity Manual* , (Washington, D.C., 2000) p10-16.

Table 3
Unsignalized Intersection Level of Service Definitions Based on Control Delay

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

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

Adverse Signalized Intersection Operations Effects

City of San Jose Intersections

According to the City of San Jose's *Transportation Analysis Handbook*, an adverse effect on signalized intersection operations would occur if for either peak hour:

1. The level of service at the intersection degrades from an acceptable level (LOS D or better) under background conditions to an unacceptable level under background plus project conditions, or
2. The level of service at the intersection is an unacceptable level (LOS E or F) under background conditions and the addition of project trips cause both the critical-movement delay at the intersection to increase by four (4) or more seconds and the volume-to-capacity ratio (V/C) to increase by one percent (.01) or more.

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.

Adverse effects at signalized intersections can be addressed by one of the following approaches:

- Construct improvements to the subject intersection or other roadway segments of the citywide transportation system to increase overall capacity, or
- Reduce project-generated vehicle trips (e.g., implement a "trip cap") to eliminate the adverse operational effects and restore intersection operations to background conditions. The extent of trip reduction should be set at a level that is realistically attainable through proven methods of reducing trips.

CMP Intersections

The intersection of Union Avenue and Camden Avenue is a CMP intersection. Therefore, the CMP level of service standard and methodology applies to this intersection. The definition of an adverse effect on a CMP intersection is the same as the definition of an adverse signalized intersection operations effect described above for City of San Jose intersection, except the CMP standard for acceptable level of service at a CMP intersection is LOS E of better. An adverse effect by CMP standards is said to be satisfactorily mitigated when measures are implemented that would restore intersection conditions to an acceptable level or no worse than no-project conditions.

Intersection Vehicle Queuing Analysis

For selected high-demand movements at the study intersections, the estimated maximum vehicle queues were compared to the existing or planned storage capacity. The queuing analysis is presented for informational purposes only, since the City of San Jose does not have a defined a policy related to queuing. Vehicle queues were calculated 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 number of vehicles in the queue per lane (vehicles per hour per lane/signal cycles per hour)

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 per signal cycle for a particular 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 movement.

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). Therefore, left-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. The 95th percentile queue length is also known as the "design queue length."

Traffic Signal Warrant Analysis

Traffic conditions at the unsignalized study intersection of Union Avenue and Cambrianna Drive/Project Driveway were assessed to determine whether a traffic signal would be warranted based on the peak-hour volume signal warrant (Warrant #3) described in the *2014 California Manual on Uniform Traffic Control Devices* (CA MUTCD). 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.

Multi-Way Stop Analysis

Traffic conditions at the intersection of Taper Avenue and Cambrianna Drive were assessed to determine whether multi-way stop control is warranted based on the CA MUTCD criteria. The quantitative and qualitative criteria are listed below.

Quantitative Criteria

A. Where traffic control signals are justified, the multi-way stop is an interim measure that can be installed quickly to control traffic while arrangements are being made for the installation of the traffic control signal.
B. A crash problem, as indicated by five or more reported crashes in a 12-month period that are susceptible to correction by a multi-way stop installation. Such crashes include right- and left-turn collisions as well as right-angle collisions.
C. Minimum volumes: The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any eight hours of an average day, **AND** the combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same eight hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour.
D. Where no single criterion is satisfied, but where Criteria B & C are satisfied to 80 percent of the minimum values.

Qualitative Criteria

1. The need to control left-turn conflicts;
2. The need to control vehicle/pedestrian conflicts near locations that generate high pedestrian volumes;
3. Locations where a road user, after stopping, cannot see conflicting traffic and is not able to reasonably safely negotiate the intersection unless conflicting cross traffic is also required to stop, and
4. An intersection of two residential neighborhood collector (through) streets of similar design and operating characteristics where multi-way stop control would improve traffic operational characteristics of the intersection.

Report Organization

This report has a total of five chapters. Chapter 2 describes existing transportation conditions including VMT of the existing land uses in the proximity of the project, the existing roadway network, transit service, bicycle and pedestrian facilities. Chapter 3 describes the CEQA transportation analysis, including the project VMT impact analysis and cumulative transportation impact assessment. Chapter 4 describes the local transportation analysis including operations of study intersections, the methods used to estimate project-generated traffic, the project's effects on the transportation system, and an analysis of other transportation issues including site access and circulation, parking, and pedestrian, bicycle, and transit facilities. Chapter 5 presents the conclusions of the transportation analysis.

2. Existing Transportation Conditions

This chapter describes the existing conditions of the transportation system within the study area of the project. It presents the vehicle miles traveled (VMT) of the existing land uses in the proximity of the project and describes transportation facilities in the vicinity of the project site, including the roadway network, transit service, and pedestrian and bicycle facilities. The analysis of existing intersection operations is included as part of the Local Transportation Analysis (see Chapter 4).

VMT of Existing Land Uses

To determine whether a project would result in CEQA transportation impacts related to VMT, the City has developed the San Jose VMT Evaluation Tool to streamline the analysis for residential, office, and industrial projects. Based on the VMT Evaluation Tool and the project's APN, the existing VMT for residential uses in the project vicinity is 9.58 per capita. The current citywide average VMT for residential uses is 11.91 per capita (see Table 1 in Chapter 1). Thus, the VMT levels of existing residential uses in the project vicinity are less than the citywide average VMT levels. The VMT Evaluation Tool summary report for the project is included in Chapter 3.

Existing Roadway Network

Regional access to the project area is provided via SR 17 and SR 85. Local access to the project site is provided via Camden Avenue, Foxworthy Avenue, Union Avenue, and Cambrianna Drive. The San Jose General Plan classifies SR 17 and SR 85 as freeways, Camden Avenue as a grand boulevard, Foxworthy Avenue as a local connector street, Union Avenue as a city connector street, and Cambrianna Drive as a residential street. These facilities are described below.

Freeway facilities are designated solely for traffic movement of automobiles, trucks, and express transit buses. Freeways provide no access to abutting properties and are designed to separate all conflicting movements through the use of grade-separated interchanges.

Grand Boulevards serve as major transportation corridors that connect city neighborhoods. These streets accommodate moderate to high volumes of through traffic within and beyond the city.

City Connector Streets prioritize automobiles, bicycles, pedestrians, and trucks equally. These streets accommodate moderate to high volumes of through traffic within and beyond the city.

Local Connector Streets prioritize automobiles, bicycles, pedestrians, and trucks equally. These streets accommodate low to moderate volumes of through traffic within the city.

Residential Streets prioritize automobiles, bicycles, and trucks equally. These streets accommodate low volumes of local traffic and primarily provide access to property.

SR 17 is generally a six-lane freeway in the vicinity of the site. SR 17 extends south to Santa Cruz and north to I-280, at which point it makes a transition into I-880 to Oakland. Access to and from the project area is provided via a full interchange at Camden Avenue/San Tomas Expressway.

SR 85 is a predominantly north-south freeway that is oriented in an east-west direction in the vicinity of the project. It extends from Mountain View to south San Jose, terminating at US 101. SR 85 is a six-lane freeway with four mixed-flow lanes and two HOV lanes. It connects to I-280, SR 17, SR 87, and US 101. SR 85 provides access to the project site via interchanges at Union Avenue and S. Bascom Avenue.

Camden Avenue is a four- to six-lane northwesterly-southeasterly divided roadway that runs through south San Jose. Camden Avenue becomes San Tomas Expressway at its interchange with SR 17. In the project vicinity, Camden Avenue includes sidewalks on both sides of the street and has a posted speed limit of 40 miles per hour (mph). On-street parking is permitted at some locations along Camden Avenue in the project vicinity. Camden Avenue provides access to the project site via Union Avenue and Taper Avenue.

Foxworthy Avenue is an east/west two-lane undivided roadway. It extends from Pearl Avenue in the east to Bascom Avenue in the west. In the project vicinity, Foxworthy Avenue includes sidewalks and on-street parking on both sides of the street and has a posted speed limit of 30 mph. Foxworthy Avenue provides access to the project site via Union Avenue.

Union Avenue is a two- to four- lane north/south roadway with a two-way left-turn lane. It extends from Campbell Avenue in the north to Blossom Hill Road in the south. In the project vicinity, Union Avenue includes sidewalks and bicycle lanes on both sides of the street and has a posted speed limit of 35 mph. Union Avenue provides access to the project site via Cambrianna Drive.

Cambrianna Drive is a two lane east/west undivided roadway. It extends from Taper Avenue in the east to Union Avenue in the west. Cambrianna Drive includes sidewalks and on-street parking on both sides of the street and has a posted speed limit of 25 mph. Cambrianna Drive provides direct access to the project site.

Existing Pedestrian, Bicycle, and Transit Facilities

San Jose desires to provide a safe, efficient, economically, and environmentally-sensitive transportation system that balances the needs of bicyclists, pedestrians, and public transit riders with those of cars and trucks. The existing pedestrian, bicycle, and transit facilities in the study area are described below.

Existing Pedestrian Facilities

Pedestrian facilities in the study area consist of sidewalks along the network of public streets. Crosswalks with pedestrian signal heads, push buttons, and curb ramps are located at the signalized intersections in the study area. There is also an existing pedestrian crosswalk with Rectangular Rapid Flashing Beacons (RRFB) crossing the south leg of the Union Avenue and Cambrianna Drive intersection. The existing network of sidewalks provides good connectivity for pedestrians.

Existing Bicycle Facilities

Existing bicycle facilities in the project vicinity consist of bicycle lanes on some nearby streets. Bicycle lanes are lanes on roadways designed for use by bicycles with special lane markings, pavement legends, and signage.

Bike lanes currently exist on the roadway segments listed below and shown on (Figure 5).

- Union Avenue, from Bascom Avenue to Los Gatos Almaden Road
- Curtner Avenue, from Monterey Road to Joseph Avenue
- Leigh Avenue, from Curtner Avenue to Blossom Hill Road

In addition, to the bicycle facilities described above, the neighborhood streets that surround the project area have low speeds and low vehicular volume, which make them conducive to bicycle traffic.

Los Gatos Creek Trail

The Los Gatos Creek Trail is a multi-use trail located approximately 1 mile west of the project site. The Los Gatos Creek Trail runs north-south and is classified as a Class I facility. The nearest access point to the Los Gatos Creek Trail from the project site is west of SR17 near the interchange at Camden Avenue/San Tomas Expressway. However, there is not a continuous bicycle route from the project site to the trail.

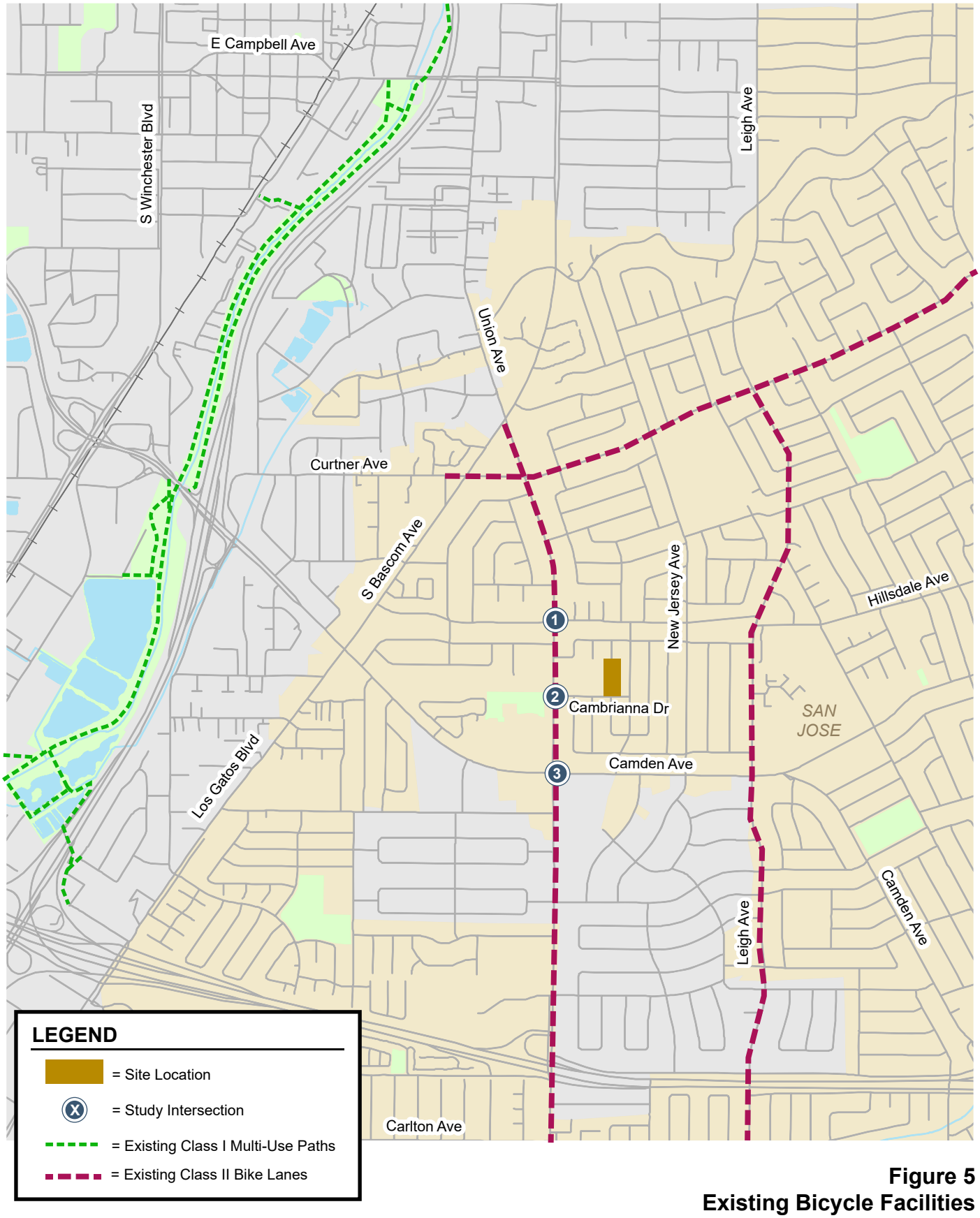


Figure 5
Existing Bicycle Facilities

Existing Transit Services

Existing transit service near the project site is provided by the Santa Clara Valley Transportation Authority (VTA) (see Figure 6). Within the project vicinity, there are VTA bus stops located near the intersections of Union Avenue/Camden Avenue, Union Avenue/Cambrianna Drive, Union Avenue/Foxworthy Avenue, and Union Avenue/Curtner Avenue. The VTA bus routes within the project vicinity and their headways are summarized in Table 4. In addition to the VTA bus stops located near the project site, there is a VTA Light Rail Station less than 2 miles from the project site. The Winchester Light Rail Station is located on Winchester Boulevard, north of San Tomas Expressway. Local Bus Route 37 and Express Route 101 include stops near the project site and at the Winchester Light Rail Station.

Table 4
Existing Bus Routes

Bus Route	Route Description	Headway[1]
Frequent Bus Route 26	West Valley College - Eastridge	20
Local Bus Route 37	West Valley College to Capitol Light Rail Station	60
Frequent Bus Route 61	Good Samaritan Hospital to Sierra & Piedmont via Bascom	20
Express Route 101	Camden & Highway 85 to Palo Alto	60[2]

Notes
[1] Approximate headway, in minutes, during the peak weekday commute periods.
[2] During the weekday, Express Route 101 has two northbound runs between 6:00 AM and 9:00 AM and two southbound runs between 4:00 PM and 7:00 PM.

Existing Intersection Lane Configurations

The existing lane configurations at the study intersections were determined by observations in the field and are shown on Figure 7.

Observed Existing Traffic Conditions

Traffic conditions were observed in the field at the study intersections in order to identify existing operational deficiencies and to confirm the accuracy of the calculated level of service. The purpose of this effort was (1) to identify any existing traffic problems that may not be directly related to level of service, (2) identify any locations where the level of service analysis does not accurately reflect existing traffic conditions. The field observations occurred on Tuesday, July 20, 2021, during the AM peak period (7:00 AM to 9:00 AM) and PM peak period (4:00 PM to 6:00 PM). Overall, the study intersections operate adequately during the AM and PM peak periods. In addition, at the day care adjacent to the project site no issues with drop-off/pick-up queuing were observed.

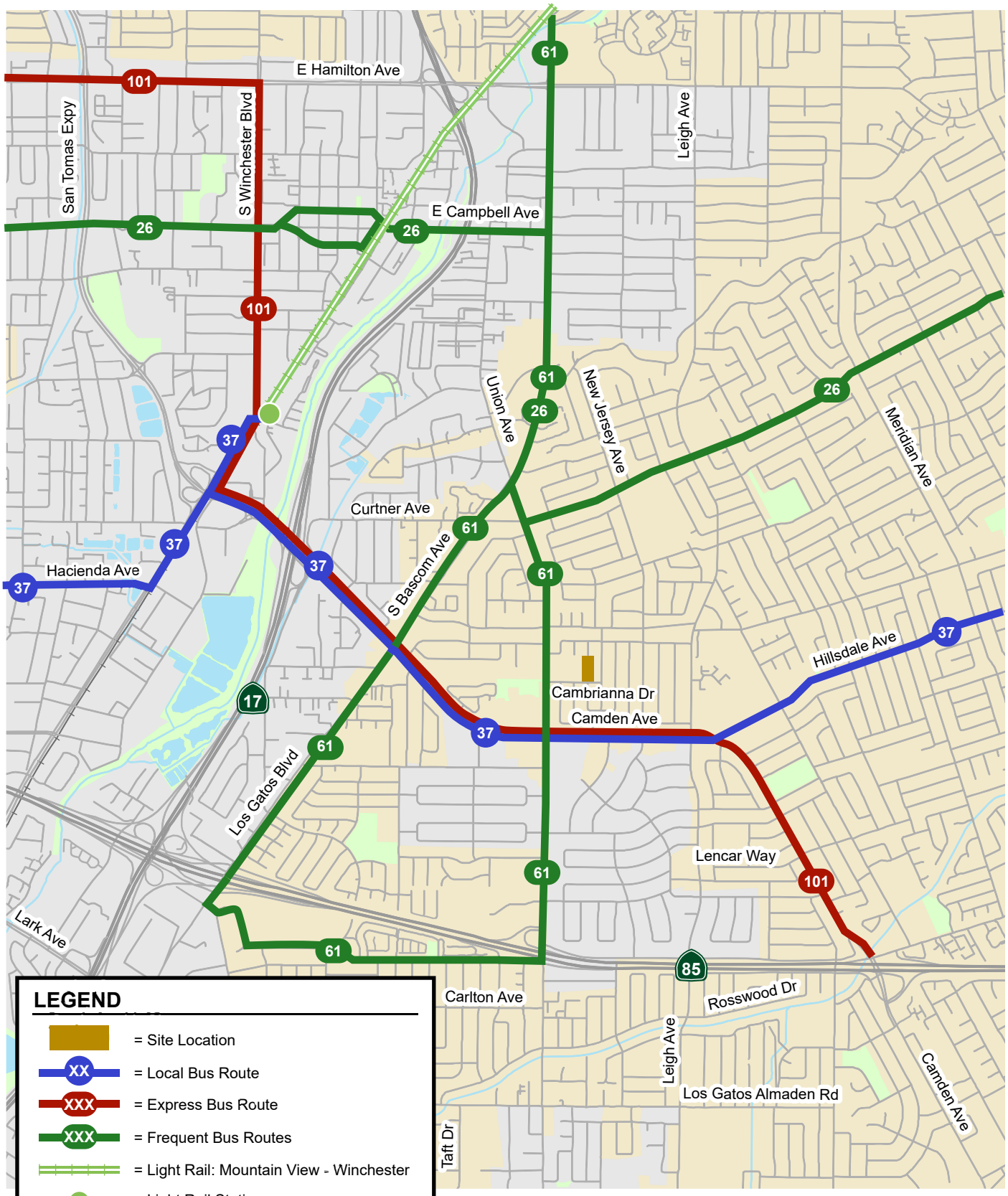


Figure 6
Existing Transit Services

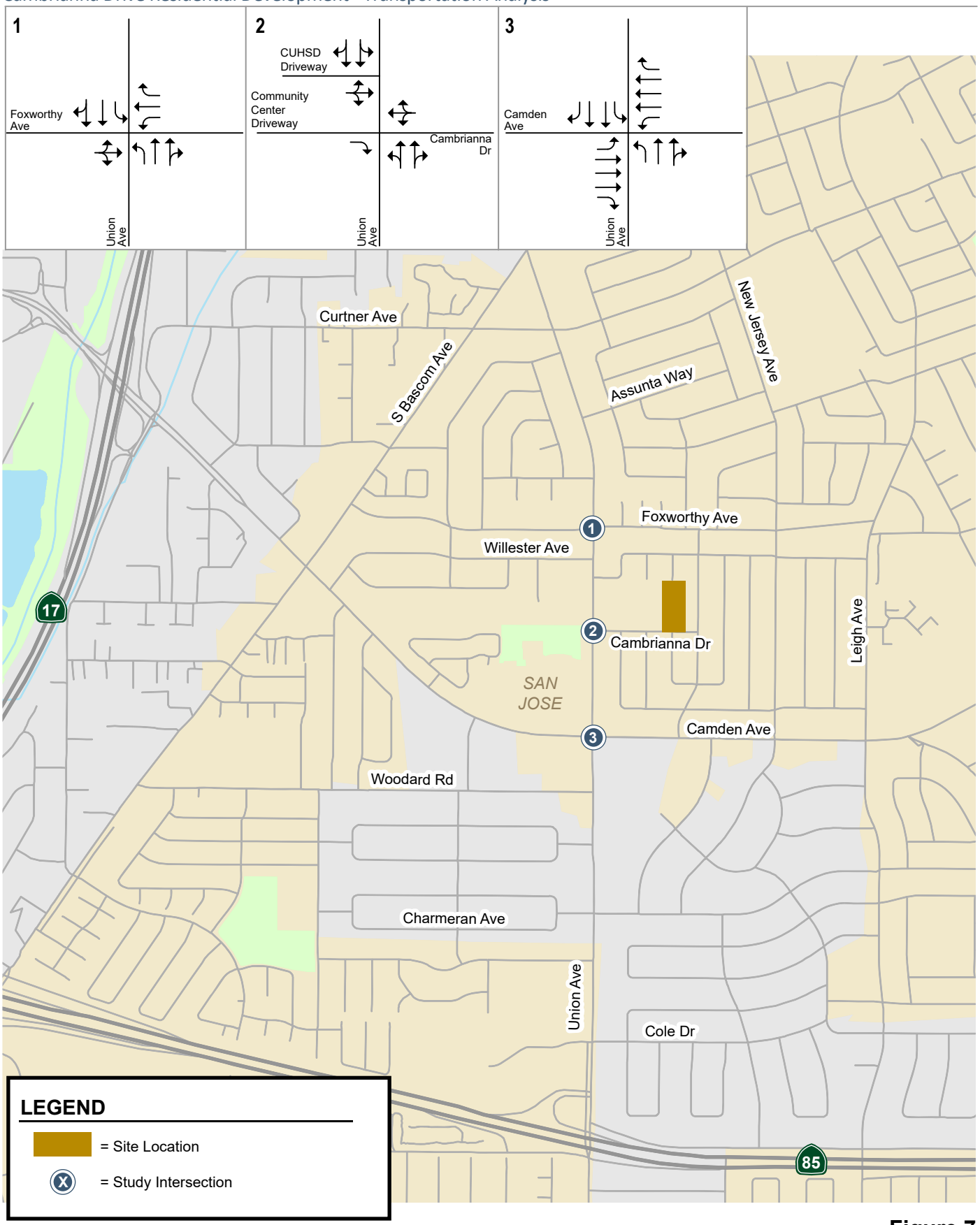


Figure 7
Existing Lane Configurations

3. CEQA Transportation Analysis

This chapter describes the CEQA transportation analysis, including the VMT threshold of significance, the VMT impact analysis screening criteria, the project-level VMT impact analysis results, and the cumulative transportation impact analysis used to determine consistency with the City's 2040 General Plan.

Project-Level VMT Impact Analysis

The project-level impact analysis under CEQA uses the VMT metric to evaluate a project's transportation impacts by comparing against the VMT thresholds of significance as established in the Transportation Analysis Policy. The San Jose VMT Evaluation Tool is used to estimate the project VMT based on the project location (APN), type of development, project description, and proposed trip reduction measures. The thresholds of significance for residential uses (see Table 1 in Chapter 1) are used for the VMT analysis. The VMT threshold for residential uses is the existing citywide average VMT level (11.91 per capita) minus 15 percent, which is 10.12 VMT per capita.

Project-Level VMT Impact Results

The results of the VMT evaluation indicate that the proposed residential project is projected to generate 9.34 VMT per capita, which is below the City's residential threshold of 10.12 per capita. Therefore, the proposed project would not have a VMT impact.

Figure 8 shows the VMT evaluation summary report generated by the City of San Jose's VMT Evaluation Tool for the project.

Figure 8
San Jose VMT Evaluation Tool Summary Report

CITY OF SAN JOSE VEHICLE MILES TRAVELED EVALUATION TOOL SUMMARY REPORT

PROJECT:

Name: Cambrianna Residential Project
Location: 1975 Cambrianna Drive
Parcel: 41421062 Parcel Type: Urban Low Transit
Proposed Parking Spaces Vehicles: 0 Bicycles: 0

Tool Version: 2/29/2019
Date: 8/19/2021

LAND USE:

Residential:		Percent of All Residential Units	
Single Family	21 DU	Extremely Low Income (≤ 30% MFI)	0 % Affordable
Multi Family	14 DU	Very Low Income (> 30% MFI, ≤ 50% MFI)	0 % Affordable
Subtotal	35 DU	Low Income (> 50% MFI, ≤ 80% MFI)	19 % Affordable
Office:	0 KSF		
Retail:	0 KSF		
Industrial:	0 KSF		

VMT REDUCTION STRATEGIES

Tier 1 - Project Characteristics

Increase Residential Density
- Existing Density (DU/Residential Acres in half-mile buffer) 5
- With Project Density (DU/Residential Acres in half-mile buffer) 5

Increase Development Diversity
- Existing Activity Mix Index 0.59
- With Project Activity Mix Index 0.58

Integrate Affordable and Below Market Rate
- Extremely Low Income BMR units ..... 0 %
- Very Low Income BMR units ..... 0 %
- Low Income BMR units ..... 19 %

Increase Employment Density
- Existing Density (Jobs/Commercial Acres in half-mile buffer) 22
- With Project Density (Jobs/Commercial Acres in half-mile buffer) 22

Tier 2 - Multimodal Infrastructure

Tier 3 - Parking

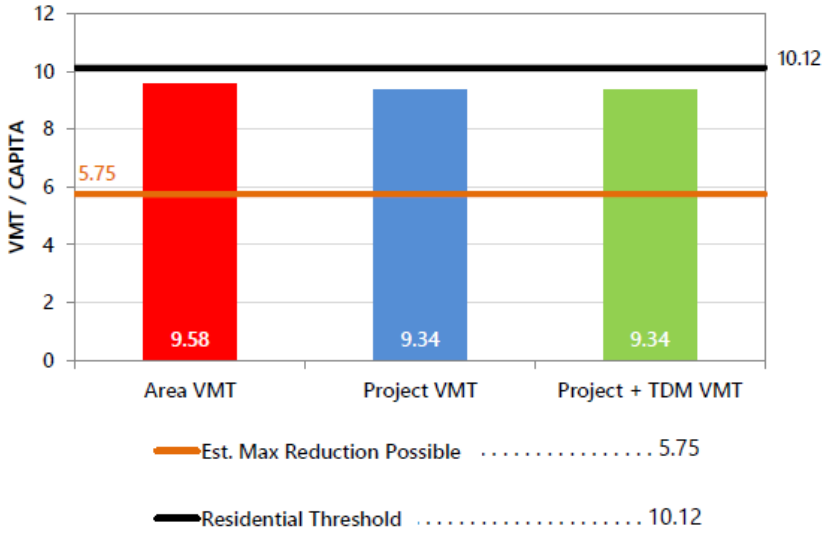
Tier 4 - TDM Programs

Figure 8 (Continued)
San Jose VMT Evaluation Tool Summary Report

CITY OF SAN JOSE VEHICLE MILES TRAVELED EVALUATION TOOL SUMMARY REPORT

RESIDENTIAL ONLY

The tool estimates that the project would generate per capita VMT below the City's threshold.



Cumulative Impact Analysis

Projects must demonstrate consistency with the *Envision San José 2040 General Plan* (2040 General Plan) to address cumulative impacts. Consistency with the City's 2040 General Plan is based on the project's density, design, and conformance to the 2040 General Plan's goals and policies. If a project is determined to be inconsistent with the 2040 General Plan, a cumulative impact analysis is required as part of the City's *Transportation Analysis Handbook*.

The project as proposed would consist of 21 homes, 14 of which are projected to include accessory dwelling units (ADUs), for a total of 35 residential units. The project is consistent with the 2040 General Plan goals and policies for the following reasons:

- The project would create a pedestrian-friendly environment internal to the site, as well as provide convenient and accessible external connections between the project site the adjoining neighborhood, parks, and pedestrian facilities.
- The project would be integrated with the City's transportation system, including transit, roads, and pedestrian facilities.
- The project would not negatively impact existing transit, bicycle or pedestrian infrastructure, nor would it conflict with any adopted plans or policies for new transit, bicycle or pedestrian facilities.

Therefore, based on the project description, the proposed residential project would be consistent with the *Envision San Jose 2040 General Plan*. The project would be considered part of the cumulative solution to meet the 2040 General Plan's long-range transportation goals and would result in a less-than-significant cumulative impact.

4.
Local Transportation Analysis

This chapter describes the local transportation analysis (LTA) including the method by which project traffic is estimated, intersection operations analysis for existing, background, project, and cumulative conditions, any adverse effects to intersection level of service caused by the project. This chapter also includes site access and on-site circulation review, neighborhood interface review, effects on pedestrian, bicycle, and transit facilities, intersection vehicle queuing analysis, parking, signal warrant analysis, and stop warrant analysis. The transportation network under background, project, and cumulative conditions would be the same as the existing transportation network.

Intersection Operations Analysis

The intersection operations analysis is intended to quantify the operations of the study intersections and to identify potential negative effects due to the addition of project traffic. Information required for the intersection operations analysis related to project trip generation, trip distribution, and trip assignment are presented in this section. The study intersections are evaluated based on the analysis methodology and standards in determining potential adverse operational effects due to the project that are described in Chapter 1.

Project Trip Estimates

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

Trip Generation

Through empirical research, data have been collected that quantify the amount of traffic produced by many types of land uses. The research is compiled in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual, 10th Edition* (2017).The standard trip generation rates can be applied to help predict the future traffic increases that would result from a new development.

The rates published for "Single-Family Detached Housing" (ITE Land Use 210) were used to estimate the trips generated by the proposed single-family homes. The rates published for "Multifamily Housing (Low-Rise)" (ITE Land Use 220) were used to estimate the trips generated by the proposed accessory units. The "Single-Family Detached Housing" ITE land use category includes all single-family detached

homes on individual lots. Some of the single-family home lots would include smaller accessory units. Because of their reduced size, the accessory units would produce correspondingly lower trip generation rates. Therefore, trip generation for the accessory units is based on the "Multifamily Housing (Low-Rise)" ITE land use category, which was selected as the best representation of the trips that the accessory units would generate. The project as proposed would include 21 single-family homes on individual lots, and 14 accessory units.

Trip Adjustments and Reductions

In accordance with San Jose's *Transportation Analysis Handbook* (April 2018, Section 4.8, "Intersection Operations Analysis"), the project is eligible for adjustments and reductions to the baseline trip generation. Based on the 2018 San Jose guidelines, the project qualifies for a location-based adjustment. The location-based adjustment reflects the project's vehicle mode share based on the "place type" in which the project is located per the San Jose Travel Demand Model. The project's place type was obtained from the San Jose VMT Evaluation Tool. Based on the VMT Evaluation Tool, the project site is located within a designated Urban Low-Transit place type. Therefore, the baseline project trips were adjusted to reflect an Urban Low-Transit mode share.

Residential developments within Urban Low-Transit areas have a vehicle mode share of 87 percent (according to Table 6 of the City's *Transportation Analysis Handbook*). Thus, a 13 percent reduction was applied to the residential trip generation estimates based on the location-based vehicle mode share outputs produced from the San Jose Travel Demand Model.

Net Project Trips

After applying the ITE trip rates to the proposed project and applying the appropriate trip adjustments, it is estimated that the project would generate 261 new daily vehicle trips, with 19 new trips occurring during the AM peak hour and 26 new trips occurring during the PM peak hour. Using the inbound/outbound splits contained in the ITE *Trip Generation Manual*, the project would produce 4 new inbound and 15 new outbound trips during the AM peak hour, and 16 new inbound and 10 new outbound trips during the PM peak hour (see Table 5).

Table 5
Project Trip Generation Summary

			Daily		AM Peak Hour				PM Peak Hour			
Land Use	**Size**	**Unit**	**Rate**	**Trips**	**Rate**	**In**	**Out**	**Total**	**Rate**	**In**	**Out**	**Total**
Proposed Use												
Single-Family Homes[1]	21	du	9.44	198	0.74	4	12	16	0.99	13	8	21
Accessory Units[2]	14	du	7.32	102	0.46	1	5	6	0.56	5	3	8
Total Gross Project Trips				**300**		**5**	**17**	**22**		**18**	**11**	**29**
Location-Based Reduction (13%) [3]				*(39)*		*(1)*	*(2)*	*(3)*		*(2)*	*(1)*	*(3)*
Net Project Trips				**261**		**4**	**15**	**19**		**16**	**10**	**26**

Notes:
Rates are expressed in trips per dwelling unit (du).
[1] Single-family home trip generation based on the rates published in the *ITE Trip Generation Manual, 10th Edition (2017)* for Single-Family Detached Housing (Land Use Code 210).
[2] Some of the single family home lots would include smaller accessory units. Because of their reduced size, the accessory units would produce correspondingly lower trip generation rates. Therefore, trip generation for the accessory units is based on the rates published in the *ITE Trip Generation Manual, 10th Edition (2017)* for Multifamily Housing (Low-Rise) (Land Use Code 220).
[3] A 13% reduction was applied based on the location-based vehicle mode share percentage outputs (Table 6 of TA Handbook) produced from the San Jose Travel Demand Model for the place type Urban Low-Transit.

Trip Distribution and Assignment

The trip distribution pattern for the project was estimated based on existing travel patterns on the surrounding roadway network that reflect typical weekday AM and PM peak commute patterns, the project driveway, the locations of complementary land uses, and freeway access points (see Figure 9). The net peak-hour vehicle trips generated by the project were assigned to the roadway network in accordance with the trip distribution pattern. The net trip assignment for the proposed project is shown on Figure 10.

Traffic Volumes Under All Scenarios

Existing Traffic Volumes

Existing AM and PM peak-hour traffic volumes are based on traffic counts from previous studies and from the CMP monitoring database. For traffic counts that were older than two years, a 1% growth factor per year was applied until 2021. The existing peak-hour intersection volumes are shown on Figure 11.

Background Traffic Volumes

Background AM and PM peak-hour traffic volumes were estimated by adding to existing traffic volumes the trips generated by nearby approved but not yet completed or occupied projects. The background peak-hour intersection volumes are shown on Figure 12. The approved projects are listed as part of the Approved Trips Inventory (ATI) in Appendix A.

Background Plus Project Traffic Volumes

Project trips were added to background traffic volumes to obtain background plus project traffic volumes (see Figure 13).

Cumulative Traffic Volumes

Cumulative traffic volumes were estimated by adding to project traffic volumes the trips from the proposed but not yet approved Cambrian Park project and the Campbell Union High School District (CUHSD) site residential project. The Cambrian Park project is proposed for the southeast corner of the Union Avenue and Camden Avenue and would include 48 single-family homes, 25 townhomes, 305 apartment units, 229 hotel rooms, up to 40,481 square feet (s.f.) of restaurant space, 17,349 s.f. of retail space, and 160,000 s.f. of office space. The CUHSD site residential project would replace a portion of the existing CUHSD maintenance yard on the west leg of the Union Avenue and Cambrianna Drive intersection. The CUHSD site residential project would include 39 single-family homes and 24 accessory units. The cumulative traffic volumes are shown on Figure 14.

Traffic volumes for all traffic scenarios are tabulated in Appendix B.

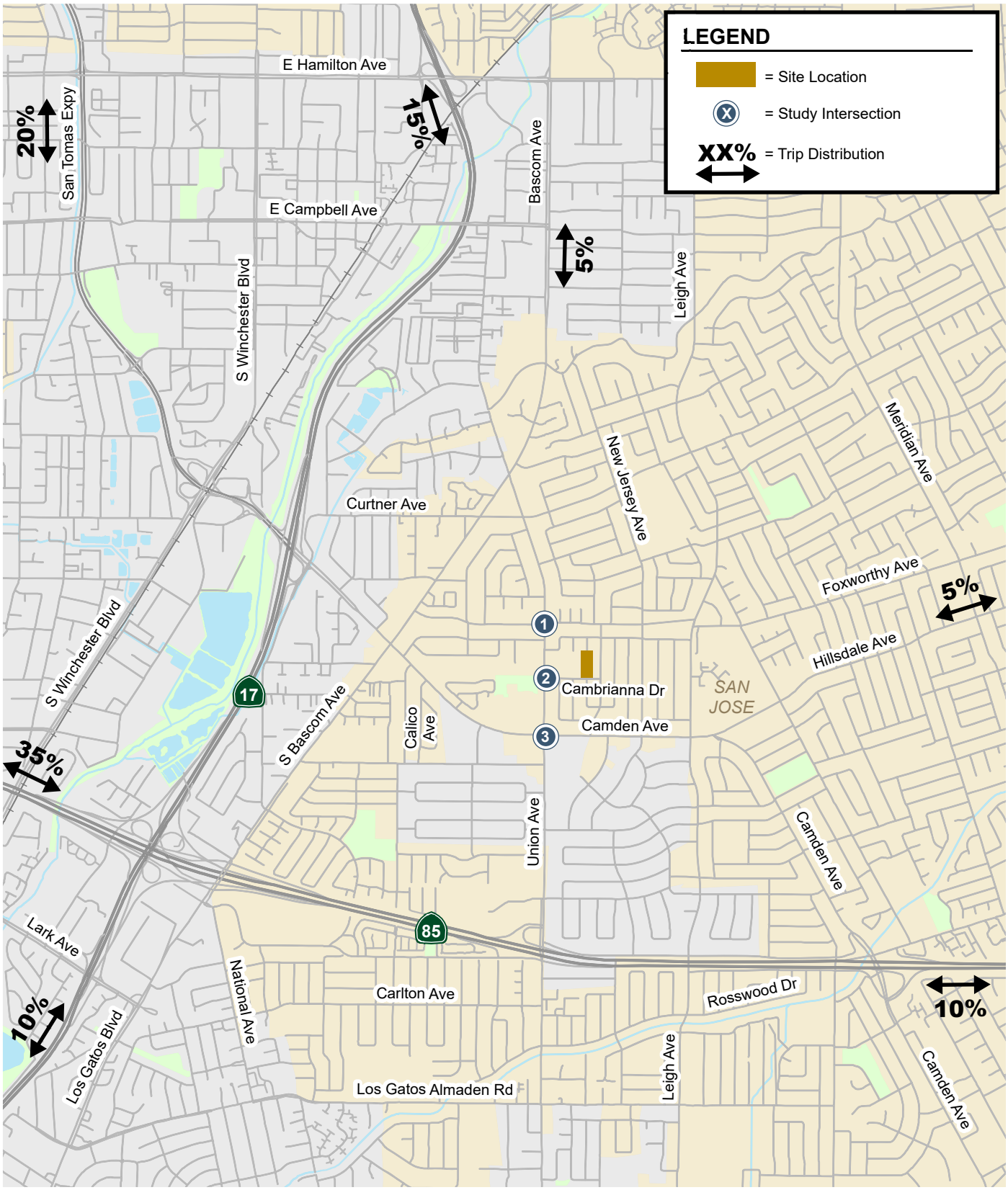


Figure 9
Project Trip Distribution Pattern

NORTH
Not to Scale

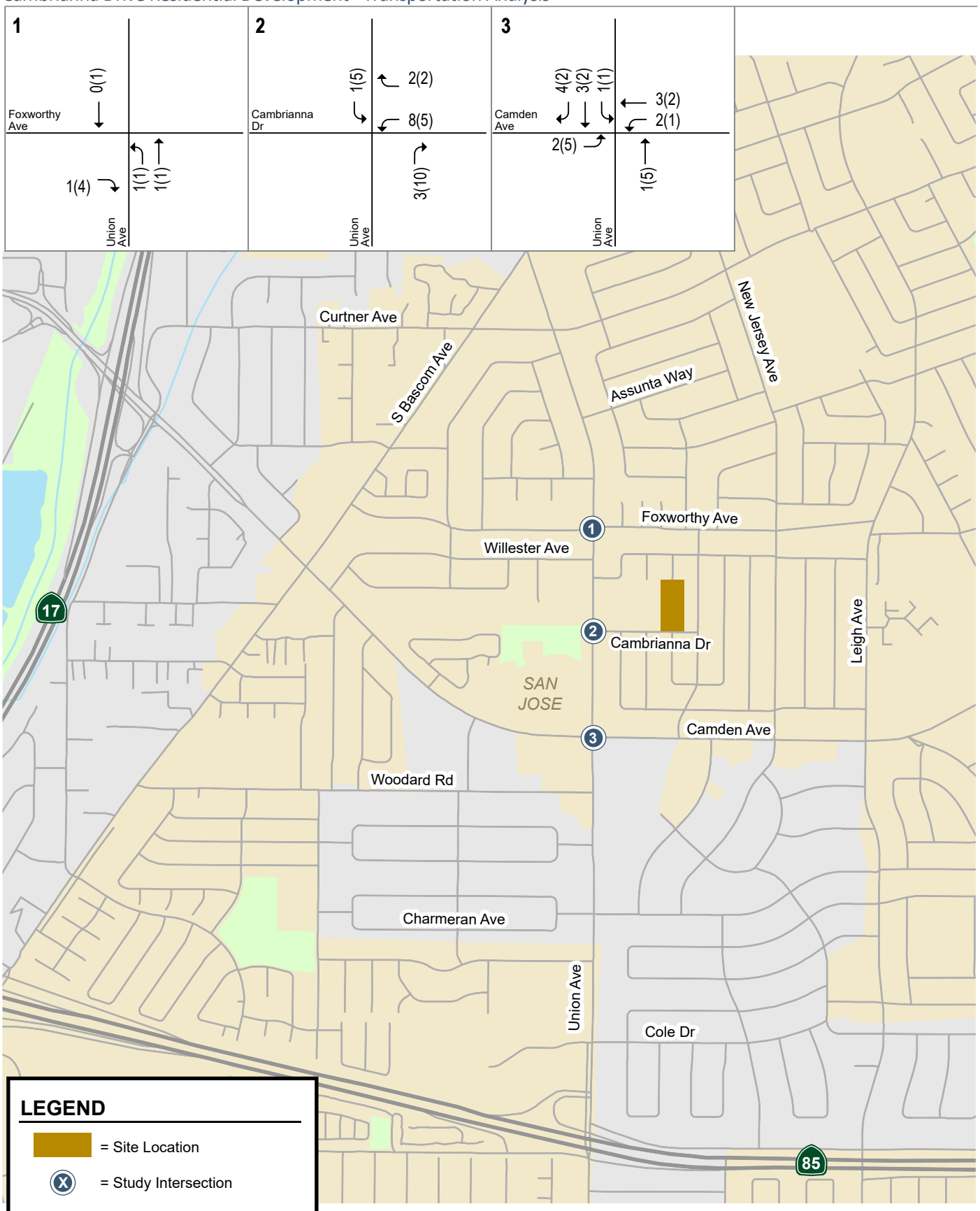


Figure 10
Net Project Trip Assignment

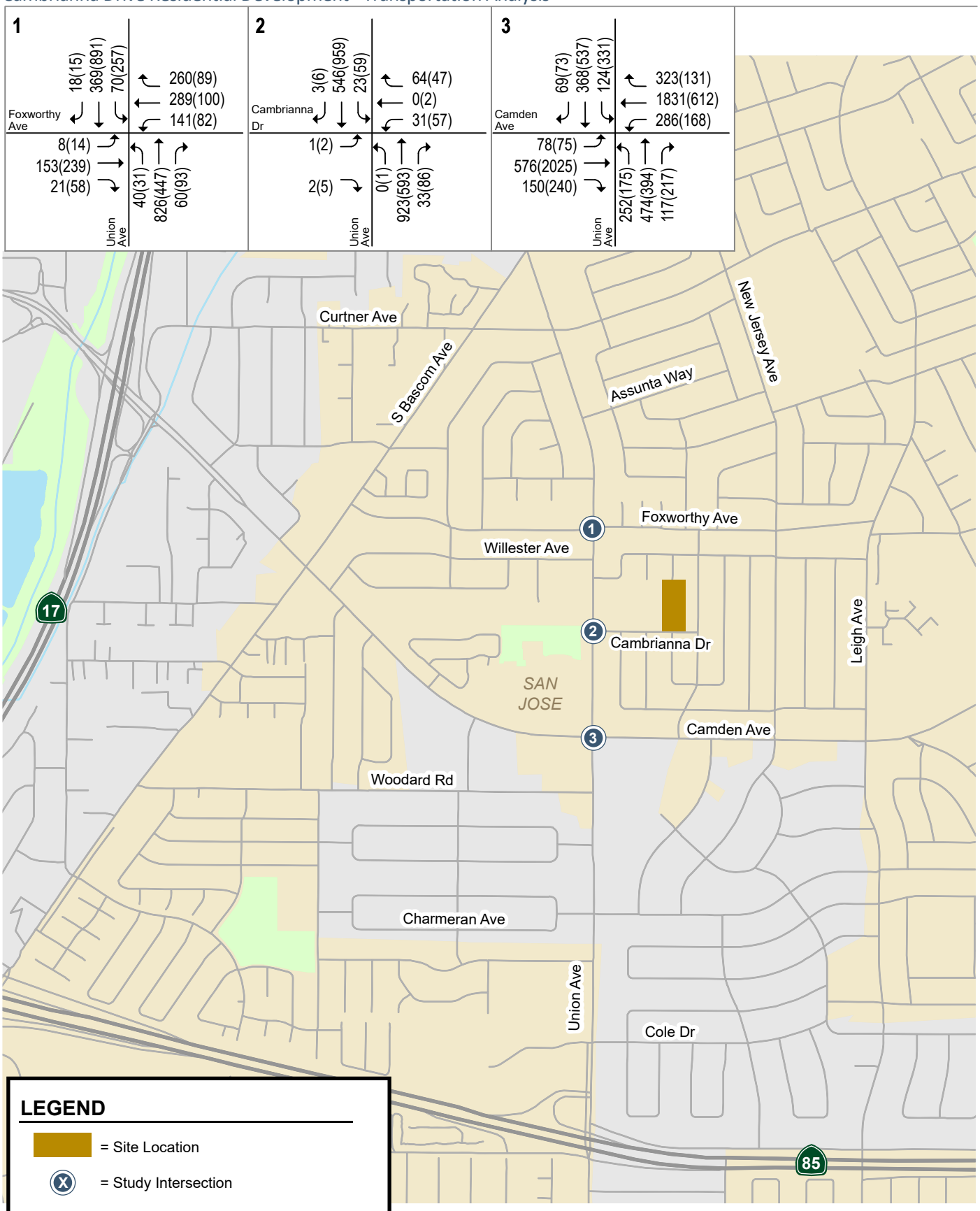


Figure 11
Existing Traffic Volumes

NORTH
Not to Scale

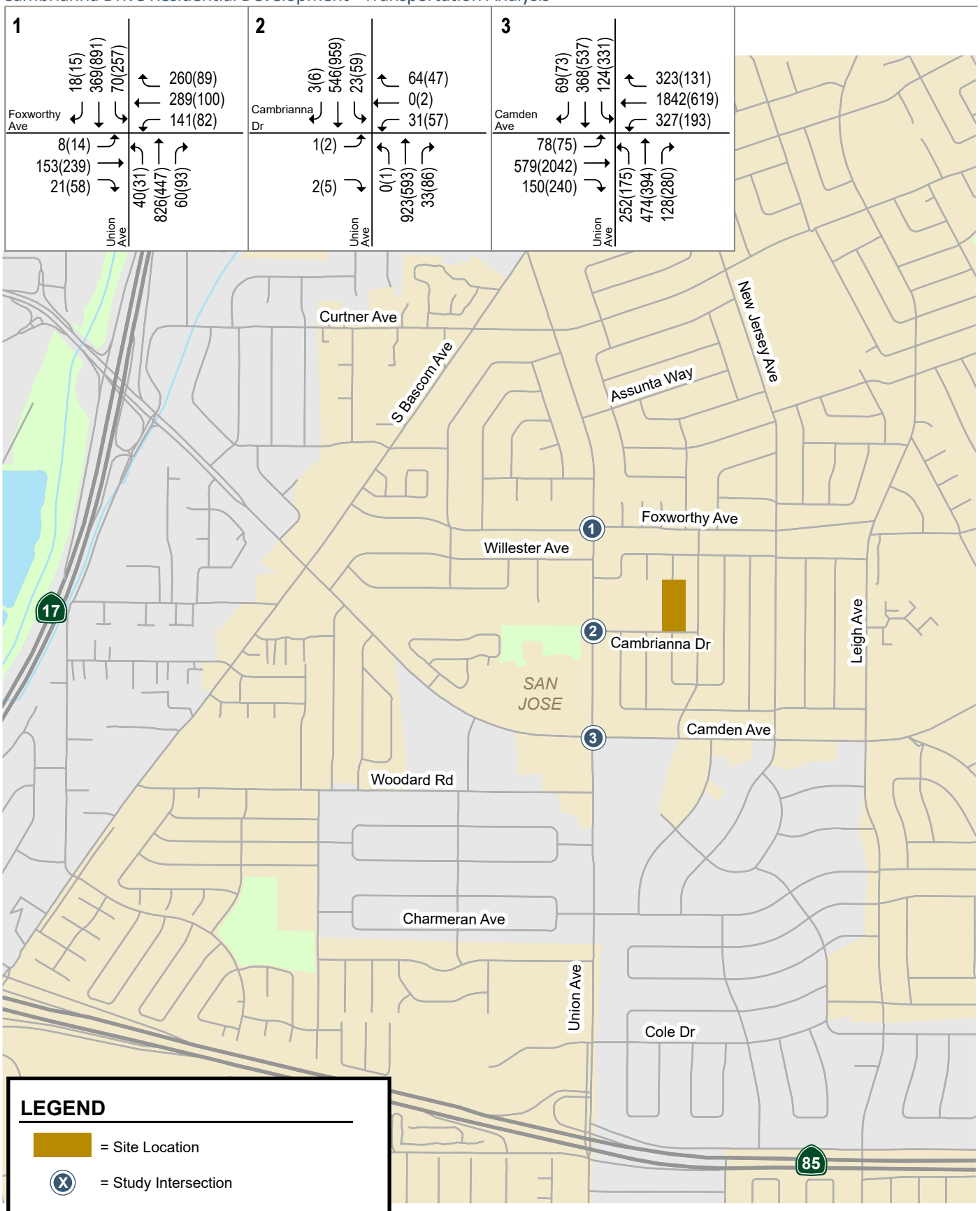


Figure 12
Backgound Traffic Volumes

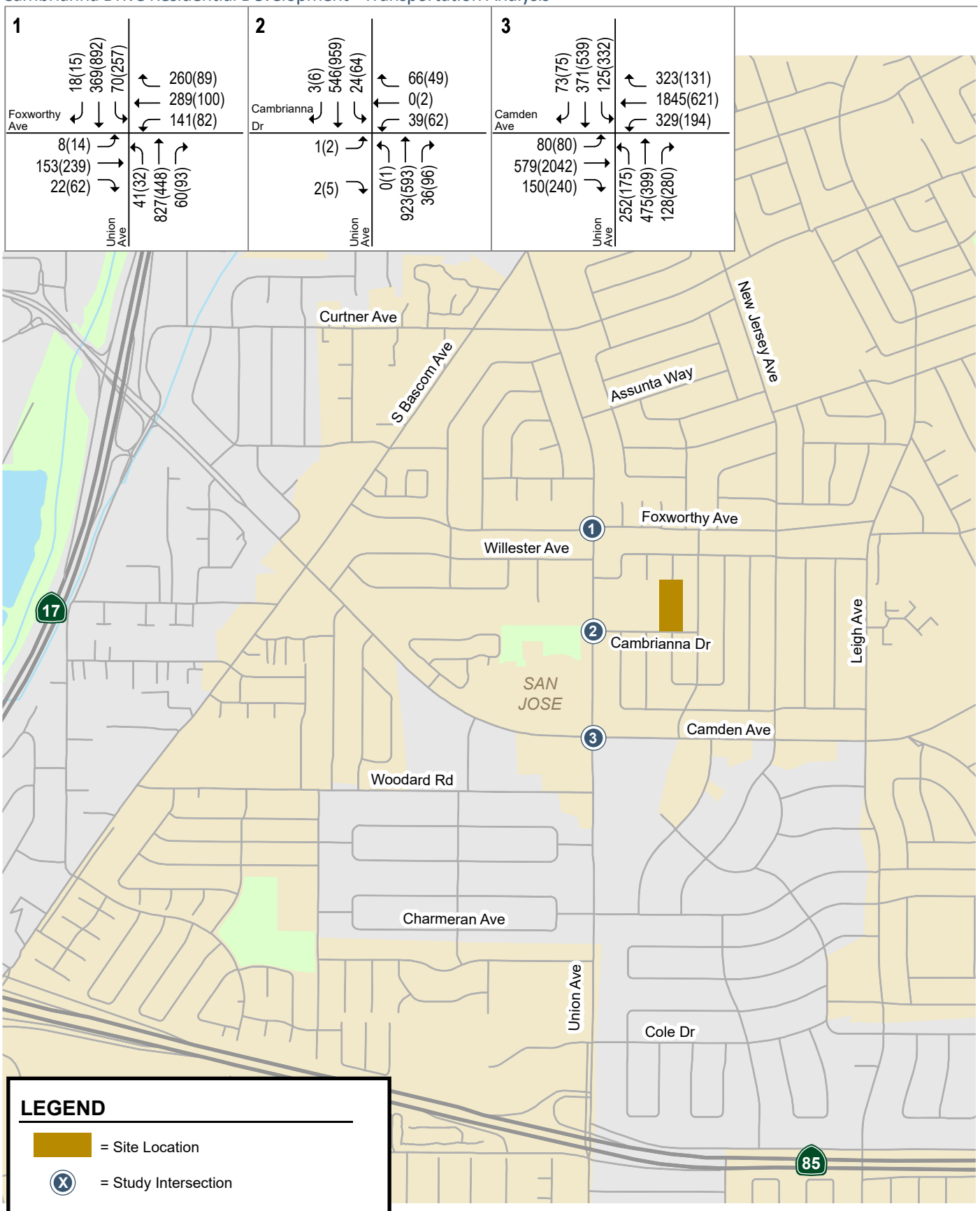


Figure 13
Background Plus Project Traffic Volumes

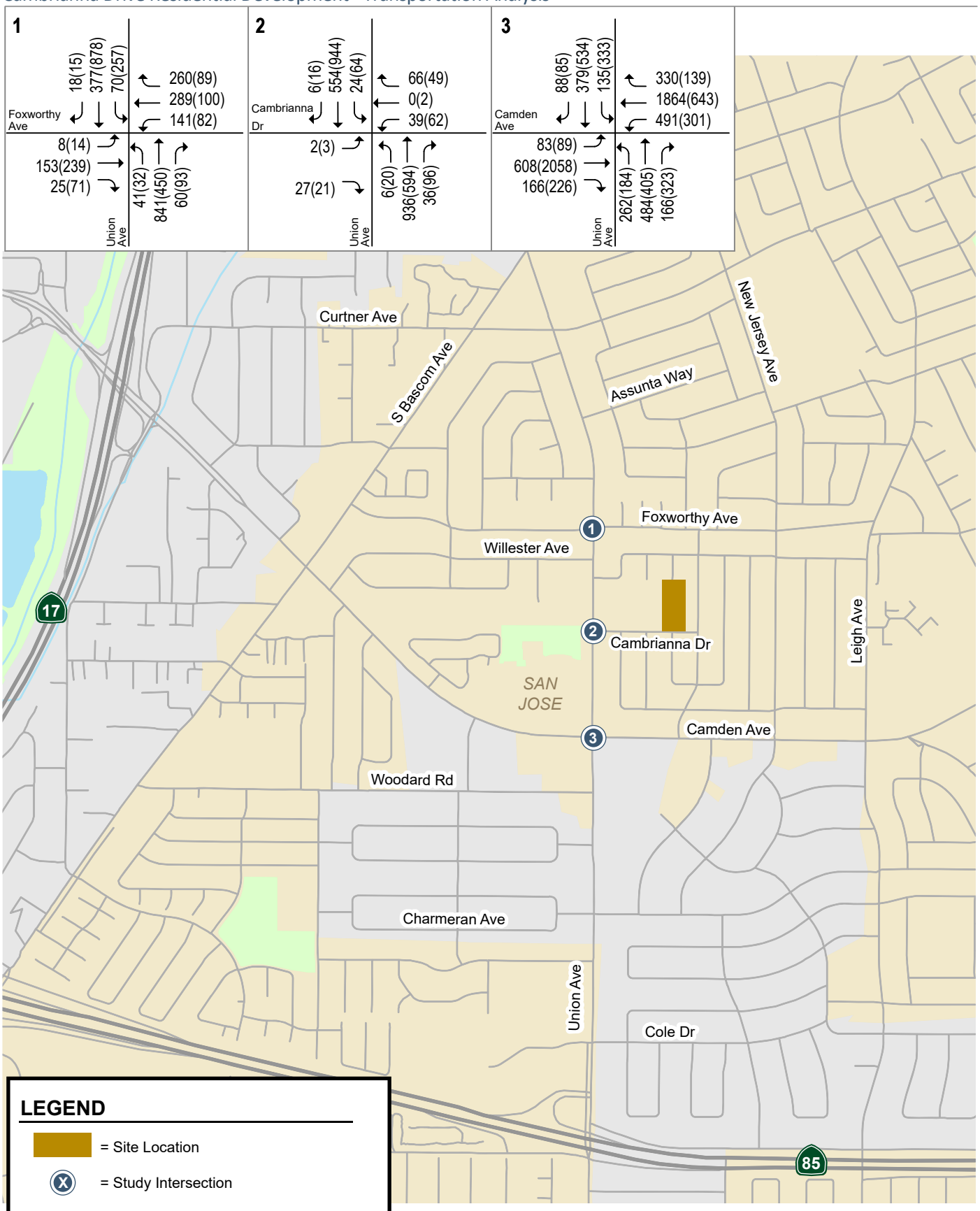


Figure 14
Cumulative Traffic Volumes

Intersection Traffic Operations

Intersection levels of service were evaluated against the standards of the City of San Jose and CMP. The results of the analysis are shown in Table 6. The results of the intersection level of service analysis show that the intersection of Union Avenue/Camden Avenue operates below the acceptable City of San Jose standard. The intersection of Union Avenue/Camden Avenue operates at an unacceptable LOS E during the PM peak hour with the existing traffic conditions and would continue to operate at LOS E during the background, background plus project, and cumulative conditions. However, based on the City of San Jose criteria described in Chapter 1, the project would not have an adverse effect on intersection operations at the study intersections. The intersection level of service calculation sheets are included in Appendix C.

Table 6
Level of Service Summary

ID #	Intersection	Peak Hour	Existing Conditions Avg. Delay (sec/veh)	Existing Conditions LOS	Background Conditions Avg. Delay (sec/veh)	Background Conditions LOS	Background Plus Project Conditions Avg. Delay (sec/veh)	Background Plus Project Conditions LOS	Background Plus Project Conditions Increase in Crit. Delay (sec)	Background Plus Project Conditions Increase in Crit. V/C	Cumulative Conditions Avg. Delay (sec/veh)	Cumulative Conditions LOS
1	Union Avenue & Foxworthy Avenue	AM	20.3	C	20.3	C	20.3	C	0.0	0.000	20.2	C
		PM	21.9	C	21.9	C	22.0	C	0.0	0.000	21.9	C
2	Union Avenue & Cambrianna Drive	AM	26.5	D	26.5	D	30.9	D	0.5	0.065	34.0	D
		PM	43.7	E	43.7	E	49.9	E	0.5	0.065	60.0	F
3	Union Avenue & Camden Avenue*	AM	48.2	D	48.6	D	48.7	D	0.2	0.002	50.8	D
		PM	**57.6**	**E**	**60.9**	**E**	**61.3**	**E**	**0.2**	**0.002**	**74.0**	**E**

Notes:
* Denotes CMP intersection
Bold indicates a substandard level of service

Intersection Vehicle Queuing Analysis

The analysis of intersection level of service was supplemented with a queuing analysis for high demand turn movements at the study intersections. The queuing analysis is based on vehicle queues for the three movements listed below.

- Eastbound left-turn on Camden Avenue at Union Avenue
- Westbound shared left/through/right on Cambrianna Drive at Union Avenue
- Southbound left-turn on Union Avenue at Cambrianna Drive

For the left-turn movements along Union Avenue and Camden Avenue, the estimated queue length was compared to the length of the existing turn pockets. For the westbound shared left/through/right movement from Cambrianna Drive, the estimated queue length was compared to the available storage space between Union Avenue and Jennifer Way.

The queuing analysis shows that the added project trips would not cause vehicle queueing issues or result in inadequate vehicle storage capacity at the three movements listed above. The results of the queuing analysis are summarized in Table 7.

Table 7
Queuing Analysis Summary

Analysis Scenario	Union Avenue and Camden Avenue		Union Avenue and Cambrianna Drive			
	EBL[1]		WBL-T-R[1]		SBL[1]	
	AM	PM	AM	PM	AM	PM
Existing						
Cycle/Delay (sec)	93.6	68.7	26.5	43.7	10.1	9.2
Volume (vphpl)	78	75	95	106	23	59
95th %. Queue (veh/ln)	5	4	2	3	1	1
95th %. Queue[2] (ft/ln)	125	100	50	75	25	25
Storage (ft/ln)	175	175	200	200	400	400
Adequate (Y/N)	Y	Y	Y	Y	Y	Y
Background						
Cycle/Delay (sec)	93.9	69.0	26.5	43.7	10.1	9.2
Volume (vphpl)	78	75	95	106	23	59
95th %. Queue (veh/ln)	5	4	2	3	1	1
95th %. Queue[2] (ft/ln)	125	100	50	75	25	25
Storage (ft/ln)	175	175	200	200	400	400
Adequate (Y/N)	Y	Y	Y	Y	Y	Y
Background Plus Project						
Cycle/Delay (sec)	93.7	68.2	30.9	49.9	10.1	9.2
Volume (vph)	80	80	105	113	24	64
Number of lanes	1	1	1	1	1	1
Volume (vphpl)	80	80	105	113	24	64
95th %. Queue (veh/ln)	5	4	3	4	1	1
95th %. Queue[2] (ft/ln)	125	100	75	100	25	25
Storage (ft/ln)	175	175	200	200	400	400
Adequate (Y/N)	Y	Y	Y	Y	Y	Y
Cumulative						
Cycle/Delay (sec)	93.6	66.3	34.0	60.0	10.2	9.2
Volume (vph)	83	89	105	113	24	64
Number of lanes	1	1	1	1	1	1
Volume (vphpl)	83	89	105	113	24	64
95th %. Queue (veh/ln)	5	4	3	4	1	1
95th %. Queue[2] (ft/ln)	125	100	75	100	25	25
Storage (ft/ln)	175	175	200	200	400	400
Adequate (Y/N)	Y	Y	Y	Y	Y	Y

Notes:
EBL = eastbound left-turn movement; WBL-T-R = westbound shared left-through-right movement; SBL = southbound left-turn movement;

[1] Vehicle queue calculations based on movement delay.
[2] Assumes 25 feet per queued vehicle.

Vehicular Site Access and On-Site Circulation

The site access and circulation evaluations are based on the site plan prepared by Civil Engineering Associates (see Figure 2 in Chapter 1), dated June 16, 2021. Site access was evaluated to determine the adequacy of the site's driveways with regard to the following: traffic volume, vehicle queues, geometric design, and stopping sight distance. On-site vehicular circulation and parking layout were reviewed in accordance with generally accepted traffic engineering standards and transportation planning principles.

Project Driveway

As proposed, vehicular access to the project would be provided via Cambrianna Drive. The residential development would include a driveway access point that would serve as a north leg to the Browning Avenue/Cambrianna Drive intersection. In addition, two homes and two of the secondary units would have driveways along Cambrianna Drive, west of the Browning Avenue/Cambrianna Drive intersection.

According to the City of San Jose Department of Transportation (DOT) Geometric Design Guidelines, the typical width for a two-way driveway that serves a multi-family residential development is 26 feet wide. This provides adequate width for vehicular ingress and egress and provides a reasonably short crossing distance for pedestrians. The driveway is shown to be 27 feet wide. Unless otherwise directed by City staff, it is recommended that the project driveway be constructed per the City standard of 26 feet wide with a standard cut to indicate the private street/public street interface.

The total peak-hour trips that are estimated to occur at the project driveway are 4 inbound trips and 15 outbound trips during the AM peak hour, and 16 inbound trips and 10 outbound trips during the PM peak hour. Due to the relatively low number of project-generated trips, approximately one vehicle trip every three minutes in the AM peak hour and 1 vehicle trip every two minutes during the PM peak hour, operational issues related to vehicle queueing and/or vehicle delay are not expected to occur at the driveway.

Sight Distance at the Driveway

The project driveway should be free and clear of any obstructions to provide adequate sight distance, thereby ensuring that exiting vehicles can see pedestrians on the sidewalk and vehicles and bicycles traveling on Cambrianna Drive. Since Cambrianna Drive has on-street parking, if a car is parked near the project driveway, the driver's view may be obstructed. Therefore, it is recommended that parking be prohibited for 10 feet on either side of the proposed project driveway.

On-Site Circulation

The project driveway would provide access to an internal street that ends in a cul-de-sac. The minimum curb to curb width of the internal street is shown to be 34 feet, which includes 7 feet wide parking stalls on both sides of the street. The remaining internal street width would be 20 feet, which is adequate to serve two-way traffic and emergency access. Note that the City's standard curb to curb width for a minor residential street is 34 feet, which includes parallel parking on both sides of the street. Thus, the project's internal street would meet the City's standard. The project site would be separated from and the adjacent residential lots to the north by a vehicular gate utilized for emergency access only. It would not be possible for project residents or visitors to access the existing homes to the north with a car. The gate will prevent vehicular access but will include a Knox Box to allow for emergency vehicle access. However, pedestrian and bicycle access would be accommodated via continuous sidewalk access to the site to the north.

Truck Access and Circulation

The project site plan was reviewed for truck access using truck turning-movement templates for a SU-30 truck type (single unit truck), which represents small emergency vehicles, garbage trucks, and small to medium delivery trucks. Based on the site plan configuration, adequate access would be provided for an SU-30 truck to access the site from Cambrianna Drive, maneuver through the site via the project's internal street, and turn around via the cul-de-sac.

Garbage Collection

Garbage collection activities for the project are expected to occur adjacent to each residential unit. Garbage trucks would have enough space to enter the site through the project driveway and turn around at the cul-de-sac. It is recommended that parking be prohibited within the circular area of the cul-de-sac to aid the circulation of garbage trucks. For the residential units along Cambrianna Drive, garbage collection would occur adjacent to the sidewalk on the north side of Cambrianna Drive. Garbage collection activities are not expected to have an adverse effect on traffic operations along Cambrianna Drive.

Emergency Vehicle Access

Cambrianna Drive and the cul-de-sac drive aisle would provide emergency vehicle access to all residential units. It is recommended that parking be prohibited within the circular area of the cul-de-sac to aid the circulation of emergency vehicles. In addition, the site plan shows emergency vehicle access to/from the northern side of the project site, via an emergency gate that would separate the project site and the adjacent residential units. The City of San Jose Fire Department requires that all portions of the buildings be within 150 feet of a fire department access road and requires a minimum of 3 feet clearance from the property line along all sides of the buildings. However, the City of San Jose Fire Department allows the maximum distance to be 200 feet for accessory dwelling units. According to the project site plan, the project would meet these requirements.

Neighborhood Interface

The neighborhood streets that provide primary access to the project site are Cambrianna Drive and Taper Avenue. Project traffic is expected to use these two residential streets to travel to and from the project site. In addition, project traffic may use Bernice Way and Geneva Avenue to access Union Avenue and Leigh Avenue. The average daily traffic for Cambrianna Drive and Taper Avenue are approximately 500 vehicles each, and the 85th percentile speeds are approximately 25 mph. Based on the trip generation estimates, the project would generate 261 new daily vehicle trips. It is estimated that approximately 85% of project trips (or 222 vehicles) would use Cambrianna Drive, and approximately 15% of project trips (or 39 vehicles) would use Taper Avenue. Generally, residential streets in San Jose operate with up to 2,000 vehicles per day. Thus, even with the addition of the project traffic, the volumes on the surrounding residential streets would be considered low.

Construction Activities

It is likely that all construction related activity for the project would occur on-site. If any construction activities occur with the public right-of-way, clear signage (e.g., closure and detour signs) must be provided to ensure vehicles, pedestrians, and bicyclists are able to adequately reach their intended destinations safely. Per City standard practice, the project would be required to submit a construction management plan for City approval that addresses the construction schedule, street closures and/or detours, construction staging areas and parking, and the planned truck route.

Pedestrian, Bicycle, and Transit Facilities

All new development projects in San Jose should encourage multi-modal travel, consistent with the goals and policies of the City's 2040 General Plan. It is the goal of the 2040 General Plan that all development projects accommodate and encourage the use of non-automobile transportation modes to achieve San Jose's mobility goals and reduce vehicle trip generation and vehicle miles traveled. In addition, the adopted City Bike Master Plan establishes goals, policies, and actions to make bicycling a daily part of life in San Jose. The Master Plan includes designated bike lanes along many City streets, as well as on designated bike corridors. In order to further the goals of the City, pedestrian and bicycle facilities should be encouraged with new development projects.

Pedestrian and Bicycle Access and On-Site Circulation

Pedestrian facilities consist of sidewalks along the streets in the immediate vicinity of the project site. The project would construct a continuous sidewalk to each residential unit that would connect to the existing sidewalk on Cambrianna Drive.

The continuous network of sidewalks and crosswalks in the study area exhibits good connectivity and would provide residents with safe routes to transit stops and other points of interest in the project area. Marked crosswalks are provided with pedestrian signal heads across all legs of the signalized intersections in the surrounding area. The nearby intersections have curb ramps with truncated domes. Truncated domes are the standard design requirement for detectable warnings which enable people with visual disabilities to determine the boundary between the sidewalk and the street. There is also a pedestrian crosswalk with Rectangular Rapid Flashing Beacons (RRFB) crossing Union Avenue near Cambrianna Drive.

Since the cul-de-sac would be a dead-end, there would be no cut-through traffic on-site. The internal street on-site would have low volume, which is conducive to bicycle riding. The project would not remove any bicycle facilities, nor would it conflict with any adopted plans or policies for new bicycle facilities. According to the *San Jose Better Bike Plan 2025*, planned bicycle facility improvements in the project area include:

- installing protected bike lanes on Camden Avenue from Curtner Avenue to Coleman Road,
- installing a bike boulevard on Foxworthy Avenue from Pearl Avenue to Lantz Avenue, and
- installing a bike route on Leigh Avenue from Camden Avenue to Dry Creek Road.

Pedestrian and Bicycle Access to Schools

Based on the school district boundary maps, the public neighborhood schools include Farnham Elementary School, Steindorf STEAM School, Price Charter Middle School, and Branham High School. Farnham Elementary School (K-5) is located southwest of the project site on Woodard Road, approximately one-mile walking distance from the site. Steindorf STEAM School is located east of the project site on Ross Avenue, less than one-mile walking distance from the site. Price Charter Middle School (grades 5-8) is located north of the project site on New Jersey Avenue, less than one-mile walking distance from the site. Branham High School (grades 9-12) is located southeast of the project site on Branham Lane, approximately two and a half-miles walking distance from the site.

Pedestrian access to all four schools is provided via a continuous network of sidewalks along the streets in the surrounding area. Crosswalks with pedestrian signal heads are provided at the signalized intersections along the school routes. Accessible ramps are provided at the corners of the signalized

intersections. The existing bicycle facilities do not provide an effective route to/from the nearby schools for elementary children.

Parking

The vehicle parking requirements and supply for the project are described below.

Vehicle Parking Requirements

The parking requirements for the proposed project are based on the City of San Jose and California state law parking requirements and guidelines. The parking analysis for the project is divided into three categories: single-family detached units, low-income single-family units, and accessory dwelling units (ADUs). The project includes 19% low-income units, i.e., 4 of 21 homes would be low-income units. The City of San Jose's off-street parking requirements as described in the City's Zoning Code (Chapter 20.90, Table 20-190) are two covered parking spaces per single-family detached unit. Thus, the project would be required to provide 2 covered spaces for the 17 single family detached units, for a total of 34 parking spaces.

Based on the City's Zoning Code (Chapter 20.190, Table 20-290) low-income units are required to provide 0.75 parking spaces per unit and moderate-income units are required to provide 1 parking space per unit. Therefore the project would be required to provide a maximum of 4 spaces for the low-income single-family units.

Based on state law (65852.2,(d)(1)(3)), the ADUs are not required to provided parking because of the two exceptions described below:

(1) The accessory dwelling unit is located within one-half mile of public transit.
(3) The accessory dwelling unit is part of the proposed or existing primary residence or accessory structure.

Therefore, the project would be required to provide two covered parking spaces for each single-family detached unit, for a total of 34 parking spaces, and one space for each low-income single-family unit, for a total of 4 parking spaces.

Vehicle Parking Supply

The site plan shows a two-car garage for each single family detached unit and a one-car garage for each low-income single-family unit. The site plan also shows 17 on-street vehicle parking spaces, which may be used for resident and/or guest parking. Driveways for the single-family homes may also serve as additional parking spaces. Thus, the proposed project would meet the parking requirements.

Signal Warrant Analysis

A peak-hour signal warrant check (CA MUTCD 2014 Edition, Part 4, Warrant 3) is one evaluation tool to indicate whether installation of a traffic signal is justified. The warrant check was performed for the intersection of Union Avenue and Cambrianna Drive. The analysis showed that the PM peak-hour traffic volume at the intersection satisfies the signal warrant under project conditions and cumulative conditions. With the traffic volume under project conditions and cumulative conditions, the westbound approach volume would exceed the lower threshold for minor street volume by eight vehicles and ten vehicles, respectively. The peak-hour signal warrant calculations are provided in Appendix D.

Collison history data and field observations are also utilized to evaluate the need for a traffic signal. Field observations and collision history data do not indicate that a signal should be installed at this location. Field observations during the peak hour did not indicate that there is excessive queuing for the westbound approach while vehicles wait for a gap in traffic to turn onto Cambrianna Drive. Based on the collision history data provided by the City of San Jose, from 2011 to 2020 there were six collisions at the intersection. Five of the six collisions can be considered susceptible to correction by a traffic signal. This equates to less than one collision per year that is susceptible to correction by a traffic signal The CA MUTCD threshold to justify installation of a signal is five or more collisions per year that are susceptible to correction by a traffic signal. Thus, the collision history data of the Union Avenue and Cambrianna Drive does not meet the CA MUTCD collision threshold. In addition, there are other nearby routes out of the neighborhood for vehicles to take to avoid making a westbound left-turn at the Union Avenue/Cambrianna Drive intersection. Therefore, although the peak-hour signal warrant analysis shows the Union Avenue and Cambrianna Drive traffic volumes would meet the warrant threshold under the PM peak hour project conditions and cumulative conditions, it is not recommended that a signal be installed.

Multi-Way Stop Analysis

The intersection of Taper Avenue and Cambrianna Drive was evaluated for a multi-way stop control based on the CA MUTCD, and the results are presented below.

Quantitative Criteria

A. The traffic volumes at the intersection are insufficient to justify the installation of a traffic signal (the peak-hour signal warrant worksheet is provided in Appendix D). **Criterion not satisfied.**
B. Based on the collision history data provided by the City of San Jose, from 2011 to 2020 there were no reported collisions at the intersection and one collision approximately 100 feet south of the intersection. **Criterion not satisfied.**
C. The minimum volume criteria were not satisfied during any single hour of a typical day (see Table 8). **Criterion not satisfied.**
D. The 80-percent volume criteria were not satisfied for any single hour of a typical day (see Table 8). **Criterion not satisfied.**

Qualitative Criteria

1. The addition of stop signs for Cambrianna Drive or for northbound Taper Avenue are not needed to control left-turn conflicts. The traffic volumes on both roadways are minimal enough to allow for sufficient gaps in traffic to accommodate left-turn movements.
2. There were three pedestrians counted during the AM peak hour and six pedestrians counted during the PM peak hour. Based on the collision history data provided by the City of San Jose, from 2011 to 2020 there were no reported pedestrian-vehicle collisions at the intersection. Therefore, the vehicular volumes and pedestrian volumes are low, and the collision history data does not indicate that there are pedestrian-vehicle conflicts at the intersection.
3. From Cambrianna Drive, looking north and south along Taper Avenue the sight distance is approximately 300 feet. Based on the Caltrans Highway Design Manual (HDM), a sight distance of 300 feet is sufficient for a design speed up to 40 mph. The 85th percentile speeds on northbound and southbound Taper Avenue were measured as 27 mph and 25 mph, respectively. Thus, the sight distance at the intersection meets the minimum requirement specified in the HDM. In addition, the collision history data at the intersection suggests that sight distance is adequate.
4. The street design and function of the two streets are relatively similar. Taper Avenue and Cambrianna Drive are both residential streets, with one-lane of travel in each direction, and on-

site parking. Both streets have low volumes and 85th percentile speeds of approximately 25 mph. There would be no clear improvement in the operational characteristics with all-way stop control.

Based on the results of the multi-way stop analysis, installation of stop signs for the Taper Avenue and Cambrianna Drive approaches is not warranted.

Table 8
Taper Avenue and Cambrianna Drive Hourly Traffic Volume Summary

Hour	Major Street (Taper Avenue)			Minor Street (Cambrianna Drive)		
	Volume[1]	Threshold	80% Threshold	Volume[2]	Threshold	80% Threshold
6:00 AM - 7:00 AM	18	300	240	4	200	160
7:00 AM - 8:00 AM	15	300	240	9	200	160
8:00 AM - 9:00 AM	50	300	240	70	200	160
9:00 AM - 10:00 AM	47	300	240	51	200	160
10:00 AM - 11:00 AM	24	300	240	19	200	160
11:00 AM - 12:00 PM	37	300	240	25	200	160
12:00 PM - 1:00 PM	36	300	240	25	200	160
1:00 PM - 2:00 PM	43	300	240	33	200	160
2:00 PM - 3:00 PM	38	300	240	35	200	160
3:00 PM - 4:00 PM	45	300	240	57	200	160
4:00 PM - 5:00 PM	50	300	240	57	200	160
5:00 PM - 6:00 PM	76	300	240	94	200	160
6:00 PM - 7:00 PM	52	300	240	49	200	160
7:00 PM - 8:00 PM	25	300	240	13	200	160
8:00 PM - 9:00 PM	26	300	240	19	200	160

Notes:

[1] Volume for the major street is the total vehicle volume for the northbound and southbound traffic on Taper Avenue.

[2] Volume for the minor street is the total vehicle volume for the eastbound and westbound traffic on Cambrianna Drive.

[3] Based on tube count volume data collected on Wednesday, July 7, 2021.

5. Conclusions

This study was conducted for the purpose of identifying the potential transportation impacts and potential adverse operational effects related to the proposed residential development.

The potential impacts of the project were evaluated in accordance with the standards and methodologies set forth by the City of San Jose. Based on the City of San Jose's Transportation Analysis Policy (Policy 5-1) and the *Transportation Analysis Handbook*, the transportation analysis report for the project includes a CEQA transportation analysis (TA) and a local transportation analysis (LTA). The CEQA transportation analysis comprises an evaluation of Vehicle Miles Traveled (VMT). VMT is defined in Chapter 1 of this report. The LTA supplements the CEQA transportation analysis by identifying potential transportation operational issues via an evaluation of weekday AM and PM peak hour traffic conditions for selected study intersections. The LTA also includes an analysis of site access, on-site circulation, parking, intersection vehicle queuing analysis, signal warrant analysis, stop warrant analysis, and effects on pedestrian, bicycle, and transit facilities.

CEQA Transportation Analysis

Residential Project VMT Analysis Results

Hexagon calculated the VMT for the proposed project using the City of San Jose's VMT Evaluation Tool, which calculates VMT based on the project location, type of development, and project description. The project VMT estimated by the VMT Evaluation Tool is 9.34 VMT per capita. The project VMT, therefore, is below the threshold of 10.12 VMT per capita. Therefore, the proposed project would not have a VMT impact.

Local Transportation Analysis

Project Trip Generation

After applying the ITE trip rates to the proposed project and applying the appropriate trip adjustments, it is estimated that the project would generate 261 new daily vehicle trips, with 19 new trips occurring during the AM peak hour and 26 new trips occurring during the PM peak hour. Using the inbound/outbound splits contained in the ITE *Trip Generation Manual*, the project would produce 4 new inbound and 15 new outbound trips during the AM peak hour, and 16 new inbound and 10 new outbound trips during the PM peak hour.

Intersection Traffic Operations

Based on the City of San Jose and CMP intersection operations analysis criteria, none of the study intersections would be adversely affected by the project.

Other Transportation Issues

The proposed site plan shows adequate site access and on-site circulation. The project would not have an adverse effect on the existing pedestrian, bicycle, or transit facilities in the study area.

Recommendations

Hexagon has the following recommendations.

- The project driveway is shown to be 27 feet wide. Unless otherwise directed by City staff, it is recommended that the project driveway be constructed per the City standard of 26 feet wide with a standard cut to indicate the private street/public street interface.
- It is recommended that parking be prohibited for 10 feet on either side of the proposed project driveway to reduce obstructions to the sight distance for exiting drivers.
- It is recommended that parking be prohibited within the circular area of the cul-de-sac to aid the circulation of garbage trucks and emergency vehicles.
- Although the peak-hour signal warrant analysis shows the Union Avenue and Cambrianna Drive traffic volumes would meet the warrant threshold under the PM peak hour project conditions and cumulative conditions, it is not recommended that a signal be installed. Field observations and collision history data do not indicate that a signal should be installed at this location. In addition, there are other nearby routes out of the neighborhood for vehicles to take to avoid making a westbound left-turn at the Union Avenue/Cambrianna Drive intersection.
- Based on the multi-way stop analysis for the intersection of Taper Avenue and Cambrianna Drive, installation of stop signs is not warranted and it is recommended that the intersection control remain as is.

Cambrianna Residential TA

Technical Appendices

November 11, 2021

Appendix A
San Jose ATI

AM PROJECT TRIPS

05/27/2021

Intersection of : Camden Av & Union Av

Traffix Node Number : 3088

Permit No./Proposed Land Use/Description/Location	M09 NBL	M08 NBT	M07 NBR	M03 SBL	M02 SBT	M01 SBR	M12 EBL	M11 EBT	M10 EBR	M06 WBL	M05 WBT	M04 WBR
PDC15-028 (3-17945) Retail/Commercial SAMARITAN MEDICAL EXPANSION	0	0	11	0	0	0	0	3	0	41	11	0
TOTAL:	**0**	**0**	**11**	**0**	**0**	**0**	**0**	**3**	**0**	**41**	**11**	**0**

	LEFT	THRU	RIGHT
NORTH	0	0	0
EAST	41	11	0
SOUTH	0	0	11
WEST	0	3	0

PM PROJECT TRIPS

05/27/2021

Intersection of : Camden Av & Union Av

Traffix Node Number : 3088

Permit No./Proposed Land Use/Description/Location	M09 NBL	M08 NBT	M07 NBR	M03 SBL	M02 SBT	M01 SBR	M12 EBL	M11 EBT	M10 EBR	M06 WBL	M05 WBT	M04 WBR
PDC15-028 (3-17945) Retail/Commercial SAMARITAN MEDICAL EXPANSION	0	0	63	0	0	0	0	17	0	25	7	0
TOTAL:	**0**	**0**	**63**	**0**	**0**	**0**	**0**	**17**	**0**	**25**	**7**	**0**

	LEFT	THRU	RIGHT
NORTH	0	0	0
EAST	25	7	0
SOUTH	0	0	63
WEST	0	17	0

Appendix B
Volume Summary

City of San Jose
Cambrianna Residential TA

Intersection Number: 1
Traffix Node Number: 3550
Intersection Name: Union Avenue & Foxworthy Avenue
Peak Hour: AM
Date of Analysis: 07/16/21

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	18	369	70	260	289	141	60	826	40	21	153	8	2255
Approved Project Trips													
CSJ ATI	0	0	0	0	0	0	0	0	0	0	0	0	0
Background Conditions	18	369	70	260	289	141	60	826	40	21	153	8	2255
Proposed Project Trips													
Residential Units	0	0	0	0	0	0	0	1	1	1	0	0	3
Exist+Project Conditions	18	369	70	260	289	141	60	827	41	22	153	8	2258
Project Conditions	18	369	70	260	289	141	60	827	41	22	153	8	2258
Cumlative Project Trips													
Cambrian Park Alternative 2	0	8	0	0	0	0	0	13	0	0	0	0	21
CUHSD Site	0	0	0	0	0	0	0	1	0	3	0	0	4
Total Cumulative	0	8	0	0	0	0	0	14	0	3	0	0	25
Cumulative Conditions	18	377	70	260	289	141	60	841	41	25	153	8	2283

Intersection Number: 2
Traffix Node Number: 2
Intersection Name: Union Avenue & Cambrianna Drive
Peak Hour: AM
Date of Analysis: 07/16/21

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	3	546	23	64	0	31	33	923	0	2	0	1	1626
Approved Project Trips													
CSJ ATI	0	0	0	0	0	0	0	0	0	0	0	0	0
Background Conditions	3	546	23	64	0	31	33	923	0	2	0	1	1626
Proposed Project Trips													
Residential Units	0	0	1	2	0	8	3	0	0	0	0	0	14
Exist+Project Conditions	3	546	24	66	0	39	36	923	0	2	0	1	1640
Project Conditions	3	546	24	66	0	39	36	923	0	2	0	1	1640
Cumlative Project Trips													
Cambrian Park Alternative 2	0	8	0	0	0	0	0	13	0	0	0	0	21
CUHSD Site	3	0	0	0	0	0	0	0	6	25	0	1	35
Total Cumulative	3	8	0	0	0	0	0	13	6	25	0	1	56
Cumulative Conditions	6	554	24	66	0	39	36	936	6	27	0	2	1696

City of San Jose
Cambrianna Residential TA

Intersection Number: 3
Traffix Node Number: 3088
Intersection Name: Union Avenue & Camden Avenue
Peak Hour: AM
Date of Analysis: 07/16/21

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	69	368	124	323	1831	286	117	474	252	150	576	78	4648
Approved Project Trips													
CSJ ATI	0	0	0	0	11	41	11	0	0	0	3	0	66
Background Conditions	69	368	124	323	1842	327	128	474	252	150	579	78	4714
Proposed Project Trips													
Residential Units	4	3	1	0	3	2	0	1	0	0	0	2	16
Exist+Project Conditions	73	371	125	323	1834	288	117	475	252	150	576	80	4664
Project Conditions	73	371	125	323	1845	329	128	475	252	150	579	80	4730
Cumlative Project Trips													
Cambrian Park Alternative 2	0	-1	9	7	19	162	38	6	10	16	29	0	295
CUHSD Site	15	9	1	0	0	0	0	3	0	0	0	3	31
Total Cumulative	15	8	10	7	19	162	38	9	10	16	29	3	326
Cumulative Conditions	88	379	135	330	1864	491	166	484	262	166	608	83	5056

City of San Jose
Cambrianna Residential TA

Intersection Number: 1
Traffix Node Number: 3550
Intersection Name: Union Avenue & Foxworthy Avenue
Peak Hour: PM Date of Analysis: 07/16/21

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	15	891	257	89	100	82	93	447	31	58	239	14	2316
Approved Project Trips													
CSJ ATI	0	0	0	0	0	0	0	0	0	0	0	0	0
Background Conditions	15	891	257	89	100	82	93	447	31	58	239	14	2316
Proposed Project Trips													
Residential Units	0	1	0	0	0	0	0	1	1	4	0	0	7
Exist+Project Conditions	15	892	257	89	100	82	93	448	32	62	239	14	2323
Project Conditions	15	892	257	89	100	82	93	448	32	62	239	14	2323
Cumlative Project Trips													
Cambrian Park Alternative 2	0	-15	0	0	0	0	0	1	0	0	0	0	-14
CUHSD Site	0	1	0	0	0	0	0	1	0	9	0	0	11
Total Cumulative	0	-14	0	0	0	0	0	2	0	9	0	0	-3
Cumulative Conditions	15	878	257	89	100	82	93	450	32	71	239	14	2320

Intersection Number: 2
Traffix Node Number: 2
Intersection Name: Union Avenue & Cambrianna Drive
Peak Hour: PM Date of Analysis: 07/16/21

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	6	959	59	47	2	57	86	593	1	5	0	2	1817
Approved Project Trips													
CSJ ATI	0	0	0	0	0	0	0	0	0	0	0	0	0
Background Conditions	6	959	59	47	2	57	86	593	1	5	0	2	1817
Proposed Project Trips													
Residential Units	0	0	5	2	0	5	10	0	0	0	0	0	22
Exist+Project Conditions	6	959	64	49	2	62	96	593	1	5	0	2	1839
Project Conditions	6	959	64	49	2	62	96	593	1	5	0	2	1839
Cumlative Project Trips													
Cambrian Park Alternative 2	0	-15	0	0	0	0	0	1	0	0	0	0	-14
CUHSD Site	10	0	0	0	0	0	0	0	19	16	0	1	46
Total Cumulative	10	-15	0	0	0	0	0	1	19	16	0	1	32
Cumulative Conditions	16	944	64	49	2	62	96	594	20	21	0	3	1871

City of San Jose
Cambrianna Residential TA

Intersection Number: 3
Traffix Node Number: 3088
Intersection Name: Union Avenue & Camden Avenue
Peak Hour: PM
Date of Analysis: 07/16/21

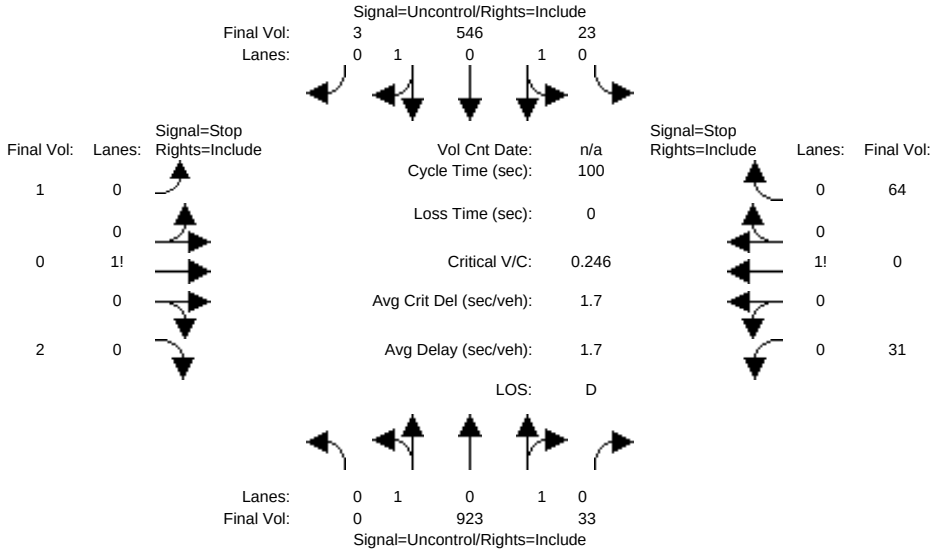
	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	73	537	331	131	612	168	217	394	175	240	2025	75	4978
Approved Project Trips													
CSJ ATI	0	0	0	0	7	25	63	0	0	0	17	0	112
Background Conditions	73	537	331	131	619	193	280	394	175	240	2042	75	5090
Proposed Project Trips													
Residential Units	2	2	1	0	2	1	0	5	0	0	0	5	18
Exist+Project Conditions	75	539	332	131	614	169	217	399	175	240	2025	80	4996
Project Conditions	75	539	332	131	621	194	280	399	175	240	2042	80	5108
Cumlative Project Trips													
Cambrian Park Alternative 2	0	-10	0	7	22	107	43	-3	9	-14	16	0	177
CUHSD Site	10	5	1	1	0	0	0	9	0	0	0	9	35
Total Cumulative	10	-5	1	8	22	107	43	6	9	-14	16	9	212
Cumulative Conditions	85	534	333	139	643	301	323	405	184	226	2058	89	5320

Appendix C
Level of Service Calculations

Cambrianna Residential TA
San Jose, CA

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

Intersection #2: Union Ave. and Cambrianna Dr.



Street Name:	Union Ave.						Cambrianna Dr.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:												
Base Vol:	0	923	33	23	546	3	1	0	2	31	0	64
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	923	33	23	546	3	1	0	2	31	0	64
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	923	33	23	546	3	1	0	2	31	0	64
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	923	33	23	546	3	1	0	2	31	0	64
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	923	33	23	546	3	1	0	2	31	0	64
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	7.5	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	956	xxxx	xxxxx	1055	1550	275	1259	1535	478
Potent Cap.:	xxxx	xxxx	xxxxx	727	xxxx	xxxxx	183	115	729	130	117	539
Move Cap.:	xxxx	xxxx	xxxxx	727	xxxx	xxxxx	157	111	729	126	114	539
Volume/Cap:	xxxx	xxxx	xxxx	0.03	xxxx	xxxx	0.01	0.00	0.00	0.25	0.00	0.12
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	10.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	B	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	329	xxxxx	xxxx	261	xxxxx
SharedQueue:	0.0	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	1.6	xxxxx
Shrd ConDel:	7.2	xxxx	xxxxx	10.1	xxxx	xxxxx	xxxxx	16.0	xxxxx	xxxxx	26.5	xxxxx
Shared LOS:	A	*	*	B	*	*	*	C	*	*	D	*
ApproachDel:	xxxxxx			xxxxxx			16.0			26.5		
ApproachLOS:	*			*			C			D		

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

Peak Hour Delay Signal Warrant Report

****

Intersection #2 Union Ave. and Cambrianna Dr.

****

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	1	0	0 1 0	1	0	0 0 1! 0		0	0 0 1! 0		0
Initial Vol:	0	923	33	23	546	3	1	0	2	31	0	64
ApproachDel:	xxxxxx			xxxxxx			16.0			26.5		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=3]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1626]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.7]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=95]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1626]
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 #2 Union Ave. and Cambrianna Dr.

****

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	1	0	0 1 0	1	0	0 0 1! 0		0	0 0 1! 0		0
Initial Vol:	0	923	33	23	546	3	1	0	2	31	0	64

Major Street Volume: 1528
Minor Approach Volume: 95
Minor Approach Volume Threshold: 139

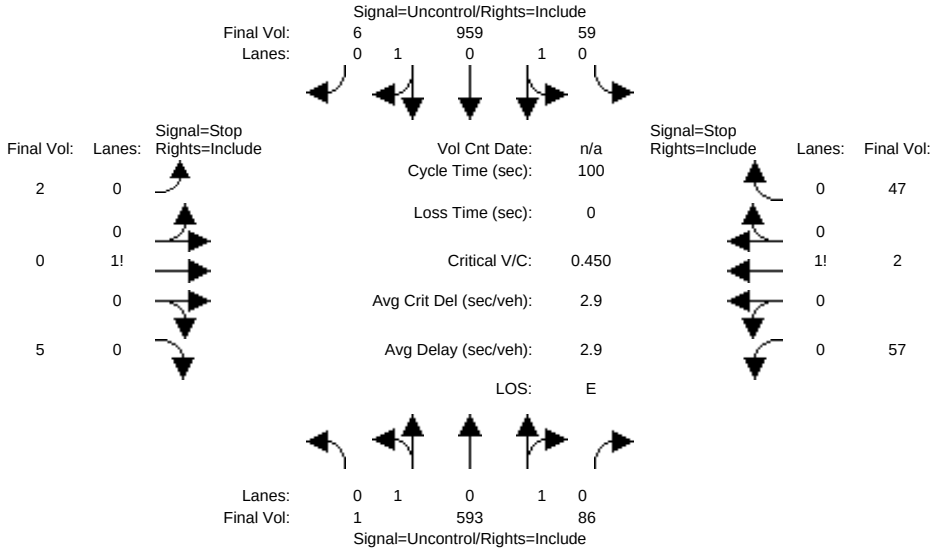
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other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

Cambrianna Residential TA
San Jose, CA

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

Intersection #2: Union Ave. and Cambrianna Dr.



Street Name:	Union Ave.						Cambrianna Dr.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:												
Base Vol:	1	593	86	59	959	6	2	0	5	57	2	47
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:	1	593	86	59	959	6	2	0	5	57	2	47
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:	1	593	86	59	959	6	2	0	5	57	2	47
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:	1	593	86	59	959	6	2	0	5	57	2	47
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	1	593	86	59	959	6	2	0	5	57	2	47
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.5	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	965	xxxx	xxxxx	679	xxxx	xxxxx	1380	1761	483	1236	1721	340
Potent Cap.:	722	xxxx	xxxxx	923	xxxx	xxxxx	105	85	535	135	90	662
Move Cap.:	722	xxxx	xxxxx	923	xxxx	xxxxx	91	80	535	127	84	662
Volume/Cap:	0.00	xxxx	xxxx	0.06	xxxx	xxxx	0.02	0.00	0.01	0.45	0.02	0.07
Level Of Service Module:												
2Way95thQ:	0.0	xxxx	xxxxx	0.2	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	10.0	xxxx	xxxxx	9.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	224	xxxxx	xxxx	194	xxxxx
SharedQueue:	0.0	xxxx	xxxxx	0.2	xxxx	xxxxx	xxxxx	0.1	xxxxx	xxxxx	2.9	xxxxx
Shrd ConDel:	10.0	xxxx	xxxxx	9.2	xxxx	xxxxx	xxxxx	21.6	xxxxx	xxxxx	43.7	xxxxx
Shared LOS:	A	*	*	A	*	*	*	C	*	*	E	*
ApproachDel:	xxxxxx			xxxxxx			21.6			43.7		
ApproachLOS:	*			*			C			E		

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

Peak Hour Delay Signal Warrant Report

****

Intersection #2 Union Ave. and Cambrianna Dr.

****

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	1 0		0 1 0	1 0		0 0 1! 0	0		0 0 1! 0	0	
Initial Vol:	1	593	86	59	959	6	2	0	5	57	2	47
ApproachDel:	xxxxxx			xxxxxx			21.6			43.7		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=7]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1817]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=1.3]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=106]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1817]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER
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Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #2 Union Ave. and Cambrianna Dr.

****

Future Volume Alternative: Peak Hour Warrant 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	1 0		0 1 0	1 0		0 0 1! 0	0		0 0 1! 0	0	
Initial Vol:	1	593	86	59	959	6	2	0	5	57	2	47

Major Street Volume: 1704
Minor Approach Volume: 106
Minor Approach Volume Threshold: 101

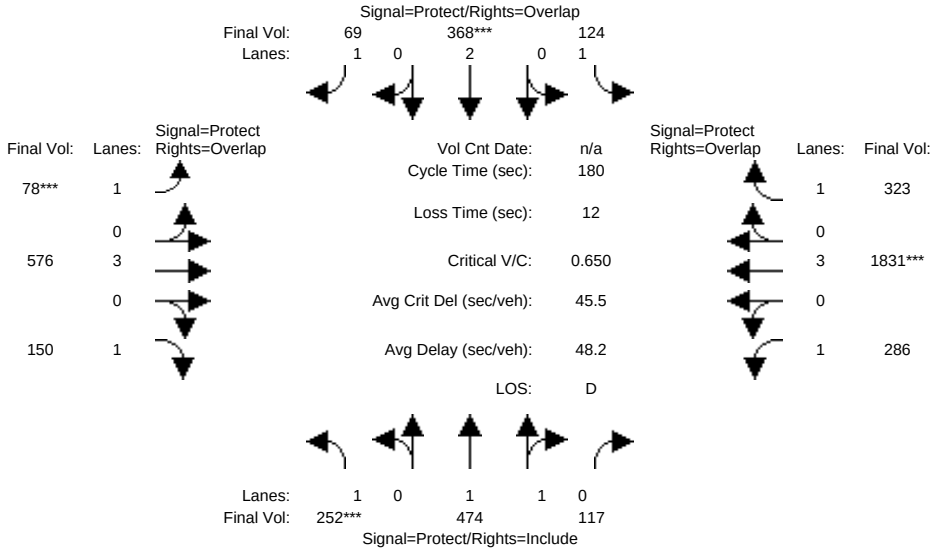
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other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

Cambrianna Residential TA
San Jose, CA

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

Intersection #3088: Union Ave. and Camden Ave.



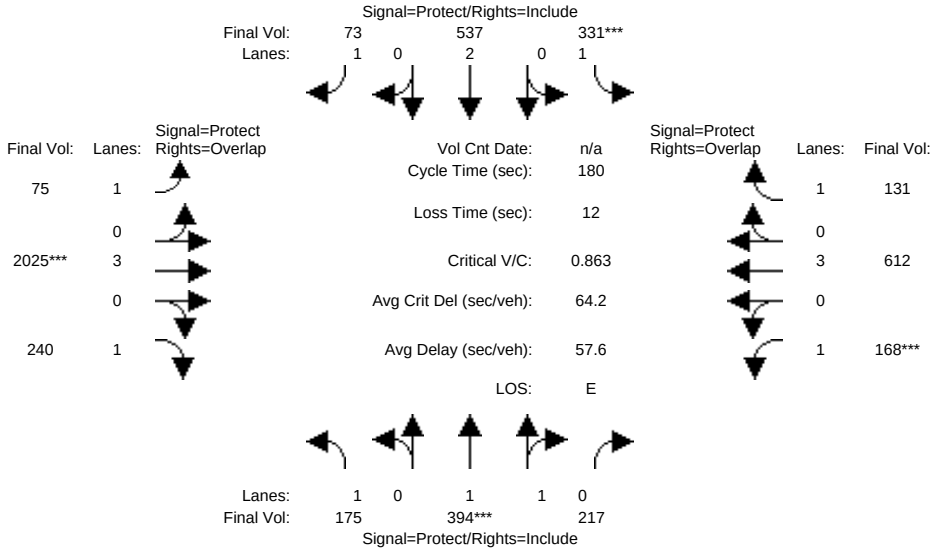
Street Name:	Union Ave.						Camden Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	252	474	117	124	368	69	78	576	150	286	1831	323
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:	252	474	117	124	368	69	78	576	150	286	1831	323
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:	252	474	117	124	368	69	78	576	150	286	1831	323
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:	252	474	117	124	368	69	78	576	150	286	1831	323
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	252	474	117	124	368	69	78	576	150	286	1831	323
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:	252	474	117	124	368	69	78	576	150	286	1831	323
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	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	1.59	0.41	1.00	2.00	1.00	1.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	1750	2967	732	1750	3800	1750	1750	5700	1750	1750	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.14	0.16	0.16	0.07	0.10	0.04	0.04	0.10	0.09	0.16	0.32	0.18
Crit Moves:	****				****		****				****	
Green Time:	39.9	46.2	46.2	20.5	26.8	39.2	12.3	38.7	78.6	62.6	89.0	109.5
Volume/Cap:	0.65	0.62	0.62	0.62	0.65	0.18	0.65	0.47	0.20	0.47	0.65	0.30
Delay/Veh:	67.6	60.5	60.5	82.0	74.8	57.6	93.6	62.0	31.4	46.3	34.5	17.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	67.6	60.5	60.5	82.0	74.8	57.6	93.6	62.0	31.4	46.3	34.5	17.1
LOS by Move:	E	E	E	F	E	E	F	E	C	D	C	B
HCM2k95thQ:	24	26	26	13	18	6	9	17	10	23	41	17

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

Cambrianna Residential TA
San Jose, CA

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

Intersection #3088: Union Ave. and Camden Ave.



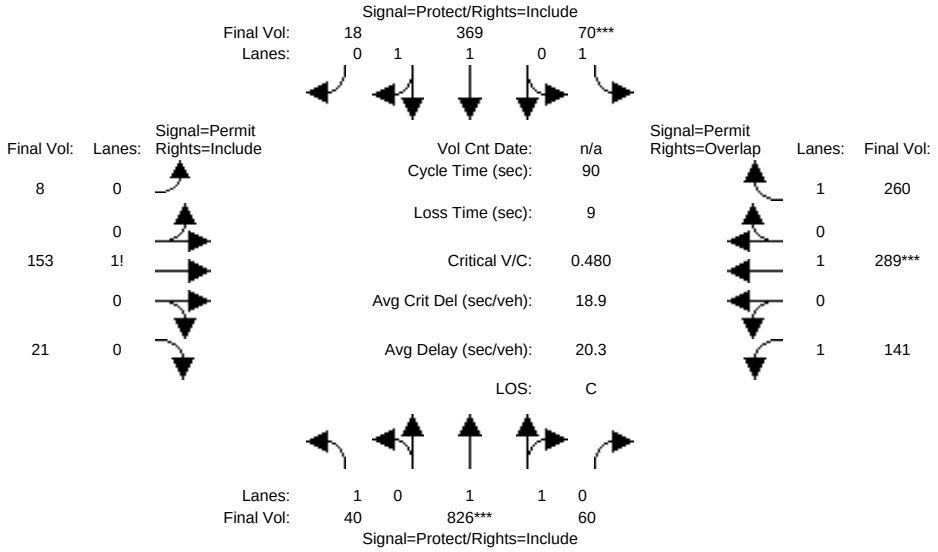
Street Name:	Union Ave.						Camden Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	175	394	217	331	537	73	75	2025	240	168	612	131
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:	175	394	217	331	537	73	75	2025	240	168	612	131
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:	175	394	217	331	537	73	75	2025	240	168	612	131
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:	175	394	217	331	537	73	75	2025	240	168	612	131
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	175	394	217	331	537	73	75	2025	240	168	612	131
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:	175	394	217	331	537	73	75	2025	240	168	612	131
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	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	1.27	0.73	1.00	2.00	1.00	1.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	1750	2385	1314	1750	3800	1750	1750	5700	1750	1750	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.10	0.17	0.17	0.19	0.14	0.04	0.04	0.36	0.14	0.10	0.11	0.07
Crit Moves:		****		****				****		****		
Green Time:	30.6	34.5	34.5	39.4	43.3	43.3	26.8	74.1	104.7	20.0	67.3	106.7
Volume/Cap:	0.59	0.86	0.86	0.86	0.59	0.17	0.29	0.86	0.24	0.86	0.29	0.13
Delay/Veh:	71.9	81.2	81.2	85.6	61.5	54.4	68.7	51.9	18.4	109.1	39.6	16.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	71.9	81.2	81.2	85.6	61.5	54.4	68.7	51.9	18.4	109.1	39.6	16.2
LOS by Move:	E	F	F	F	E	D	E	D	B	F	D	B
HCM2k95thQ:	18	31	31	34	23	7	8	56	13	22	14	7

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

Cambrianna Residential TA
San Jose, CA

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

Intersection #3550: Union Ave. and Foxworthy Ave.



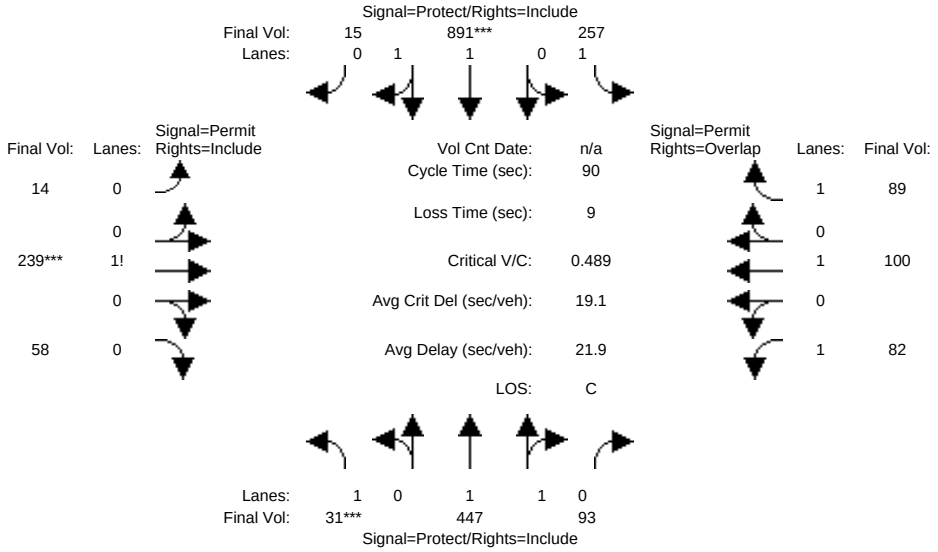
Street Name:	Union Ave.						Foxworthy Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	40	826	60	70	369	18	8	153	21	141	289	260
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:	40	826	60	70	369	18	8	153	21	141	289	260
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:	40	826	60	70	369	18	8	153	21	141	289	260
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:	40	826	60	70	369	18	8	153	21	141	289	260
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	40	826	60	70	369	18	8	153	21	141	289	260
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:	40	826	60	70	369	18	8	153	21	141	289	260
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	0.92	1.00	0.92
Lanes:	1.00	1.86	0.14	1.00	1.90	0.10	0.04	0.84	0.12	1.00	1.00	1.00
Final Sat.:	1750	3449	251	1750	3528	172	77	1471	202	1750	1900	1750
Capacity Analysis Module:												
Vol/Sat:	0.02	0.24	0.24	0.04	0.10	0.10	0.10	0.10	0.10	0.08	0.15	0.15
Crit Moves:		****		****							****	
Green Time:	21.6	44.9	44.9	7.5	30.9	30.9	28.5	28.5	28.5	28.5	28.5	36.1
Volume/Cap:	0.10	0.48	0.48	0.48	0.31	0.31	0.33	0.33	0.33	0.25	0.48	0.37
Delay/Veh:	26.7	15.0	15.0	41.9	21.8	21.8	23.8	23.8	23.8	23.1	25.3	19.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	26.7	15.0	15.0	41.9	21.8	21.8	23.8	23.8	23.8	23.1	25.3	19.3
LOS by Move:	C	B	B	D	C	C	C	C	C	C	C	B
HCM2k95thQ:	2	15	15	4	8	8	8	8	8	6	13	11

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

Cambrianna Residential TA
San Jose, CA

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

Intersection #3550: Union Ave. and Foxworthy Ave.



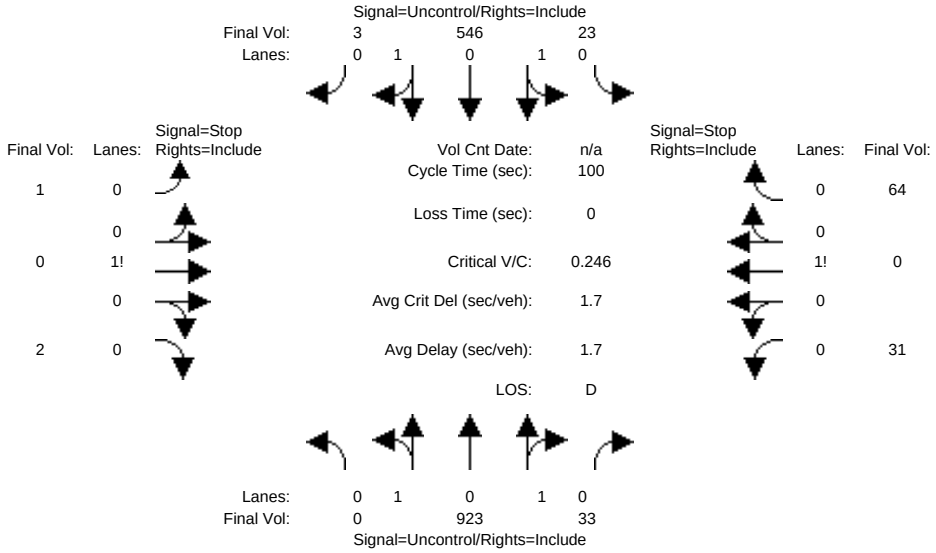
Street Name:	Union Ave.						Foxworthy Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	31	447	93	257	891	15	14	239	58	82	100	89
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:	31	447	93	257	891	15	14	239	58	82	100	89
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:	31	447	93	257	891	15	14	239	58	82	100	89
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:	31	447	93	257	891	15	14	239	58	82	100	89
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	31	447	93	257	891	15	14	239	58	82	100	89
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:	31	447	93	257	891	15	14	239	58	82	100	89
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	0.92	1.00	0.92
Lanes:	1.00	1.65	0.35	1.00	1.97	0.03	0.04	0.77	0.19	1.00	1.00	1.00
Final Sat.:	1750	3062	637	1750	3639	61	79	1345	326	1750	1900	1750
Capacity Analysis Module:												
Vol/Sat:	0.02	0.15	0.15	0.15	0.24	0.24	0.18	0.18	0.18	0.05	0.05	0.05
Crit Moves:	****				****			****				
Green Time:	7.0	24.9	24.9	25.0	42.9	42.9	31.1	31.1	31.1	31.1	31.1	56.1
Volume/Cap:	0.23	0.53	0.53	0.53	0.51	0.51	0.51	0.51	0.51	0.14	0.15	0.08
Delay/Veh:	39.8	28.1	28.1	28.6	16.6	16.6	24.2	24.2	24.2	20.3	20.4	6.7
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:	39.8	28.1	28.1	28.6	16.6	16.6	24.2	24.2	24.2	20.3	20.4	6.7
LOS by Move:	D	C	C	C	B	B	C	C	C	C	C	A
HCM2k95thQ:	2	12	12	12	16	16	14	14	14	3	4	2

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

Cambrianna Residential TA
San Jose, CA

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

Intersection #2: Union Ave. and Cambrianna Dr.



Street Name:	Union Ave.						Cambrianna Dr.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:												
Base Vol:	0	923	33	23	546	3	1	0	2	31	0	64
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	923	33	23	546	3	1	0	2	31	0	64
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	923	33	23	546	3	1	0	2	31	0	64
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	923	33	23	546	3	1	0	2	31	0	64
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	923	33	23	546	3	1	0	2	31	0	64
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	7.5	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	956	xxxx	xxxxx	1055	1550	275	1259	1535	478
Potent Cap.:	xxxx	xxxx	xxxxx	727	xxxx	xxxxx	183	115	729	130	117	539
Move Cap.:	xxxx	xxxx	xxxxx	727	xxxx	xxxxx	157	111	729	126	114	539
Volume/Cap:	xxxx	xxxx	xxxx	0.03	xxxx	xxxx	0.01	0.00	0.00	0.25	0.00	0.12
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	10.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	B	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	329	xxxxx	xxxx	261	xxxxx
SharedQueue:	0.0	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	1.6	xxxxx
Shrd ConDel:	7.2	xxxx	xxxxx	10.1	xxxx	xxxxx	xxxxx	16.0	xxxxx	xxxxx	26.5	xxxxx
Shared LOS:	A	*	*	B	*	*	*	C	*	*	D	*
ApproachDel:	xxxxxx			xxxxxx			16.0			26.5		
ApproachLOS:	*			*			C			D		

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

Peak Hour Delay Signal Warrant Report

****

Intersection #2 Union Ave. and Cambrianna Dr.

****

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	1 0		0 1 0	1 0		0 0 1! 0	0		0 0 1! 0	0	
Initial Vol:	0	923	33	23	546	3	1	0	2	31	0	64
ApproachDel:	xxxxxx			xxxxxx			16.0			26.5		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=3]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1626]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.7]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=95]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1626]
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 #2 Union Ave. and Cambrianna Dr.

****

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	1 0		0 1 0	1 0		0 0 1! 0	0		0 0 1! 0	0	
Initial Vol:	0	923	33	23	546	3	1	0	2	31	0	64

Major Street Volume: 1528
Minor Approach Volume: 95
Minor Approach Volume Threshold: 139

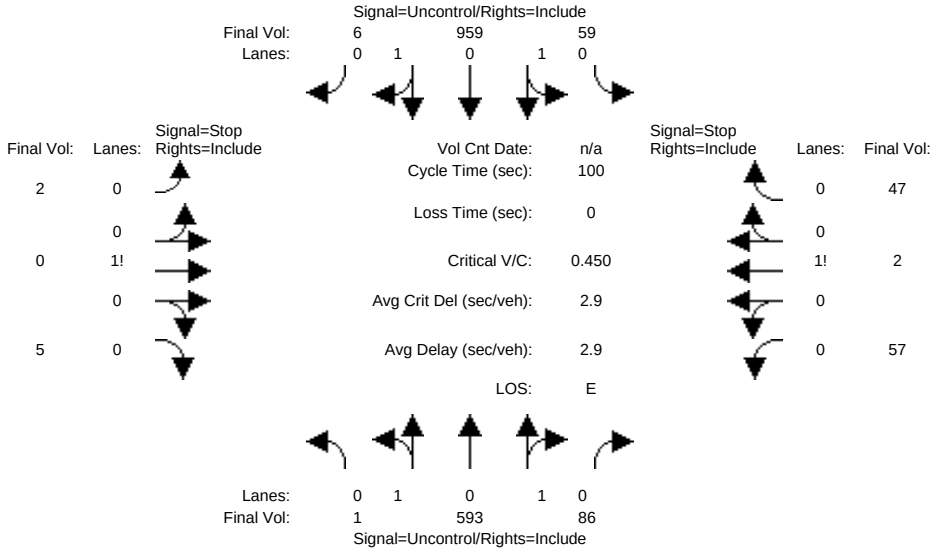
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other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

Cambrianna Residential TA
San Jose, CA

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

Intersection #2: Union Ave. and Cambrianna Dr.



Street Name:	Union Ave.						Cambrianna Dr.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:												
Base Vol:	1	593	86	59	959	6	2	0	5	57	2	47
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:	1	593	86	59	959	6	2	0	5	57	2	47
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:	1	593	86	59	959	6	2	0	5	57	2	47
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:	1	593	86	59	959	6	2	0	5	57	2	47
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	1	593	86	59	959	6	2	0	5	57	2	47
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.5	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	965	xxxx	xxxxx	679	xxxx	xxxxx	1380	1761	483	1236	1721	340
Potent Cap.:	722	xxxx	xxxxx	923	xxxx	xxxxx	105	85	535	135	90	662
Move Cap.:	722	xxxx	xxxxx	923	xxxx	xxxxx	91	80	535	127	84	662
Volume/Cap:	0.00	xxxx	xxxx	0.06	xxxx	xxxx	0.02	0.00	0.01	0.45	0.02	0.07
Level Of Service Module:												
2Way95thQ:	0.0	xxxx	xxxxx	0.2	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	10.0	xxxx	xxxxx	9.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	224	xxxxx	xxxx	194	xxxxx
SharedQueue:	0.0	xxxx	xxxxx	0.2	xxxx	xxxxx	xxxxx	0.1	xxxxx	xxxxx	2.9	xxxxx
Shrd ConDel:	10.0	xxxx	xxxxx	9.2	xxxx	xxxxx	xxxxx	21.6	xxxxx	xxxxx	43.7	xxxxx
Shared LOS:	A	*	*	A	*	*	*	C	*	*	E	*
ApproachDel:	xxxxxx			xxxxxx			21.6			43.7		
ApproachLOS:	*			*			C			E		

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

Peak Hour Delay Signal Warrant Report

****

Intersection #2 Union Ave. and Cambrianna Dr.

****

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	1	0	0 1 0	1	0	0 0 1! 0		0	0 0 1! 0		0
Initial Vol:	1	593	86	59	959	6	2	0	5	57	2	47
ApproachDel:	xxxxxx			xxxxxx			21.6			43.7		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=7]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1817]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=1.3]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=106]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1817]
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 #2 Union Ave. and Cambrianna Dr.

****

Future Volume Alternative: Peak Hour Warrant 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	1	0	0 1 0	1	0	0 0 1! 0		0	0 0 1! 0		0
Initial Vol:	1	593	86	59	959	6	2	0	5	57	2	47

Major Street Volume: 1704
Minor Approach Volume: 106
Minor Approach Volume Threshold: 101

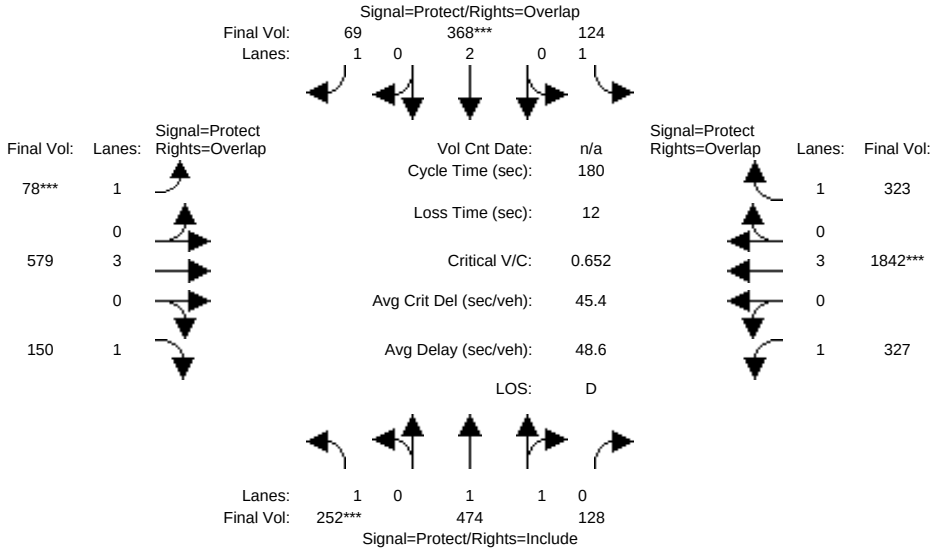
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other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

Cambrianna Residential TA
San Jose, CA

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

Intersection #3088: Union Ave. and Camden Ave.



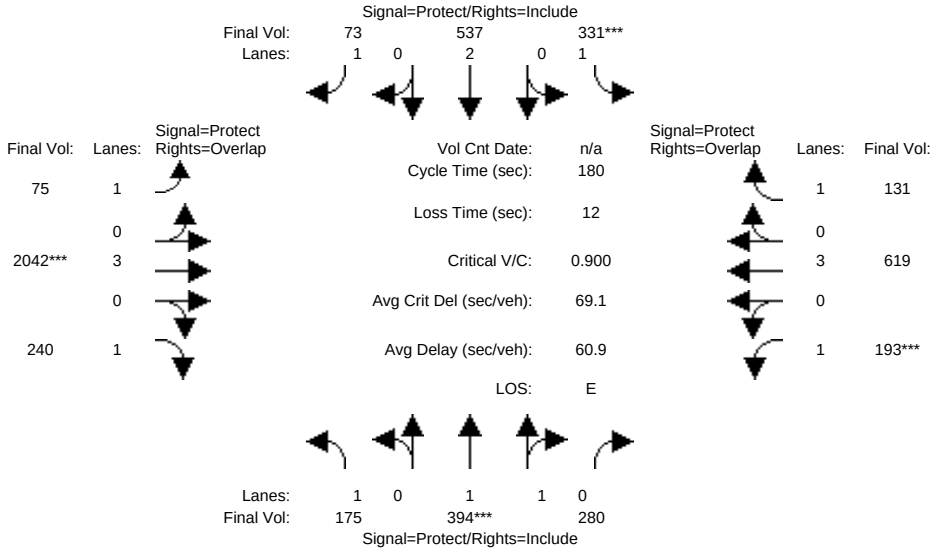
Street Name:	Union Ave.						Camden Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	252	474	128	124	368	69	78	579	150	327	1842	323
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:	252	474	128	124	368	69	78	579	150	327	1842	323
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:	252	474	128	124	368	69	78	579	150	327	1842	323
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:	252	474	128	124	368	69	78	579	150	327	1842	323
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	252	474	128	124	368	69	78	579	150	327	1842	323
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:	252	474	128	124	368	69	78	579	150	327	1842	323
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	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	1.56	0.44	1.00	2.00	1.00	1.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	1750	2913	787	1750	3800	1750	1750	5700	1750	1750	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.14	0.16	0.16	0.07	0.10	0.04	0.04	0.10	0.09	0.19	0.32	0.18
Crit Moves:	****				****		****				****	
Green Time:	39.8	46.3	46.3	20.2	26.7	39.0	12.3	35.8	75.5	65.8	89.2	109.4
Volume/Cap:	0.65	0.63	0.63	0.63	0.65	0.18	0.65	0.51	0.20	0.51	0.65	0.30
Delay/Veh:	67.8	60.7	60.7	82.9	75.0	57.7	93.9	64.7	33.3	45.3	34.4	17.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	67.8	60.7	60.7	82.9	75.0	57.7	93.9	64.7	33.3	45.3	34.4	17.2
LOS by Move:	E	E	E	F	E	E	F	E	C	D	C	B
HCM2k95thQ:	24	26	26	13	18	6	9	17	11	26	41	17

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

Cambrianna Residential TA
San Jose, CA

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

Intersection #3088: Union Ave. and Camden Ave.



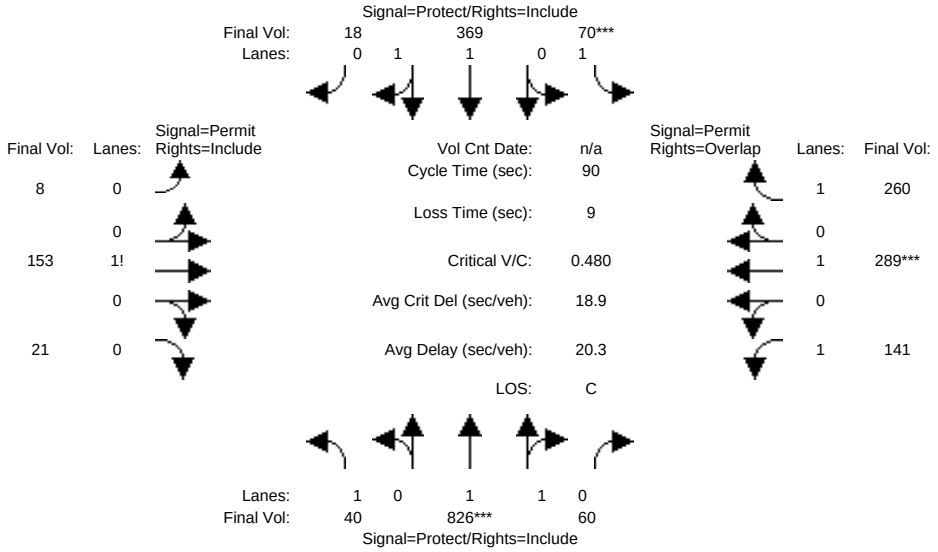
Street Name:	Union Ave.						Camden Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	175	394	280	331	537	73	75	2042	240	193	619	131
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:	175	394	280	331	537	73	75	2042	240	193	619	131
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:	175	394	280	331	537	73	75	2042	240	193	619	131
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:	175	394	280	331	537	73	75	2042	240	193	619	131
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	175	394	280	331	537	73	75	2042	240	193	619	131
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:	175	394	280	331	537	73	75	2042	240	193	619	131
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	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	1.15	0.85	1.00	2.00	1.00	1.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	1750	2162	1536	1750	3800	1750	1750	5700	1750	1750	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.10	0.18	0.18	0.19	0.14	0.04	0.04	0.36	0.14	0.11	0.11	0.07
Crit Moves:		****		****				****		****		
Green Time:	30.8	36.5	36.5	37.8	43.5	43.5	26.5	71.7	102.4	22.1	67.2	105.0
Volume/Cap:	0.58	0.90	0.90	0.90	0.58	0.17	0.29	0.90	0.24	0.90	0.29	0.13
Delay/Veh:	71.7	83.9	83.9	93.3	61.2	54.2	69.0	56.2	19.5	113.3	39.7	16.9
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:	71.7	83.9	83.9	93.3	61.2	54.2	69.0	56.2	19.5	113.3	39.7	16.9
LOS by Move:	E	F	F	F	E	D	E	E	B	F	D	B
HCM2k95thQ:	18	34	34	35	23	7	8	58	13	25	14	7

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

Cambrianna Residential TA
San Jose, CA

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

Intersection #3550: Union Ave. and Foxworthy Ave.



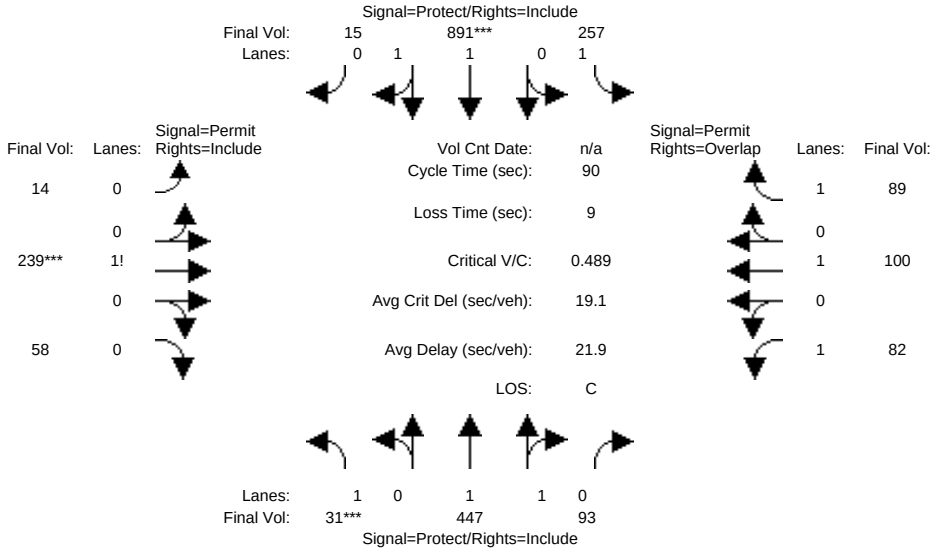
Street Name:	Union Ave.						Foxworthy Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	40	826	60	70	369	18	8	153	21	141	289	260
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:	40	826	60	70	369	18	8	153	21	141	289	260
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:	40	826	60	70	369	18	8	153	21	141	289	260
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:	40	826	60	70	369	18	8	153	21	141	289	260
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	40	826	60	70	369	18	8	153	21	141	289	260
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:	40	826	60	70	369	18	8	153	21	141	289	260
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	0.92	1.00	0.92
Lanes:	1.00	1.86	0.14	1.00	1.90	0.10	0.04	0.84	0.12	1.00	1.00	1.00
Final Sat.:	1750	3449	251	1750	3528	172	77	1471	202	1750	1900	1750
Capacity Analysis Module:												
Vol/Sat:	0.02	0.24	0.24	0.04	0.10	0.10	0.10	0.10	0.10	0.08	0.15	0.15
Crit Moves:		****		****							****	
Green Time:	21.6	44.9	44.9	7.5	30.9	30.9	28.5	28.5	28.5	28.5	28.5	36.1
Volume/Cap:	0.10	0.48	0.48	0.48	0.31	0.31	0.33	0.33	0.33	0.25	0.48	0.37
Delay/Veh:	26.7	15.0	15.0	41.9	21.8	21.8	23.8	23.8	23.8	23.1	25.3	19.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	26.7	15.0	15.0	41.9	21.8	21.8	23.8	23.8	23.8	23.1	25.3	19.3
LOS by Move:	C	B	B	D	C	C	C	C	C	C	C	B
HCM2k95thQ:	2	15	15	4	8	8	8	8	8	6	13	11

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

Cambrianna Residential TA
San Jose, CA

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

Intersection #3550: Union Ave. and Foxworthy Ave.



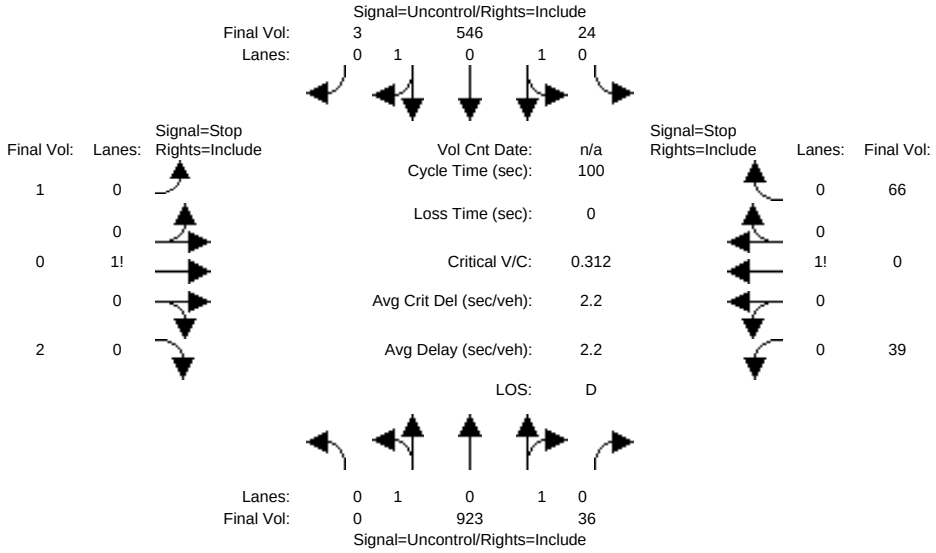
Street Name:	Union Ave.						Foxworthy Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	31	447	93	257	891	15	14	239	58	82	100	89
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:	31	447	93	257	891	15	14	239	58	82	100	89
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:	31	447	93	257	891	15	14	239	58	82	100	89
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:	31	447	93	257	891	15	14	239	58	82	100	89
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	31	447	93	257	891	15	14	239	58	82	100	89
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:	31	447	93	257	891	15	14	239	58	82	100	89
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	0.92	1.00	0.92
Lanes:	1.00	1.65	0.35	1.00	1.97	0.03	0.04	0.77	0.19	1.00	1.00	1.00
Final Sat.:	1750	3062	637	1750	3639	61	79	1345	326	1750	1900	1750
Capacity Analysis Module:												
Vol/Sat:	0.02	0.15	0.15	0.15	0.24	0.24	0.18	0.18	0.18	0.05	0.05	0.05
Crit Moves:	****				****			****				
Green Time:	7.0	24.9	24.9	25.0	42.9	42.9	31.1	31.1	31.1	31.1	31.1	56.1
Volume/Cap:	0.23	0.53	0.53	0.53	0.51	0.51	0.51	0.51	0.51	0.14	0.15	0.08
Delay/Veh:	39.8	28.1	28.1	28.6	16.6	16.6	24.2	24.2	24.2	20.3	20.4	6.7
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:	39.8	28.1	28.1	28.6	16.6	16.6	24.2	24.2	24.2	20.3	20.4	6.7
LOS by Move:	D	C	C	C	B	B	C	C	C	C	C	A
HCM2k95thQ:	2	12	12	12	16	16	14	14	14	3	4	2

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

Cambrianna Residential TA
San Jose, CA

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

Intersection #2: Union Ave. and Cambrianna Dr.



Street Name:	Union Ave.						Cambrianna Dr.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:												
Base Vol:	0	923	36	24	546	3	1	0	2	39	0	66
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	923	36	24	546	3	1	0	2	39	0	66
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	923	36	24	546	3	1	0	2	39	0	66
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	923	36	24	546	3	1	0	2	39	0	66
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	923	36	24	546	3	1	0	2	39	0	66
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	7.5	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	959	xxxx	xxxxx	1057	1555	275	1262	1538	480
Potent Cap.:	xxxx	xxxx	xxxxx	725	xxxx	xxxxx	182	114	729	129	117	538
Move Cap.:	xxxx	xxxx	xxxxx	725	xxxx	xxxxx	156	110	729	125	113	538
Volume/Cap:	xxxx	xxxx	xxxx	0.03	xxxx	xxxx	0.01	0.00	0.00	0.31	0.00	0.12
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	10.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	B	*	*	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	327	xxxxx	xxxx	242	xxxxx
SharedQueue:	0.0	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	2.1	xxxxx
Shrd ConDel:	7.2	xxxx	xxxxx	10.1	xxxx	xxxxx	xxxxx	16.1	xxxxx	xxxxx	30.9	xxxxx
Shared LOS:	A	*	*	B	*	*	*	C	*	*	D	*
ApproachDel:	xxxxxx			xxxxxx			16.1			30.9		
ApproachLOS:	*			*			C			D		

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

Peak Hour Delay Signal Warrant Report

****

Intersection #2 Union Ave. and Cambrianna Dr.

****

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	1	0	0 1 0	1	0	0 0 1! 0		0	0 0 1! 0		0
Initial Vol:	0	923	36	24	546	3	1	0	2	39	0	66
ApproachDel:	xxxxxx			xxxxxx			16.1			30.9		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=3]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1640]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.9]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=105]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1640]
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 #2 Union Ave. and Cambrianna Dr.

****

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	1	0	0 1 0	1	0	0 0 1! 0		0	0 0 1! 0		0
Initial Vol:	0	923	36	24	546	3	1	0	2	39	0	66

Major Street Volume: 1532
Minor Approach Volume: 105
Minor Approach Volume Threshold: 138

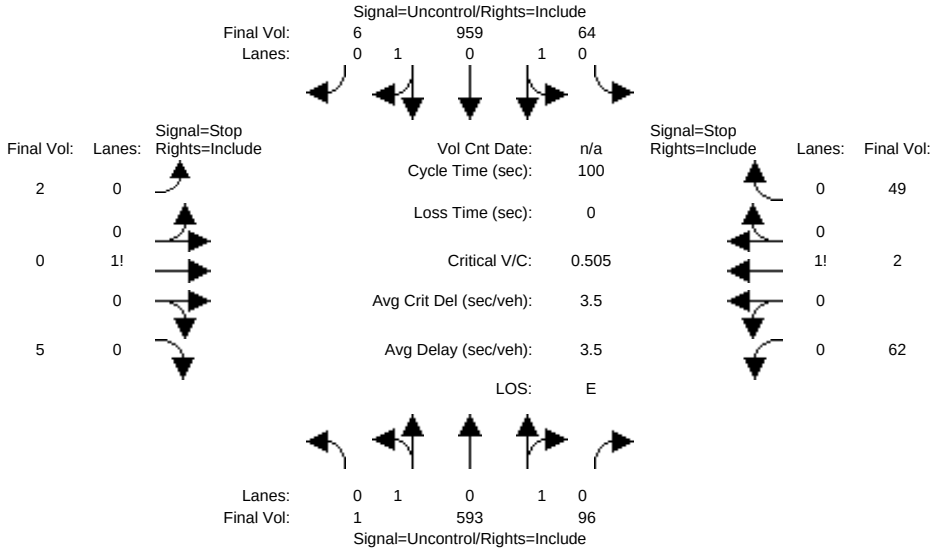
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other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

Cambrianna Residential TA
San Jose, CA

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

Intersection #2: Union Ave. and Cambrianna Dr.



Street Name:	Union Ave.						Cambrianna Dr.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:												
Base Vol:	1	593	96	64	959	6	2	0	5	62	2	49
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:	1	593	96	64	959	6	2	0	5	62	2	49
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:	1	593	96	64	959	6	2	0	5	62	2	49
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:	1	593	96	64	959	6	2	0	5	62	2	49
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	1	593	96	64	959	6	2	0	5	62	2	49
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.5	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	965	xxxx	xxxxx	689	xxxx	xxxxx	1390	1781	483	1251	1736	345
Potent Cap.:	722	xxxx	xxxxx	915	xxxx	xxxxx	104	83	535	131	88	657
Move Cap.:	722	xxxx	xxxxx	915	xxxx	xxxxx	89	77	535	123	82	657
Volume/Cap:	0.00	xxxx	xxxx	0.07	xxxx	xxxx	0.02	0.00	0.01	0.51	0.02	0.07
Level Of Service Module:												
2Way95thQ:	0.0	xxxx	xxxxx	0.2	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	10.0	xxxx	xxxxx	9.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	220	xxxxx	xxxx	187	xxxxx
SharedQueue:	0.0	xxxx	xxxxx	0.2	xxxx	xxxxx	xxxxx	0.1	xxxxx	xxxxx	3.4	xxxxx
Shrd ConDel:	10.0	xxxx	xxxxx	9.2	xxxx	xxxxx	xxxxx	21.9	xxxxx	xxxxx	49.9	xxxxx
Shared LOS:	A	*	*	A	*	*	*	C	*	*	E	*
ApproachDel:	xxxxxx			xxxxxx			21.9			49.9		
ApproachLOS:	*			*			C			E		

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

Peak Hour Delay Signal Warrant Report

****

Intersection #2 Union Ave. and Cambrianna Dr.

****

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	1	0	0 1 0	1	0	0 0 1! 0		0	0 0 1! 0		0
Initial Vol:	1	593	96	64	959	6	2	0	5	62	2	49
ApproachDel:	xxxxxx			xxxxxx			21.9			49.9		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=7]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1839]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=1.6]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=113]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1839]
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 #2 Union Ave. and Cambrianna Dr.

****

Future Volume Alternative: Peak Hour Warrant 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	1	0	0 1 0	1	0	0 0 1! 0		0	0 0 1! 0		0
Initial Vol:	1	593	96	64	959	6	2	0	5	62	2	49

Major Street Volume: 1719
Minor Approach Volume: 113
Minor Approach Volume Threshold: 98 [less than minimum of 100]

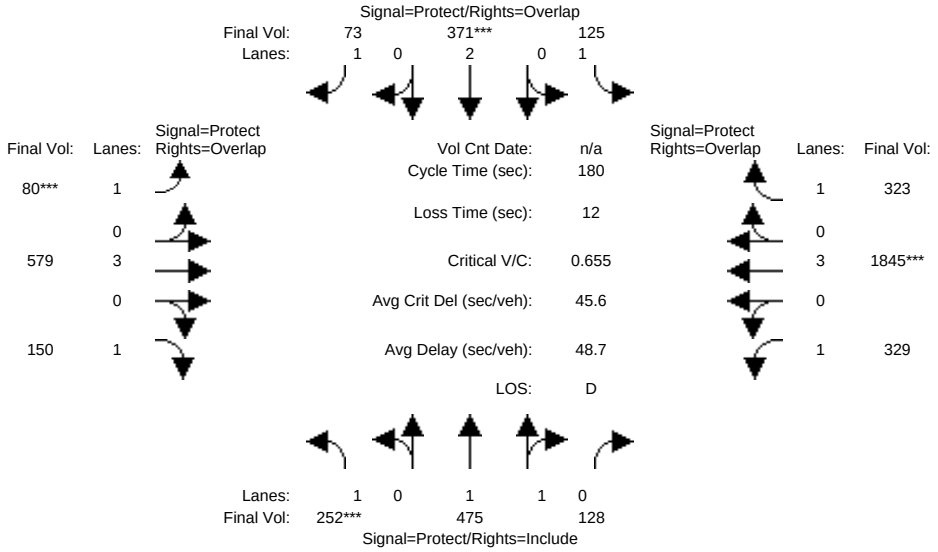
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other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

Cambrianna Residential TA
San Jose, CA

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

Intersection #3088: Union Ave. and Camden Ave.



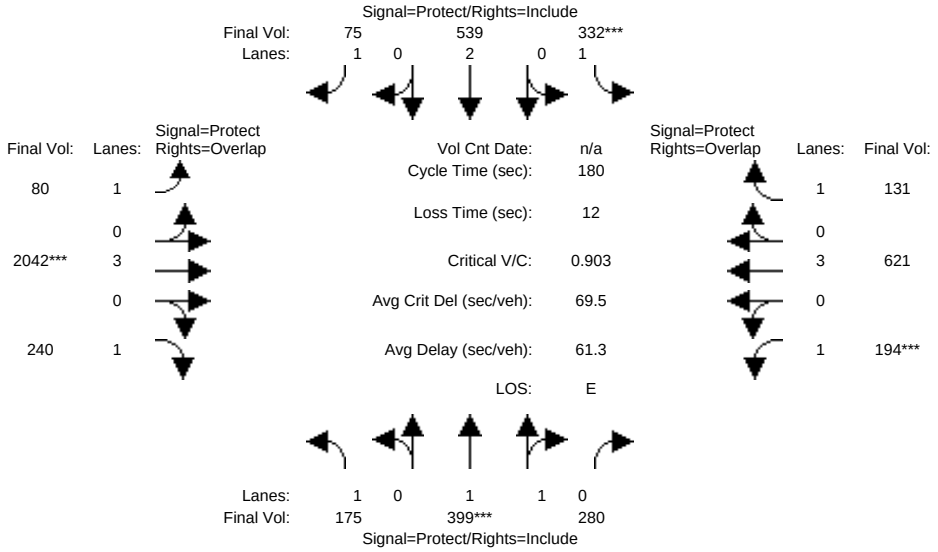
Street Name:	Union Ave.						Camden Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	252	475	128	125	371	73	80	579	150	329	1845	323
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:	252	475	128	125	371	73	80	579	150	329	1845	323
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:	252	475	128	125	371	73	80	579	150	329	1845	323
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:	252	475	128	125	371	73	80	579	150	329	1845	323
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	252	475	128	125	371	73	80	579	150	329	1845	323
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:	252	475	128	125	371	73	80	579	150	329	1845	323
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	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	1.56	0.44	1.00	2.00	1.00	1.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	1750	2914	785	1750	3800	1750	1750	5700	1750	1750	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.14	0.16	0.16	0.07	0.10	0.04	0.05	0.10	0.09	0.19	0.32	0.18
Crit Moves:	****				****		****				****	
Green Time:	39.6	46.2	46.2	20.2	26.8	39.4	12.6	35.6	75.2	65.9	89.0	109.2
Volume/Cap:	0.65	0.64	0.64	0.64	0.65	0.19	0.65	0.51	0.21	0.51	0.65	0.30
Delay/Veh:	68.0	60.8	60.8	83.0	75.0	57.5	93.7	64.8	33.5	45.2	34.6	17.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	68.0	60.8	60.8	83.0	75.0	57.5	93.7	64.8	33.5	45.2	34.6	17.2
LOS by Move:	E	E	E	F	E	E	F	E	C	D	C	B
HCM2k95thQ:	24	26	26	14	18	7	9	17	11	26	41	17

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

Cambrianna Residential TA
San Jose, CA

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

Intersection #3088: Union Ave. and Camden Ave.



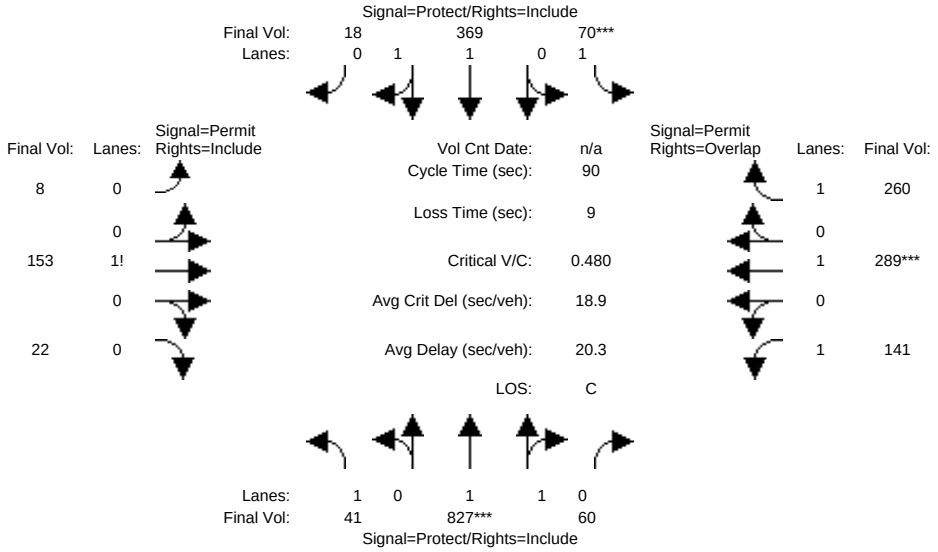
Street Name:	Union Ave.						Camden Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	175	399	280	332	539	75	80	2042	240	194	621	131
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:	175	399	280	332	539	75	80	2042	240	194	621	131
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:	175	399	280	332	539	75	80	2042	240	194	621	131
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:	175	399	280	332	539	75	80	2042	240	194	621	131
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	175	399	280	332	539	75	80	2042	240	194	621	131
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:	175	399	280	332	539	75	80	2042	240	194	621	131
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	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	1.15	0.85	1.00	2.00	1.00	1.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	1750	2173	1525	1750	3800	1750	1750	5700	1750	1750	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.10	0.18	0.18	0.19	0.14	0.04	0.05	0.36	0.14	0.11	0.11	0.07
Crit Moves:		****		****				****		****		
Green Time:	30.8	36.6	36.6	37.8	43.7	43.7	27.7	71.4	102.2	22.1	65.9	103.7
Volume/Cap:	0.58	0.90	0.90	0.90	0.58	0.18	0.30	0.90	0.24	0.90	0.30	0.13
Delay/Veh:	71.7	84.1	84.1	93.8	61.1	54.1	68.2	56.5	19.6	113.9	40.7	17.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	71.7	84.1	84.1	93.8	61.1	54.1	68.2	56.5	19.6	113.9	40.7	17.5
LOS by Move:	E	F	F	F	E	D	E	E	B	F	D	B
HCM2k95thQ:	18	34	34	35	23	7	8	59	13	25	15	7

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

Cambrianna Residential TA
San Jose, CA

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

Intersection #3550: Union Ave. and Foxworthy Ave.



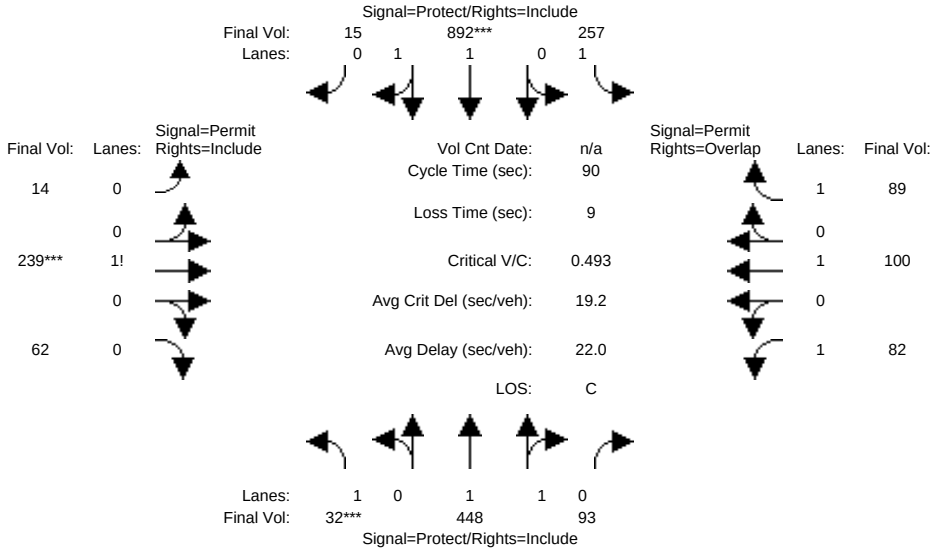
Street Name:	Union Ave.						Foxworthy Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	41	827	60	70	369	18	8	153	22	141	289	260
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:	41	827	60	70	369	18	8	153	22	141	289	260
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:	41	827	60	70	369	18	8	153	22	141	289	260
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:	41	827	60	70	369	18	8	153	22	141	289	260
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	41	827	60	70	369	18	8	153	22	141	289	260
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:	41	827	60	70	369	18	8	153	22	141	289	260
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	0.92	1.00	0.92
Lanes:	1.00	1.86	0.14	1.00	1.90	0.10	0.04	0.84	0.12	1.00	1.00	1.00
Final Sat.:	1750	3450	250	1750	3528	172	77	1463	210	1750	1900	1750
Capacity Analysis Module:												
Vol/Sat:	0.02	0.24	0.24	0.04	0.10	0.10	0.10	0.10	0.10	0.08	0.15	0.15
Crit Moves:		****		****							****	
Green Time:	21.6	45.0	45.0	7.5	30.9	30.9	28.5	28.5	28.5	28.5	28.5	36.0
Volume/Cap:	0.10	0.48	0.48	0.48	0.31	0.31	0.33	0.33	0.33	0.25	0.48	0.37
Delay/Veh:	26.7	15.0	15.0	41.9	21.8	21.8	23.8	23.8	23.8	23.1	25.4	19.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	26.7	15.0	15.0	41.9	21.8	21.8	23.8	23.8	23.8	23.1	25.4	19.3
LOS by Move:	C	B	B	D	C	C	C	C	C	C	C	B
HCM2k95thQ:	2	15	15	4	8	8	8	8	8	6	13	11

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

Cambrianna Residential TA
San Jose, CA

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

Intersection #3550: Union Ave. and Foxworthy Ave.



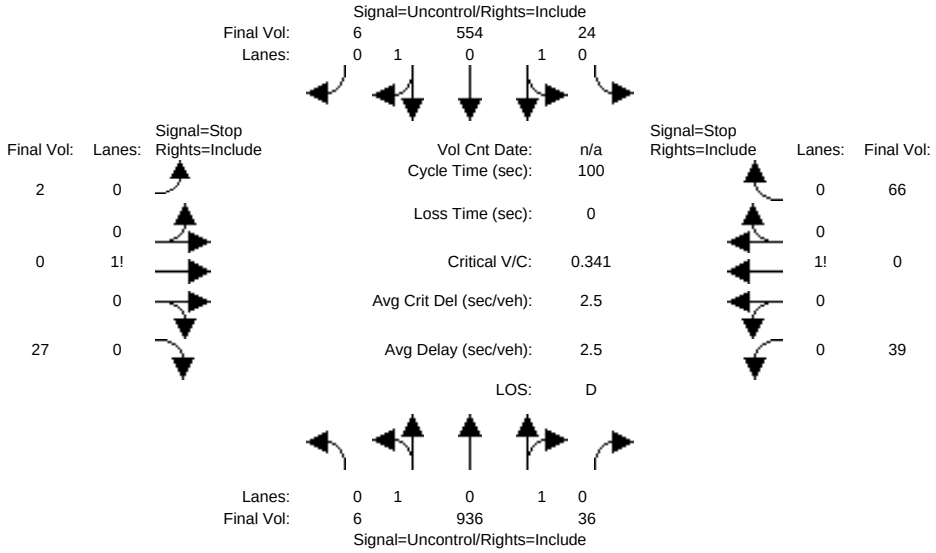
Street Name:	Union Ave.						Foxworthy Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	32	448	93	257	892	15	14	239	62	82	100	89
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:	32	448	93	257	892	15	14	239	62	82	100	89
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:	32	448	93	257	892	15	14	239	62	82	100	89
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:	32	448	93	257	892	15	14	239	62	82	100	89
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	32	448	93	257	892	15	14	239	62	82	100	89
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:	32	448	93	257	892	15	14	239	62	82	100	89
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	0.92	1.00	0.92
Lanes:	1.00	1.65	0.35	1.00	1.97	0.03	0.04	0.76	0.20	1.00	1.00	1.00
Final Sat.:	1750	3063	636	1750	3639	61	78	1328	344	1750	1900	1750
Capacity Analysis Module:												
Vol/Sat:	0.02	0.15	0.15	0.15	0.25	0.25	0.18	0.18	0.18	0.05	0.05	0.05
Crit Moves:	****				****			****				
Green Time:	7.0	24.8	24.8	24.9	42.7	42.7	31.3	31.3	31.3	31.3	31.3	56.2
Volume/Cap:	0.24	0.53	0.53	0.53	0.52	0.52	0.52	0.52	0.52	0.13	0.15	0.08
Delay/Veh:	39.9	28.2	28.2	28.7	16.8	16.8	24.1	24.1	24.1	20.2	20.3	6.7
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:	39.9	28.2	28.2	28.7	16.8	16.8	24.1	24.1	24.1	20.2	20.3	6.7
LOS by Move:	D	C	C	C	B	B	C	C	C	C	C	A
HCM2k95thQ:	2	12	12	12	16	16	14	14	14	3	4	2

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

Cambrianna Residential TA
San Jose, CA

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

Intersection #2: Union Ave. and Cambrianna Dr.



Street Name:	Union Ave.						Cambrianna Dr.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:												
Base Vol:	6	936	36	24	554	6	2	0	27	39	0	66
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:	6	936	36	24	554	6	2	0	27	39	0	66
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:	6	936	36	24	554	6	2	0	27	39	0	66
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:	6	936	36	24	554	6	2	0	27	39	0	66
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	6	936	36	24	554	6	2	0	27	39	0	66
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.5	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	560	xxxx	xxxxx	972	xxxx	xxxxx	1085	1589	280	1291	1574	486
Potent Cap.:	1021	xxxx	xxxxx	717	xxxx	xxxxx	174	109	723	123	111	533
Move Cap.:	1021	xxxx	xxxxx	717	xxxx	xxxxx	147	104	723	114	107	533
Volume/Cap:	0.01	xxxx	xxxx	0.03	xxxx	xxxx	0.01	0.00	0.04	0.34	0.00	0.12

Level Of Service Module:												
2Way95thQ:	0.0	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	8.5	xxxx	xxxxx	10.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	B	*	*	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	570	xxxxx	xxxx	226	xxxxx
SharedQueue:	0.0	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxxx	0.2	xxxxx	xxxxx	2.3	xxxxx
Shrd ConDel:	8.5	xxxx	xxxxx	10.2	xxxx	xxxxx	xxxxx	11.7	xxxxx	xxxxx	34.0	xxxxx
Shared LOS:	A	*	*	B	*	*	*	B	*	*	D	*
ApproachDel:	xxxxxx			xxxxxx			11.7			34.0		
ApproachLOS:	*			*			B			D		

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

Peak Hour Delay Signal Warrant Report

****

Intersection #2 Union Ave. and Cambrianna Dr.

****

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	1	0	0 1 0	1	0	0 0 1! 0		0	0 0 1! 0		0
Initial Vol:	6	936	36	24	554	6	2	0	27	39	0	66
ApproachDel:	xxxxxx			xxxxxx			11.7			34.0		

Approach[eastbound][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=29]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1696]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=1.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=105]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1696]
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 #2 Union Ave. and Cambrianna Dr.

****

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	1	0	0 1 0	1	0	0 0 1! 0		0	0 0 1! 0		0
Initial Vol:	6	936	36	24	554	6	2	0	27	39	0	66

Major Street Volume: 1562
Minor Approach Volume: 105
Minor Approach Volume Threshold: 131

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

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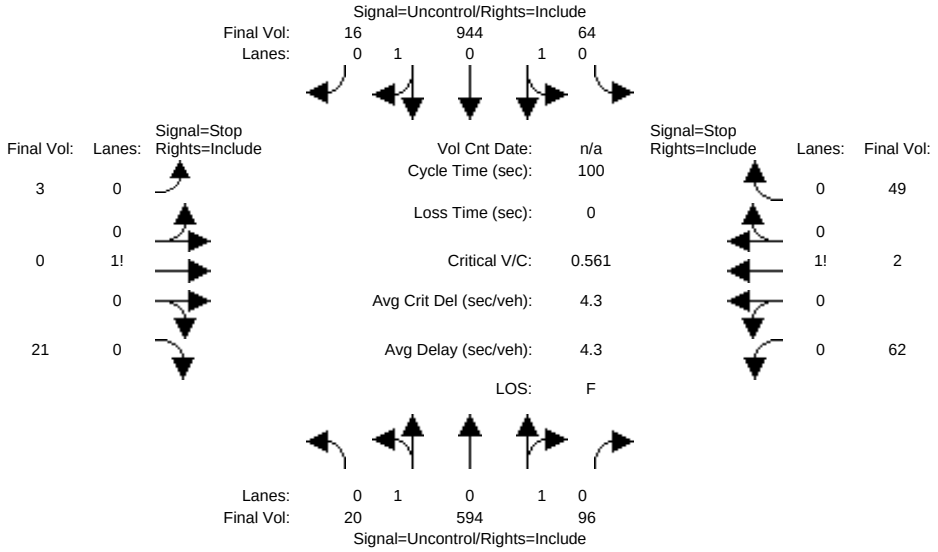
Cambrianna Residential TA
San Jose, CA

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

Intersection #2: Union Ave. and Cambrianna Dr.



Street Name:	Union Ave.						Cambrianna Dr.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:												
Base Vol:	20	594	96	64	944	16	3	0	21	62	2	49
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:	20	594	96	64	944	16	3	0	21	62	2	49
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:	20	594	96	64	944	16	3	0	21	62	2	49
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:	20	594	96	64	944	16	3	0	21	62	2	49
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	20	594	96	64	944	16	3	0	21	62	2	49
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.5	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	960	xxxx	xxxxx	690	xxxx	xxxxx	1418	1810	480	1282	1770	345
Potent Cap.:	725	xxxx	xxxxx	914	xxxx	xxxxx	99	80	537	125	84	657
Move Cap.:	725	xxxx	xxxxx	914	xxxx	xxxxx	83	72	537	110	76	657
Volume/Cap:	0.03	xxxx	xxxx	0.07	xxxx	xxxx	0.04	0.00	0.04	0.56	0.03	0.07
Level Of Service Module:												
2Way95thQ:	0.1	xxxx	xxxxx	0.2	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	10.1	xxxx	xxxxx	9.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	B	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	319	xxxxx	xxxx	171	xxxxx
SharedQueue:	0.1	xxxx	xxxxx	0.2	xxxx	xxxxx	xxxxx	0.2	xxxxx	xxxxx	3.8	xxxxx
Shrd ConDel:	10.1	xxxx	xxxxx	9.2	xxxx	xxxxx	xxxxx	17.2	xxxxx	xxxxx	60.0	xxxxx
Shared LOS:	B	*	*	A	*	*	*	C	*	*	F	*
ApproachDel:	xxxxxx			xxxxxx			17.2			60.0		
ApproachLOS:	*			*			C			F		

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

Peak Hour Delay Signal Warrant Report

****

Intersection #2 Union Ave. and Cambrianna Dr.

****

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	1 0		0 1 0	1 0		0 0 1! 0	0		0 0 1! 0	0	
Initial Vol:	20	594	96	64	944	16	3	0	21	62	2	49
ApproachDel:	xxxxxx			xxxxxx			17.2			60.0		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=24]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1871]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=1.9]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=113]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1871]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER
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Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #2 Union Ave. and Cambrianna Dr.

****

Future Volume Alternative: Peak Hour Warrant 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	1 0		0 1 0	1 0		0 0 1! 0	0		0 0 1! 0	0	
Initial Vol:	20	594	96	64	944	16	3	0	21	62	2	49

Major Street Volume: 1734
Minor Approach Volume: 113
Minor Approach Volume Threshold: 95 [less than minimum of 100]

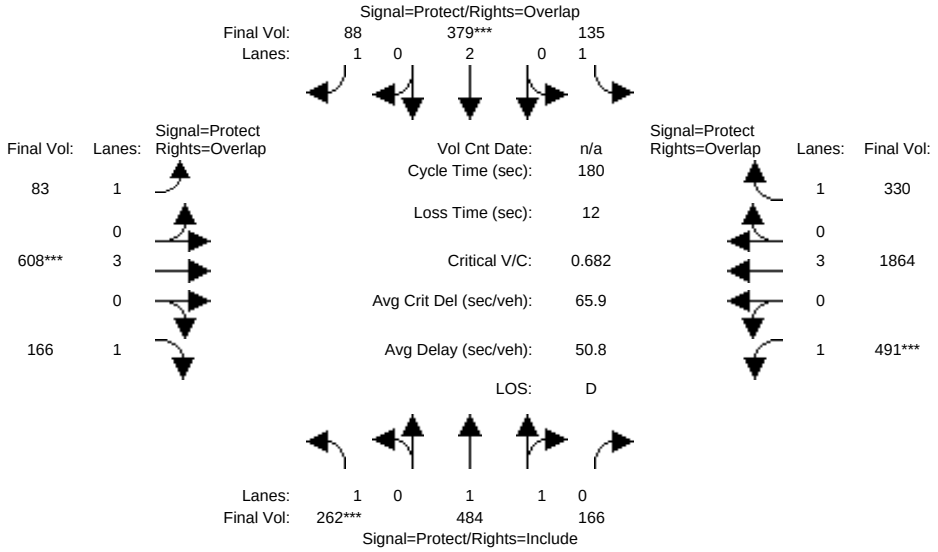
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other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

Cambrianna Residential TA
San Jose, CA

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

Intersection #3088: Union Ave. and Camden Ave.



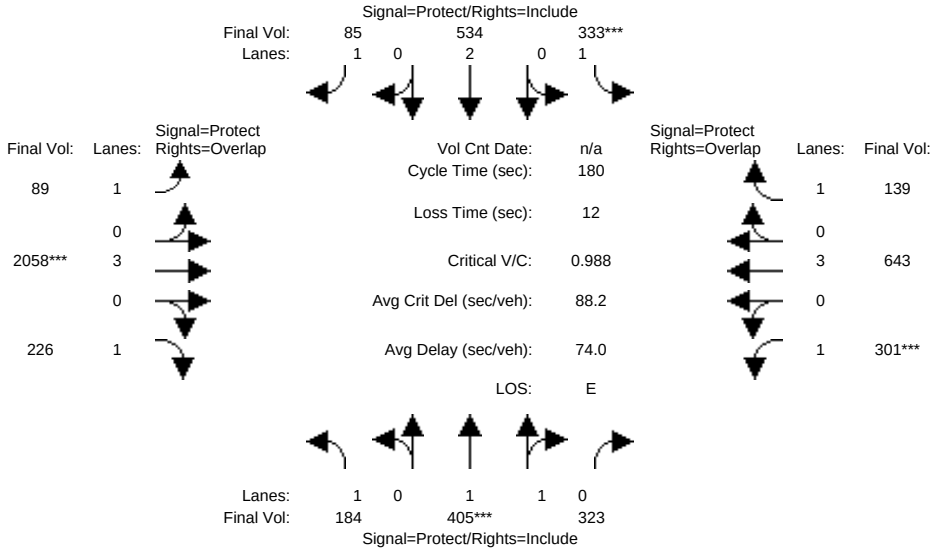
Street Name:	Union Ave.						Camden Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	262	484	166	135	379	88	83	608	166	491	1864	330
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:	262	484	166	135	379	88	83	608	166	491	1864	330
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:	262	484	166	135	379	88	83	608	166	491	1864	330
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:	262	484	166	135	379	88	83	608	166	491	1864	330
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	262	484	166	135	379	88	83	608	166	491	1864	330
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:	262	484	166	135	379	88	83	608	166	491	1864	330
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	1.46	0.54	1.00	2.00	1.00	1.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	1750	2769	950	1750	3800	1750	1750	5700	1750	1750	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.15	0.17	0.17	0.08	0.10	0.05	0.05	0.11	0.09	0.28	0.33	0.19
Crit Moves:	****				****			****			****	
Green Time:	39.5	45.7	45.7	20.2	26.3	39.3	12.9	28.1	67.6	74.0	89.2	109.4
Volume/Cap:	0.68	0.69	0.69	0.69	0.68	0.23	0.66	0.68	0.25	0.68	0.66	0.31
Delay/Veh:	69.5	62.9	62.9	86.8	76.3	58.2	93.6	73.9	38.9	46.1	34.6	17.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	69.5	62.9	62.9	86.8	76.3	58.2	93.6	73.9	38.9	46.1	34.6	17.2
LOS by Move:	E	E	E	F	E	E	F	E	D	D	C	B
HCM2k95thQ:	25	29	29	15	18	8	10	19	12	40	41	17

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

Cambrianna Residential TA
San Jose, CA

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

Intersection #3088: Union Ave. and Camden Ave.



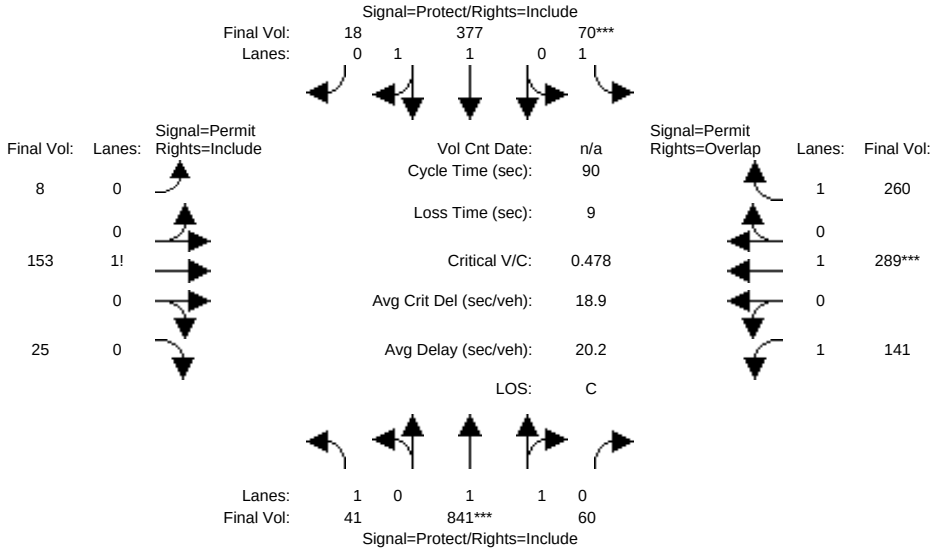
Street Name:	Union Ave.						Camden Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	184	405	323	333	534	85	89	2058	226	301	643	139
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:	184	405	323	333	534	85	89	2058	226	301	643	139
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:	184	405	323	333	534	85	89	2058	226	301	643	139
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:	184	405	323	333	534	85	89	2058	226	301	643	139
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	184	405	323	333	534	85	89	2058	226	301	643	139
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:	184	405	323	333	534	85	89	2058	226	301	643	139
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	1.07	0.93	1.00	2.00	1.00	1.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	1750	2037	1624	1750	3800	1750	1750	5700	1750	1750	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.11	0.20	0.20	0.19	0.14	0.05	0.05	0.36	0.13	0.17	0.11	0.08
Crit Moves:		****		****				****		****		
Green Time:	30.3	36.2	36.2	34.7	40.6	40.6	30.2	65.8	96.1	31.3	66.9	101.6
Volume/Cap:	0.62	0.99	0.99	0.99	0.62	0.22	0.30	0.99	0.24	0.99	0.30	0.14
Delay/Veh:	73.7	102	101.7	118.1	64.3	57.0	66.3	73.6	22.6	122.3	40.1	18.6
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:	73.7	102	101.7	118.1	64.3	57.0	66.3	73.6	22.6	122.3	40.1	18.6
LOS by Move:	E	F	F	F	E	E	E	E	C	F	D	B
HCM2k95thQ:	19	40	40	38	23	8	9	66	13	38	15	7

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

Cambrianna Residential TA
San Jose, CA

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

Intersection #3550: Union Ave. and Foxworthy Ave.



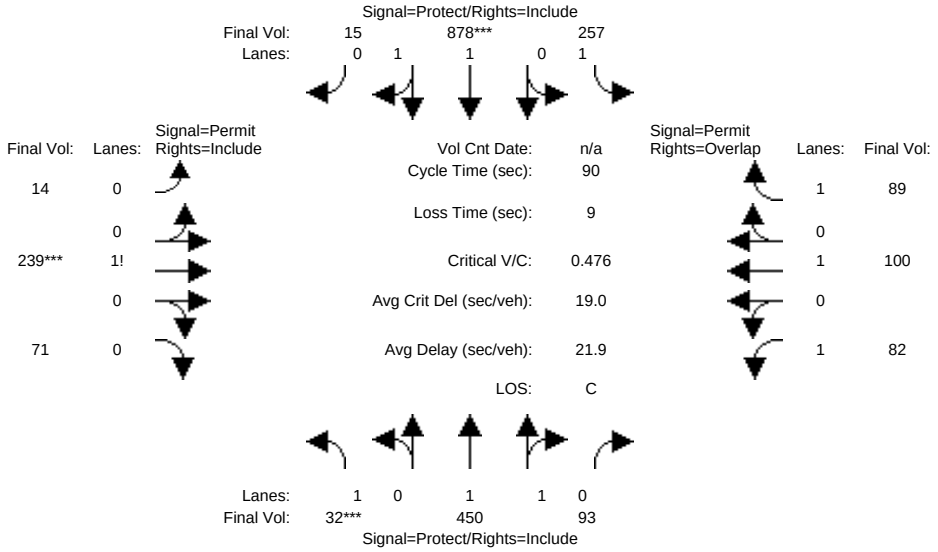
Street Name:	Union Ave.						Foxworthy Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	41	841	60	70	377	18	8	153	25	141	289	260
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:	41	841	60	70	377	18	8	153	25	141	289	260
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:	41	841	60	70	377	18	8	153	25	141	289	260
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:	41	841	60	70	377	18	8	153	25	141	289	260
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	41	841	60	70	377	18	8	153	25	141	289	260
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:	41	841	60	70	377	18	8	153	25	141	289	260
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	1.86	0.14	1.00	1.90	0.10	0.05	0.81	0.14	1.00	1.00	1.00
Final Sat.:	1750	3527	252	1750	3613	172	80	1539	252	1750	1900	1750
Capacity Analysis Module:												
Vol/Sat:	0.02	0.24	0.24	0.04	0.10	0.10	0.10	0.10	0.10	0.08	0.15	0.15
Crit Moves:		****		****							****	
Green Time:	21.6	44.9	44.9	7.5	30.8	30.8	28.6	28.6	28.6	28.6	28.6	36.1
Volume/Cap:	0.10	0.48	0.48	0.48	0.30	0.30	0.31	0.31	0.31	0.25	0.48	0.37
Delay/Veh:	26.7	15.1	15.1	41.8	21.9	21.9	23.5	23.5	23.5	23.0	25.3	19.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	26.7	15.1	15.1	41.8	21.9	21.9	23.5	23.5	23.5	23.0	25.3	19.3
LOS by Move:	C	B	B	D	C	C	C	C	C	C	C	B
HCM2k95thQ:	2	15	15	4	8	8	8	8	8	6	13	11

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

Cambrianna Residential TA
San Jose, CA

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

Intersection #3550: Union Ave. and Foxworthy Ave.



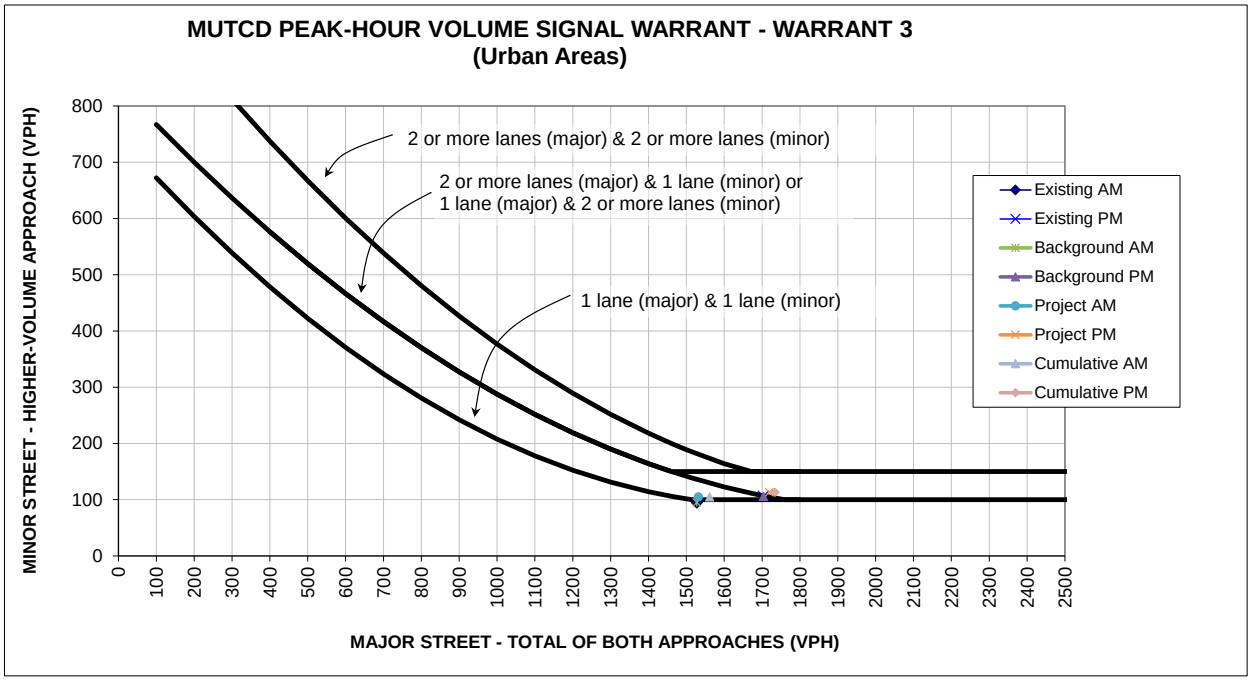
Street Name:	Union Ave.						Foxworthy Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	32	450	93	257	878	15	14	239	71	82	100	89
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:	32	450	93	257	878	15	14	239	71	82	100	89
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:	32	450	93	257	878	15	14	239	71	82	100	89
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:	32	450	93	257	878	15	14	239	71	82	100	89
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	32	450	93	257	878	15	14	239	71	82	100	89
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:	32	450	93	257	878	15	14	239	71	82	100	89
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	1.63	0.37	1.00	1.96	0.04	0.05	0.72	0.23	1.00	1.00	1.00
Final Sat.:	1750	3104	641	1750	3731	64	80	1371	407	1750	1900	1750
Capacity Analysis Module:												
Vol/Sat:	0.02	0.14	0.14	0.15	0.24	0.24	0.17	0.17	0.17	0.05	0.05	0.05
Crit Moves:	****				****			****				
Green Time:	7.0	24.6	24.6	24.9	42.5	42.5	31.5	31.5	31.5	31.5	31.5	56.4
Volume/Cap:	0.24	0.53	0.53	0.53	0.50	0.50	0.50	0.50	0.50	0.13	0.15	0.08
Delay/Veh:	39.9	28.3	28.3	28.7	16.6	16.6	23.6	23.6	23.6	20.1	20.2	6.6
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:	39.9	28.3	28.3	28.7	16.6	16.6	23.6	23.6	23.6	20.1	20.2	6.6
LOS by Move:	D	C	C	C	B	B	C	C	C	C	C	A
HCM2k95thQ:	2	11	11	12	16	16	13	13	13	3	4	2

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

Appendix D
Signal Warrant Analysis Calculations

Cambrianna Residential TA - Signal Warrant Analysis

Union Avenue (major)/Cambrianna Drive (minor)



Source: Figure 4C-3 of the Manual on Unifrom Traffic Control and Devices (MUTCD) 2014 Edition from California Department of Transportation (Caltrans).
* 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.

AM Peak Hour

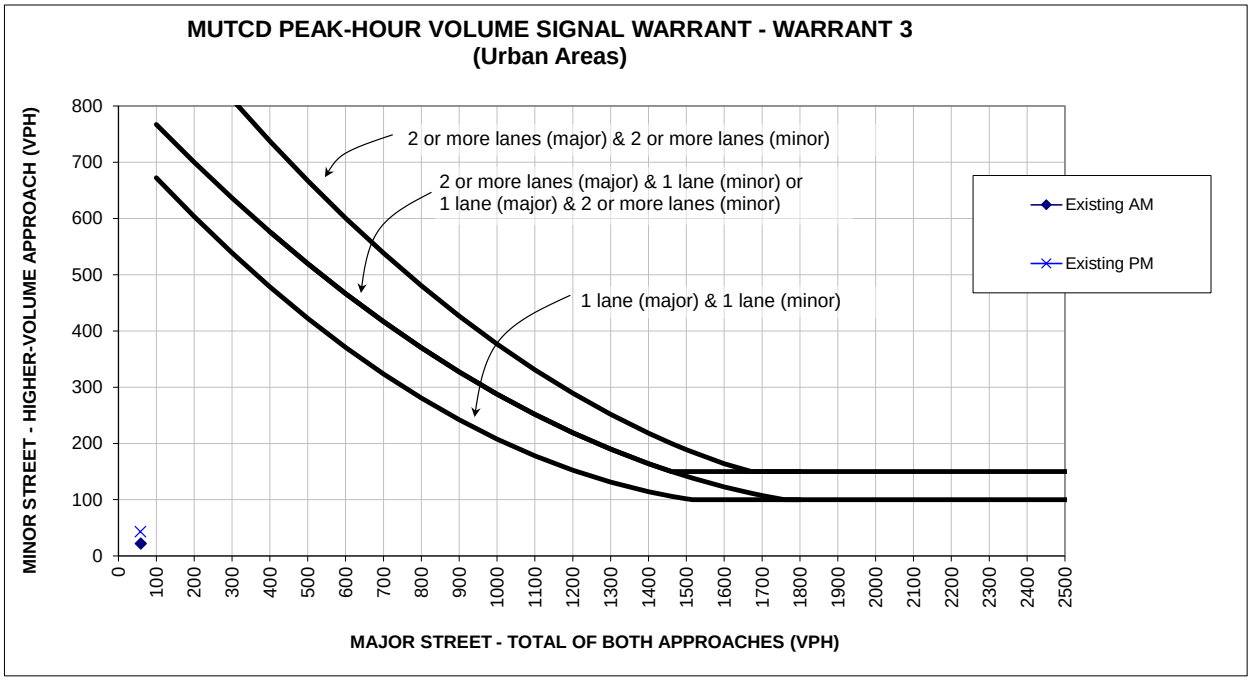
		Existing Approach Lanes: One	Existing Approach Lanes: 2 or More	Existing AM	Background AM	Project AM	Cumulative AM
Major Street - Both Approaches	Union Avenue		X	1528	1528	1532	1562
Minor Street - Highest Approach	Cambrianna Drive	X		95	95	105	105
Maximum warrant threshold for minor street volume				136	136	135	130
Difference between warrant threshold & minor street volume				41	41	30	25
		Warrant Met?		No	No	No	No

PM Peak Hour

		Existing Approach Lanes: One	Existing Approach Lanes: 2 or More	Existing PM	Background PM	Project PM	Cumulative PM
Major Street - Both Approaches	Union Avenue		X	1704	1704	1719	1734
Minor Street - Highest Approach	Cambrianna Drive	X		106	106	113	113
Maximum warrant threshold for minor street volume				107	107	105	103
Difference between warrant threshold & minor street volume				1	1	8	10
		Warrant Met?		No	No	**Yes**	**Yes**

Cambrianna Residential TA - Signal Warrant Analysis

Taper Avenue (major)/Cambrianna Drive (minor)



Source: Figure 4C-3 of the Manual on Unifrom Traffic Control and Devices (MUTCD) 2014 Edition from California Department of Transportation (Caltrans).
* 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.

AM Peak Hour

		Existing Approach Lanes: One	Existing Approach Lanes: 2 or More	Existing AM
Major Street - Both Approaches	Taper Avenue	X		59
Minor Street - Highest Approach	Cambrianna Drive	X		22
Maximum warrant threshold for minor street volume				702
Difference between warrant threshold & minor street volume				680
		Warrant Met?		No

PM Peak Hour

		Existing Approach Lanes: One	Existing Approach Lanes: 2 or More	Existing PM
Major Street - Both Approaches	Taper Avenue	X		58
Minor Street - Highest Approach	Cambrianna Drive	X		43
Maximum warrant threshold for minor street volume				703
Difference between warrant threshold & minor street volume				660
		Warrant Met?		No