Appendix B

Transportation Analysis January 28, 2020 and Transportation Memorandum February 21, 2020

Hexagon Transportation Consultants, Inc.

Limited Service Restaurant Building At Santa Teresa Village

Transportation Analysis

Prepared for:

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January 28, 2020

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Executive Summary

This study was conducted for the purpose of identifying any potential transportation impacts caused by adding a limited service restaurant building to the Santa Teresa Village Shopping Center in San Jose, California. The limited service restaurant would provide fast casual food service that is similar to fast food restaurants, but contain higher quality made to order food items than fast food restaurants. The project would construct a 7,116 square foot building in the current Santa Teresa Village Shopping Center that currently has 125,162 square feet of retail buildings. Access to the shopping center is currently provided by multiple driveways located on Bernal Road, Santa Teresa Boulevard, and Chantilley Lane. The proposed restaurant building would be located facing Santa Teresa Boulevard with direct access via the current driveway next to the site on Santa Teresa Boulevard. Due to the raised center median on Santa Teresa Boulevard, the driveway is limited to right turns only for outbound traffic with inbound left turns provided via the existing left-turn pocket on Santa Teresa Boulevard.

The study also evaluates a project alternative for the same building being used as a medical office. Access to the medical office building would not change from the proposed restaurant project.

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 2018*, the transportation analysis report for the project includes a CEQA transportation analysis and a local transportation analysis (LTA). The CEQA transportation analysis comprises of an evaluation of Vehicle Miles Traveled (VMT). The LTA supplements the CEQA transportation analysis by identifying transportation operational issues via an evaluation of weekday AM and PM peak-hour traffic conditions for four signalized intersections and one unsignalized intersection in the vicinity of the project site. The LTA also includes an analysis of site access, on-site circulation, parking, vehicle queueing, and effects to transit, bicycle, and pedestrian access.

CEQA Transportation Impacts

Based on the San Jose VMT Evaluation Tool, the existing area VMT for employment uses in the project vicinity is 14.93 per worker while the regional average VMT is 14.37 per worker. Because the area VMT is higher than the regional average VMT, the project is located in a high-VMT area for employment uses.

Limited Service Restaurant Project-Level VMT Impacts and Mitigation Measures

Project Impact: Because the proposed limited service restaurant would result in a net increase of 21 VMT for all employees (or 1.17 VMT per employee), the project would result in a significant CEQA transportation impact based on the threshold of significance for retail uses. Therefore, mitigation measures are required to reduce VMT to baseline conditions.

Mitigation Measures: It is recommended the project implement the following mitigation measures to reduce the significant VMT impact.

- Provide end of trip bike facilities. The project proposes to provide 10 short-term bicycle parking spaces (5 bike racks) next to the project building, which is more than the 3 required bicycle parking spaces.
- Provide commute trip reduction marketing and education for employees. This would educate and encourage employees the use of transit, shared rides, and active modes, therefore lowering the number of single occupancy vehicle trips.
- Provide a rideshare program. This would encourage employees to carpool with other employees and/or through ridematching services to help employees find other commuters traveling in the same direction.

The project will be required to prepare a transportation demand management (TDM) plan that implement the VMT mitigation measures. The combination of the mitigation measures would reduce the project VMT by 1.24 per worker (an 8.3% VMT reduction as compared to the Area VMT) or 22.32 for all workers. Therefore, the mitigation measures would reduce the project VMT to baseline conditions and make the project impact less than significant. The VMT estimate assumes that 5% of the workers would participate in the rideshare program.

CEQA Cumulative Impacts

The project is consistent with the General Plan goals and policies for the following reasons:

- The project would provide more bicycle parking spaces than required.
- As part of the mitigation measures, the project should implement TDM measures to minimize vehicle trip generation and reduce VMT.
- The project should construct 15-foot ADA compliant sidewalks along the project frontage per the Urban Village standards. Widening the sidewalks would improve pedestrian access to the transit stop and other destinations.

With the implementation of bicycle parking, mitigation measures for VMT, and wider sidewalks, the project would result in a less-than-significant cumulative impact.

Medical Office Project-Level VMT Impacts and Mitigation Measures

Project Impact: The VMT generated by the medical office (14.71 VMT per employee) would exceed the threshold of 12.21 VMT per employee; therefore, the medical office would result in a significant transportation impact on VMT, and mitigation measures are required to reduce the VMT impact.

Mitigation Measures: Based on the list of selected VMT reduction measures included in the VMT evaluation tool, it is recommended the project implement the following TDM mitigation measure to reduce the significant VMT impact.

- Provide end of trip bike facilities. The project proposes to provide 10 short-term bicycle parking spaces (5 bike racks) next to the project building, which is more than the 2 required bicycle parking spaces.

- Provide commute trip reduction marketing and education for employees. This would educate and encourage employees the use of transit, shared rides, and active modes, therefore lowering the number of single occupancy vehicle trips.
- Provide a rideshare program. This would encourage employees to carpool with other employees and/or through ridematching services, which help employees find other commuters traveling in the same direction.

The project would be required to prepare a TDM plan that offers the commute trip reduction measures to 100% of the eligible office employees. The mitigation measures would reduce the project VMT per worker to 12.19 (a 18.4% VMT reduction as compared to the Area VMT), which would make the project impact less than significant. The VMT estimate assumes that 25% of the workers would participate in the rideshare program.

Cumulative Impact Analysis

The cumulative impact of the medical office alternative would be same as the cumulative impact described above for the proposed limited service restaurant. With the implementation of bike parking, mitigation measures for VMT, and wider sidewalks, the project would be consistent with the General Plan and would result in a less-than-significant cumulative impact.

Local Transportation Analysis (LTA)

Project Trip Generation

Limited Service Restaurant Trip Estimates

Project trips were estimated using trip rates published in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*, 10th Edition. The trip generation rates for Fast-Food Restaurant (Land Code Use 930) were used for this project. A 9% trip reduction was applied to the trip generation estimate to account for non-vehicle mode share of the project area. A 44% pass-by trip reduction was applied to the PM peak-hour trips. With trip reductions, the project is estimated to generate 14 net new trips during the AM peak hour (9 inbound and 5 outbound) and 52 trips during the PM peak hour (29 inbound and 23 outbound).

Medical Office Alternative Trip Estimates

Trips that would be generated by the medical office were estimated using average trip rates published in the ITE Trip Generation Manual for a Medical-Dental Office (Land Use 720). A 5% trip reduction was applied to the trip generation estimate to account for non-vehicle mode share of the project area. By implementing VMT reduction strategies, the VMT level for the office development would be reduced from the existing level of 14.93 VMT per employee to 12.19 VMT per employee, which is an 18% reduction in VMT. The reduction was applied to the adjusted office trips (with location-based adjustment).

After applying appropriate trip reductions, the project alternative would generate 19 new trips (15 inbound and 4 outbound) during the AM peak hour and 20 new trips (6 inbound and 14 outbound) during the PM peak hour. Compared to the proposed limited service restaurant, the medical office is expected to generate a similar number of trips in the AM peak hour and fewer trips in the PM peak hour.

Intersection Traffic Operations

Based on the City of San Jose intersection operations analysis criteria, none of the signalized study intersections would be adversely affected by the limited service restaurant project (see Table ES-1 for intersection level of service results). The medical office is expected to generate a similar number of trips as the proposed restaurant during the AM peak hour and fewer trips during the PM peak hour. As shown in Table ES-1, with the proposed limited service restaurant, all of the study intersections would operate at LOS D or better. Therefore, with the medical office, the study intersections are expected to operate at an acceptable level of service.

At the unsignalized project driveway intersection on Santa Teresa Boulevard, because outbound traffic is restricted to right turns, the vehicle delay would continue to be short under both background and background plus project conditions. For the southbound (inbound) left-turn movement at the driveway, because the approved developments would substantially increase the northbound Santa Teresa Boulevard volume, which reduce the gap for the left-turn vehicles to make turns, the vehicle delay in the PM peak hour is estimated to degrade from LOS A under existing conditions to LOS F (LOS C in the AM peak hour) under both background and background plus project conditions. The project would add 37 southbound left-turn vehicles during the PM peak hour. Although the project is expected to increase the maximum vehicle queue for this left-turn movement by 3 vehicles in the PM peak hour, the storage pocket would be adequate to accommodate the maximum vehicle queue. Note that the analysis conservatively assumes that most inbound project trips would enter the site via the left-turn pocket. The project traffic at the left-turn pocket could be lower as some of the eastbound Bernal Road traffic can enter the site via the shopping center driveway on Bernal Road just east of Santa Teresa Boulevard, and some of the southbound Santa Teresa Boulevard traffic can also access the site via the same driveway by turning left onto eastbound Bernal Road. Therefore, the driveway intersection would operate adequately and is not expected to experience issues associated with vehicle queuing or delay.

Table ES-1
Intersection Level of Service Summary

			Existing		Background					
					No Project		with Project			
Intersection	Peak Hour	Count Date	Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS	Incr. in Critical Delay (sec)	Incr. in Critical V/C
1 Santa Teresa Boulevard and Chantilley Lane	AM	05/07/19	13.0	B	9.8	A	9.9	A	0.0	0.000
	PM	05/07/19	15.5	B	10.3	B+	10.4	B+	0.1	0.004
2 Santa Teresa Boulevard and Bernal Road*	AM	05/07/19	29.0	C	31.7	C	31.8	C	0.3	0.004
	PM	12/18/18	35.0	D+	35.1	D+	35.8	D+	1.0	0.014
3 Santa Teresa Boulevard and Martinvale Lane	AM	05/07/19	20.2	C+	15.3	B	15.3	B	0.0	0.001
	PM	05/07/19	15.1	B	10.0	B+	10.0	A	0.0	0.002
4 Realm Drive and Bernal Road	AM	05/07/19	18.1	B-	13.5	B	13.5	B	0.0	0.001
	PM	05/07/19	28.3	C	26.9	C	26.7	C	-0.2	0.003

* Denotes the CMP designated Intersection

Vehicle Queuing Analysis

Vehicle queuing analysis was performed for left-turn movements at intersections where the project would add a noteworthy number of trips. The queuing analysis indicates that the estimated 95th percentile left-turn vehicle queue would exceed the vehicle storage capacity for the westbound left-turn movement from Bernal Road to Santa Teresa Boulevard under background conditions, and the project trips would increase the vehicle queue by just one vehicle. Lengthening this turn pocket to accommodate the estimated maximum vehicle queue length is not a feasible option because of the eastbound left-turn pocket at the Realm Drive/Bernal Road intersection. Note that although field observations confirm that the left-turn traffic occasionally fills the turn pocket, long green time is assigned to the movement to accommodate the high left-turn volume, and the left-turn queue clears within one signal cycle. There are two travel lanes provided for the low westbound through traffic on Bernal Road. Therefore, although the maximum left-turn queue would occasionally exceed the turn pocket storage, it is not expected to hinder the westbound traffic flow on Bernal Road.

Medical Office Alternative

With the medical office, the vehicle queuing condition is expected to be similar to the proposed limited service restaurant in the AM peak hour and better than the proposed limited service restaurant in the PM peak hour. The increased inbound trips during the AM peak hour would potentially lengthen the 95th percentile left-turn vehicle queue for the westbound left-turn movement from Bernal Road to Santa Teresa Boulevard, which was estimated to exceed the vehicle storage capacity under background conditions. However, as describe above for the limited service restaurant, although the maximum left-turn queue would occasionally exceed the turn pocket storage, it is not expected to hinder the westbound traffic flow on Bernal Road.

During the PM peak hour, the medical office is estimated to generate fewer inbound and outbound trips. Therefore, the vehicle queuing condition is expected to be better than the queuing condition with the limited service restaurant.

Other Transportation Issues

The proposed site plan shows adequate site access and on-site circulation, and no significant operational issues are expected to occur as a result of the project. The project would not have an adverse effect on the existing pedestrian, bicycle, or transit facilities in the area.

Recommendations:

- Reduce the driveway widths of the driveways adjacent to the site to 26 feet, per City standards (City of San Jose Department of Transportation Geometric Guidelines).
- The City's standard minimum width for two-way drive aisles is 26 feet where 90-degree parking is provided. The proposed two-way drive aisles would be between 23 and 25 feet wide. The project requires City approval for any proposed reduction in the standard drive aisle width.

1.
Introduction

This report presents the results of the transportation analysis (TA) conducted for the proposed limited service restaurant building at the Santa Teresa Village Shopping Center located at 7076 Santa Teresa Boulevard in San Jose, California (see Figure 1). The limited service restaurant would provide fast casual food service that is similar to fast food restaurants, but contain higher quality made to order food items than fast food restaurants. The project would construct a limited service restaurant building with 7,116 square feet (s.f.) of floor area in the current Santa Teresa Village Shopping Center that currently has 125,162 square feet of retail buildings (see Figure 2). Access to the shopping center is currently provided by multiple driveways located on Bernal Road, Santa Teresa Boulevard, and Chantilley Lane. The proposed restaurant building would be located facing Santa Teresa Boulevard with direct access via the current driveway next to the site on Santa Teresa Boulevard. Due to the raised center median on Santa Teresa Boulevard, the driveway is limited to right turns only for outbound traffic with inbound left turns provided via the existing left-turn pocket on Santa Teresa Boulevard.

The study also evaluates a project alternative for the same building being used as a medical office. Access to the medical office building would not change from the proposed restaurant project.

This study was conducted for the purposed of identifying the potential transportation impacts related to the proposed 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 TA report for the project includes a California Environmental Quality Act (CEQA) transportation analysis and a local transportation analysis (LTA).

Transportation Policies

In alignment with State of California Senate Bill 743 (SB 743) and the City's goals as set forth in the Envision San Jose 2040 General Plan, the City of San Jose's adopted a new Transportation Analysis Policy (Council Policy 5-1) to replace the Transportation Level of Service Policy (Council Policy 5-3). The new policy establishes the thresholds for transportation impacts under CEQA based on vehicle miles traveled (VMT) instead of intersection level of service (LOS). The intent of this change is to shift the focus of transportation analysis under CEQA from vehicle delay and roadway auto capacity to a reduction in vehicle emissions, and the creation of robust multimodal networks that support integrated land uses. The new Transportation Analysis Policy, which took effect on March 29, 2018, requires all projects to analyze transportation impacts using the VMT metric.

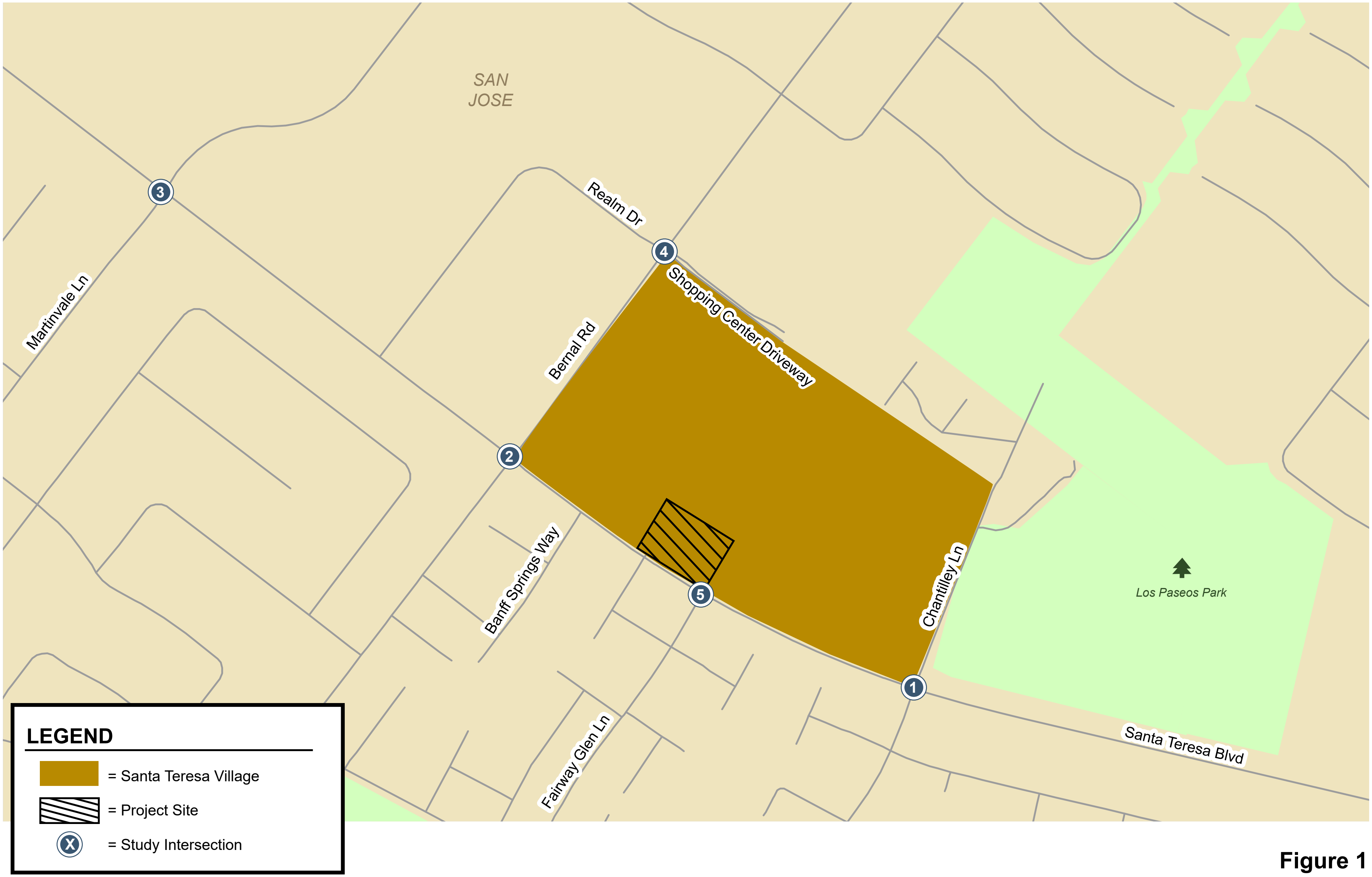

Figure 1
Site Location and Study Intersections

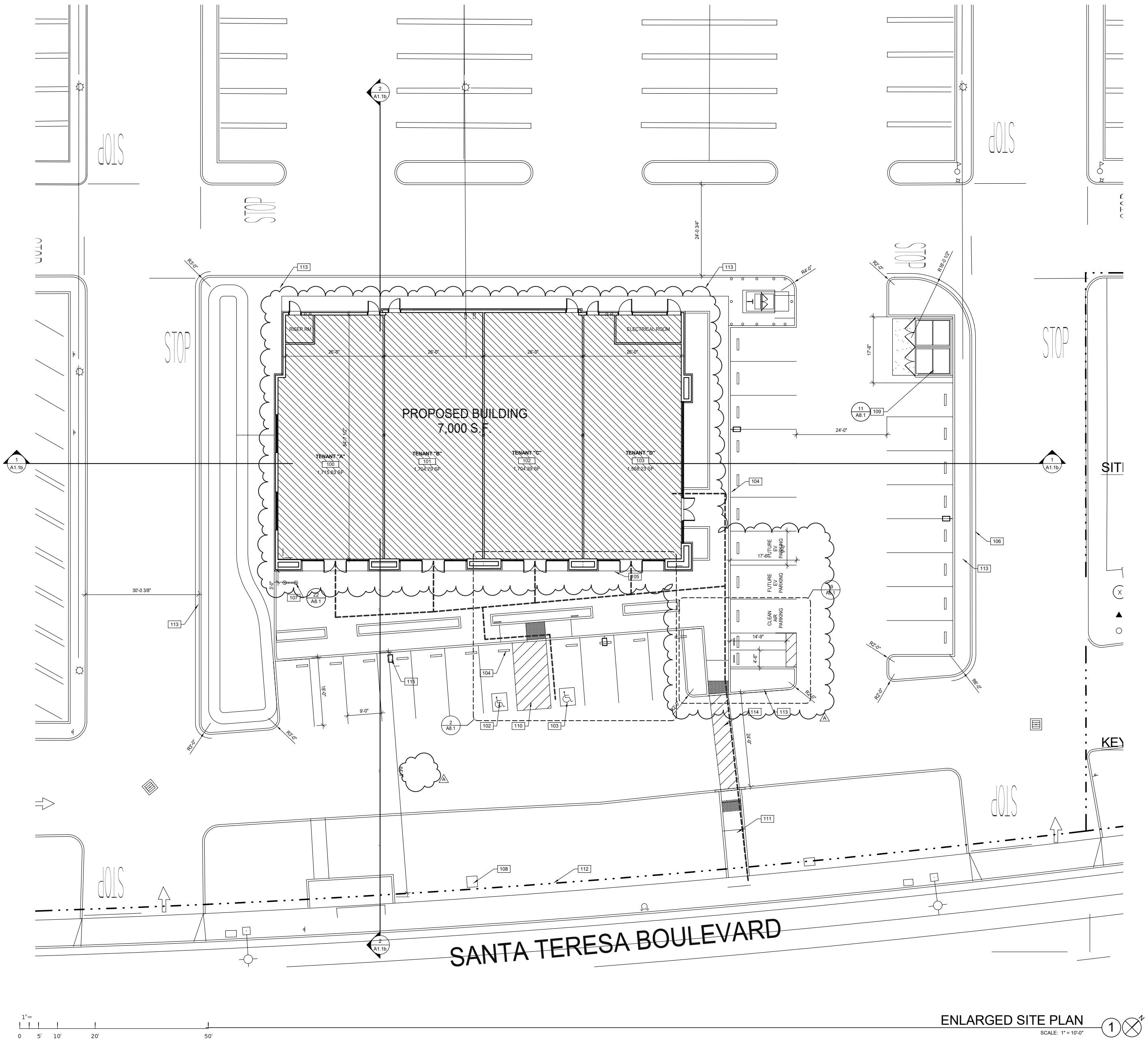

Figure 2
Proposed Site Plan

NORTH
Not to Scale

The new Transportation Analysis Policy aligns with the Envision San Jose 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 General Plan's Planned Growth Areas.

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

- 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 biking, walking and transit facilities and services that encourage reduced vehicle travel demand (TR-1.4);
- 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);
- 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. In addition, require that new development is designed to accommodate and to provide direct access to transit facilities (TR-3.3);
- 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 Corridors and other growth areas (TR-8.6);
- Encourage private property owners to share their underutilized parking supplies with the general public and/or other adjacent private developments (TR-8.7);
- 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);

- 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 and Methodology

The City of San Jose's Transportation Analysis Policy establishes procedures for determining project impacts on 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.

Thresholds of Significance

The City of San Jose's *Transportation Analysis Handbook* includes screening criteria for projects that are expected to result in less-than-significant VMT impacts based on the project description, characteristics and/or location. Projects that meet the screening criteria do not require a CEQA transportation analysis. For a project that does meet the screening criteria, a project's VMT impact is determined by comparing the project VMT to the appropriate thresholds of significance (see Table 1) based on the type of development.

Small retail developments (100,000 s.f. or less) are considered local-serving and result in less-than-significant VMT impacts according to the screening criteria. However, because this project is part of a larger shopping center that is over 100,000 s.f., it does not meet the screening criteria and a CEQA transportation analysis is required to evaluate the project's VMT against the threshold of significance. For retail developments, the threshold of significance is any net increase in existing regional total VMT. A retail project that would result in any increase in regional VMT is considered an impact.

Office projects of 10,000 s.f. or less are considered small infill projects and result in less-than-significant VMT impacts according to the screening criteria. The proposed medical office use is not the same as general office use that is used to establish the screening criteria and threshold of significance by the City. Therefore, based on direction from the City staff, the VMT analysis for the medical office was conducted by converting vehicle trips generated by the medical office to an equivalent general office square footage. Based on the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*, 10th Edition, the medical office building would generate 248 daily trips using the daily rates for medical-dental office building (Land Use 720). Using the daily rate of general office building (Land Use 710), the medical office would generate daily trips equivalent to 25,462 s.f. of a general office (see Table 2). Therefore, it does not meet the screening criteria and a CEQA transportation analysis is required to evaluate the project's VMT against the threshold of significance. For office developments, the threshold of significance is the regional average VMT per employee minus 15 percent, which calculates to 12.21 daily miles per employee.

Table 1
VMT Thresholds of Significance for Development Projects

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.

Table 2
Medical Office to General Office Conversion

Land Use	ITE Land Use Code	Size		Daily Trips Trip Rate		Daily Trips Trips
Proposed Land Use						
Medical Office	Medical-Dental Office Building (Land Use 720)	7,116	s.f.	34.80	per 1000 s.f.	248
Equivalent Land Use						
General Office	General office Building (Land use 710)			9.74	per 1000 s.f.	248
Equivalent Square Footage		**25,462**	**s.f.**			

All trip rates are from ITE Trip Generation Manual, 10th Edition, 2017

Area VMT

To identify whether a project would result in VMT impacts and whether the impacts can be mitigated, the City has created heat maps for residential and employment developments that show the current VMT per capita and per worker, respectively based on the locations of residences and jobs. Figure 3 shows the VMT heat map for workers in the City. 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. A project located in a downtown area is shown to have the area VMT lower than the thresholds of significance, while a project located in a suburban area is expected to generate area VMT higher than the thresholds of significance.

As shown in Figure 3, the project site is colored in orange which means that the current VMT per worker in the project area exceed the thresholds of significant for employment uses, but the VMT impacts for employment developments in the area can be mitigated.

Based on the San Jose VMT Evaluation Tool and the project site’s assessor parcel number (APN), the existing area VMT for employment uses in the project vicinity is 14.93 per worker. The regional average VMT for employment uses is 14.37 per worker. Because the area VMT is greater than the regional average VMT, the project is located in a high-VMT area for employment uses.

Project VMT Analysis 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. For larger projects with regional traffic, the City of San Jose’s Travel Demand Model (model) may be required for the CEQA transportation analysis.

Proposed Limited Service Restaurant

Because the project is an addition to an existing shopping center that generates regional traffic and would potentially result in a change in travel patterns of nearby shopping centers (see Figure 4), the City of San Jose’s Travel Demand Model (model) was used to analyze the project’s CEQA transportation impact on VMT. The citywide VMT was estimated both with and without the project.

Because there would be an increase in citywide VMT due to the project, the VMT evaluation tool was used to identify possible mitigation measures to bring citywide VMT down to baseline conditions. The VMT evaluation tool evaluates a list of selected VMT reduction measures that can be applied to a project to reduce the project VMT.

Medical Office Alternative

The medical office is a relatively small office development that would generate local traffic. Therefore, the VMT evaluation tool is used to estimate the project VMT and determine whether the medical office would result in a significant VMT impact.

Based on the APN of a project, the VMT evaluation tool identifies the existing average VMT per capita and the existing average 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.

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:

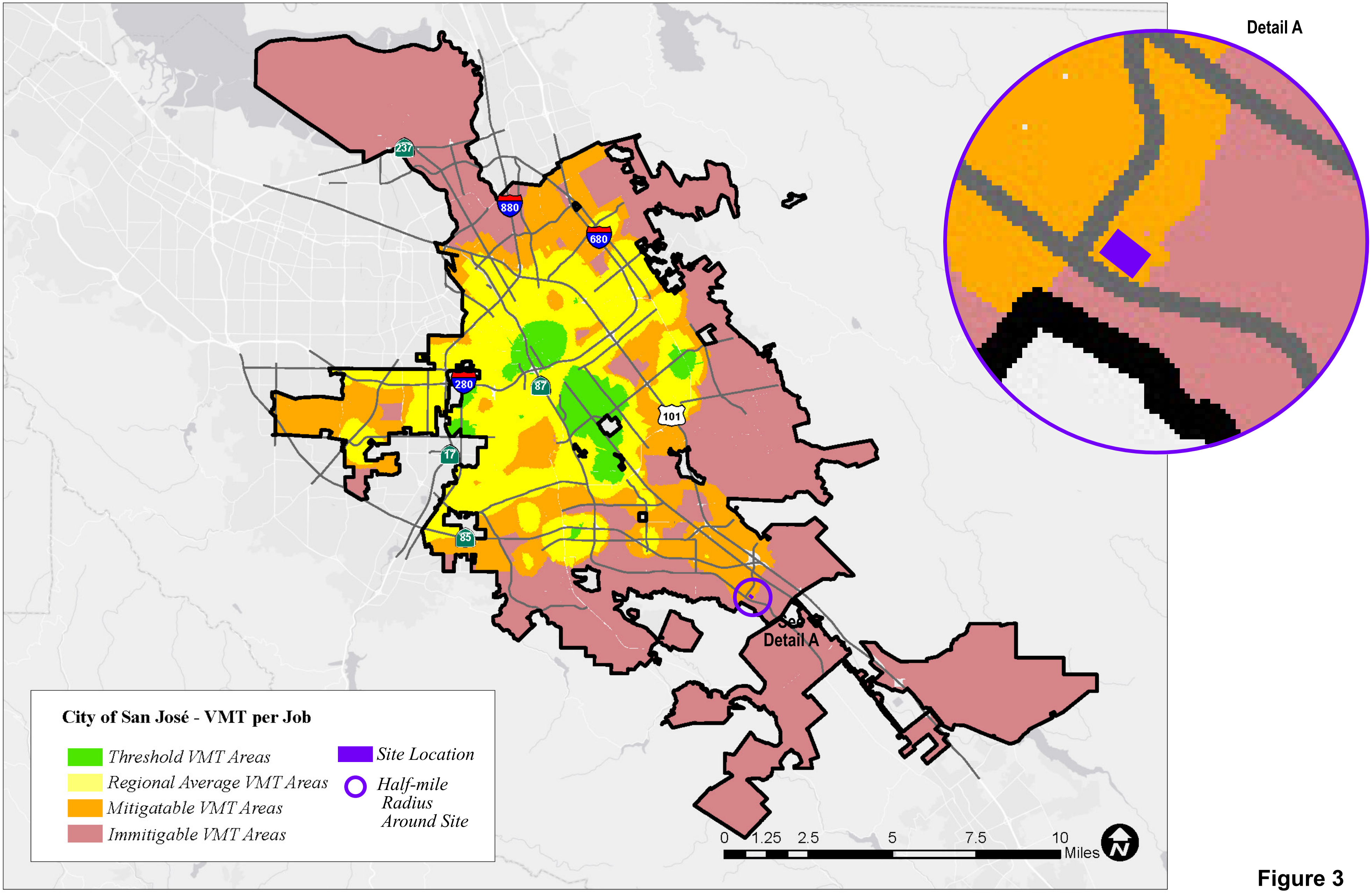

Figure 3
VMT Heat Map for Workers in San Jose

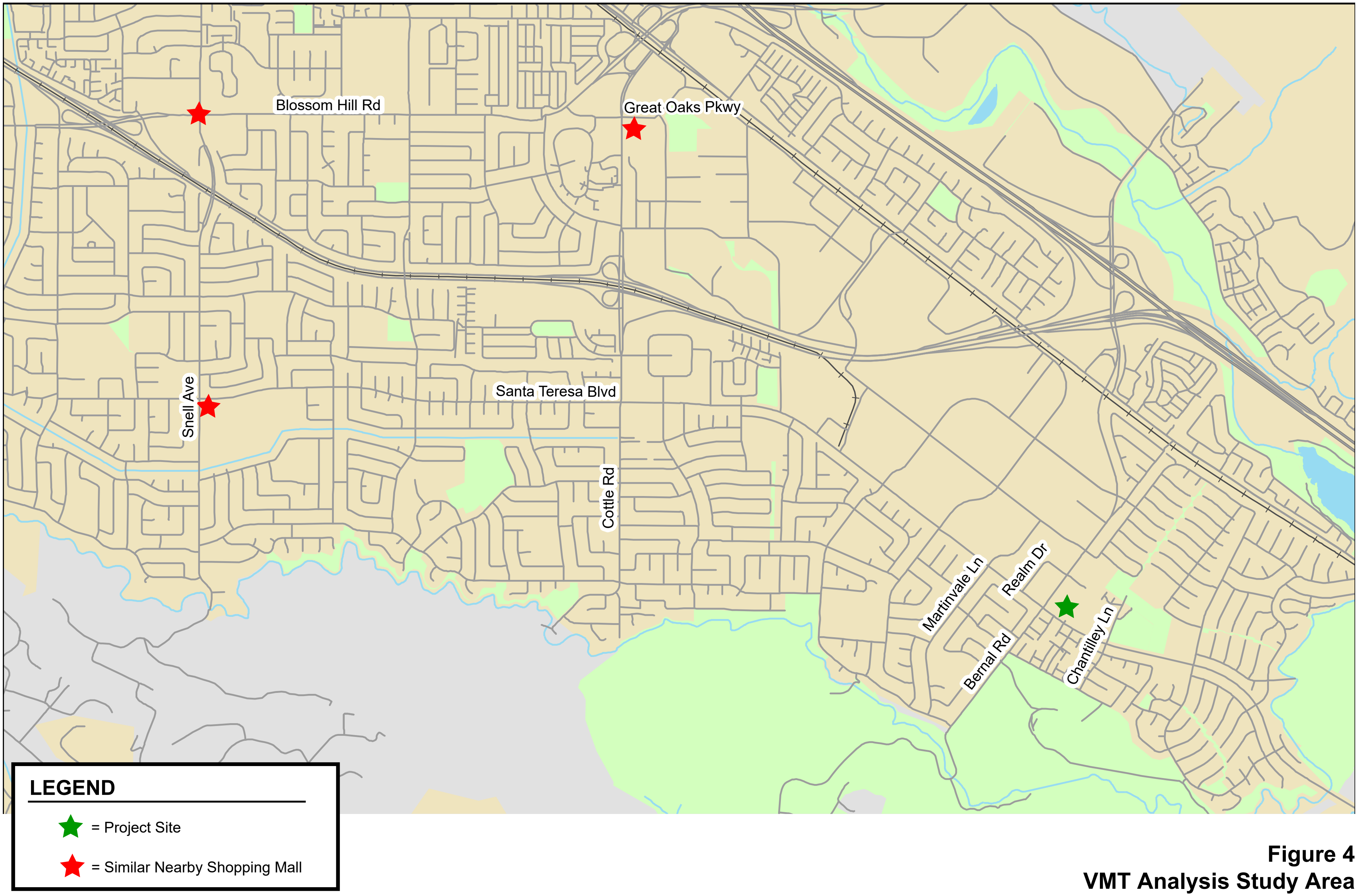

Figure 4
VMT Analysis Study Area

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.

Local Transportation Analysis Scope

A local transportation analysis (LTA) was prepared to identify potential adverse operational effects that may arise due to a development project, evaluates the effects of the project on transportation, access, circulation, and related safety elements in the proximate area of the project.

As part of the LTA, a project is generally required to conduct an intersection LOS analysis if it 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. City staff may also require an intersection LOS analysis at their discretion based on engineering judgement. If a project is not expected to add a measurable number of vehicle trips to an intersection, the project would not be required to include the intersection in the operations analysis.

Based on these criteria, as outlined in the City's *Transportation Analysis Handbook,* a list of study intersections was developed. The LTA comprises an analysis of AM and PM peak-hour traffic conditions for the following four (4) signalized intersections and one (1) unsignalized intersections (see Figure 1):

1. Santa Teresa Boulevard and Chantilley Lane
2. Santa Teresa Boulevard and Bernal Road (CMP)
3. Santa Teresa Boulevard and Martinvale Lane
4. Realm Drive and Bernal Road
5. Santa Teresa Boulevard and Fairway Glen Lane (unsignalized)

Throughout this report, Santa Teresa Boulevard is referred to as a north-south street. The Santa Teresa Boulevard/Bernal Road intersection is designated as a County Congestion Management Program (CMP) intersection. The Santa Clara Valley Transportation Authority (VTA) administers the CMP and monitors the PM peak-hour traffic conditions of CMP intersections.

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

- ***Existing Conditions.*** Existing AM and PM peak-hour traffic volumes at the study intersections were obtained from new turning-movement counts conducted in May 2019 and the 2018 CMP Annual Monitoring Report. The signalized study intersection was evaluated with a level of service analysis using TRAFFIX software in accordance with the *2000 Highway Capacity Manual* methodology.

- ***Background Conditions*.** Background traffic volumes reflect traffic added by nearby approved projects that are not yet completed or occupied. The added traffic from approved but not yet completed developments was provided by the City of San Jose. Background conditions represent the baseline conditions to which project conditions are compared for the purpose of determining potential adverse operational effects of the project.
- ***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. Background plus project traffic volumes were estimated by adding to background traffic volumes the additional traffic generated by the project.

The LTA also includes a vehicle queuing analysis, an evaluation of potential project impacts on bicycle, pedestrian, and transit facilities, and a review of site access, and on-site circulation.

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.

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,
- intersection lane configurations,
- signal timing and phasing, and
- approved project trips.

Level of Service Analysis Methodologies and 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 signalized study intersections are subject to the City of San Jose's level of service standards. The City of San Jose level of service methodology for signalized intersections is the *2000 Highway Capacity Manual* (HCM) method. This method is applied using the TRAFFIX software. The HCM operations 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 correlation between average delay and level of service is shown in Table 3.

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

Level of Service	Description	Average Control Delay Per Vehicle (sec.)
A	Signal Progression is extremely favorable. Most vehicles arrive during the green phase and do not stop at all. Short cycle lengths may also contribute to the very low vehicle delay.	10.0 or less
B+ B B-	Operations characterized by good signal progression and/or short cycle lengths. More vehicles stop than with LOS A, causing higher levels of average vehicle delay.	10.1 to 12.0 12.1 to 18.0 18.1 to 20.0
C+ C C-	Higher delays may result from fair signal progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant, though may still pass through the intersection without	20.1 to 23.0 23.1 to 32.0 32.1 to 35.0
D+ D D-	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable signal progression, long cycle lengths, or high volume-to-capacity (V/C) ratios. Many vehicles stop and individual cycle	35.1 to 39.0 39.1 to 51.0 51.1 to 55.0
E+ E E-	This is considered to be the limit of acceptable delay. These high delay values generally inidcate poor signal progression, long cycle lengths, and high volume-to-capacity (V/C) ratios. Individual cycle failures occur frequently.	55.1 to 60.0 60.1 to 75.0 75.1 to 80.0
F	This level of delay is considered unacceptable by most drivers. This condition often occurs with oversaturation, that is when arrival flow rates exceed the capacity of the intersection. Poor progression and long cycle lengths may also be major contributing causes of such delays.	greater than 80.0

Source:
Transportation Research Board, 2000 Highway Capacity Manual (Washington, D.C. 2000) p 10-16.
VTA Traffic Level of Service Analysis Guidelines (June 2003), Table 2.

CMP Signalized Intersections

Since TRAFFIX is the designated level of service methodology for the CMP and the City of San Jose, the CMP study intersections are not analyzed separately, but rather is among the signalized intersections analyzed using TRAFFIX. The only difference between the City of San Jose and CMP analyses is that the CMP level of service standard for signalized intersections is LOS E or better.

Unsignalized Intersections

The City has not established a level of service standard for unsignalized intersections. The unsignalized study intersection was analyzed for operational purposes.

Definition of Adverse Intersection Operations Effects

According to the City of San Jose's *Transportation Analysis Handbook*, an adverse effect on 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.

Intersection Vehicle Queuing Analysis

The analysis of intersection operations was supplemented with a vehicle queuing analysis at intersections where the project would add a substantial number of trips to the left-turn movements or stop-controlled approaches. The queuing analysis is presented for informational purposes only, since the City of San Jose has not defined a policy related to queuing. Vehicle queues were estimated using a Poisson probability distribution, which estimates the probability of “n” vehicles for a vehicle movement using the following formula:

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

Where:

P (x=n) = probability of “n” vehicles in queue per lane

n = number of vehicles in the queue per lane

$\lambda =$ average # of vehicles in the queue per lane (vehicles per hr per lane/signal cycles per hr)

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

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

Report Organization

This report has a total of five chapters. Chapter 2 describes existing transportation conditions including the existing roadway network, transit service, bicycle and pedestrian facilities. Chapter 3 describes the CEQA transportation analysis, including the project VMT impact and mitigation measures to reduce the VMT impact. Chapter 4 describes the local transportation analysis including the method by which project traffic is estimated, intersection operations analysis for background plus project conditions, any adverse intersection traffic effects caused by the project, intersection vehicle queuing analysis, site access and on-site circulation review, effects on bicycle, pedestrian, and transit facilities, and parking. 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 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 (Chapter 4).

Existing Roadway Network

Regional access to the project site is provided via SR 85 and US 101. Local access to the project site is provided via Santa Teresa Boulevard and Bernal Road. These facilities are described below.

SR 85 is a six-lane freeway (two mixed-flow lanes and one high occupancy vehicle (HOV) lane in each direction) in the vicinity of the site. It extends from its starting point at US 101 in South San Jose westward and northward to Mountain View, where it ends as it again merges with US 101. Access to the project site is provided via its interchange with Bernal Road.

US 101 is an eight-lane freeway (three mixed-flow lanes and one HOV lane in each direction) in the vicinity of the project site. It extends northward through San Francisco and southward through Gilroy. Access to the project site is provided via an interchange at Bernal Road.

Santa Teresa Boulevard is a six-lane arterial in the project vicinity. Throughout this report, Santa Teresa Boulevard is referred to as a north-south street. It extends north of Great Oaks Boulevard and south of Avenida Espana in the project vicinity. Santa Teresa Boulevard has a posted speed limit of 45 mph in the project vicinity with sidewalks and bike lanes on both sides of the street. There is direct access to the project site from Santa Teresa Boulevard via the main driveway of the shopping center, across from Fairway Glen Lane. The driveway is limited to right turns only for outbound traffic with inbound left turns provided via the existing left-turn pocket on Santa Teresa Boulevard.

Bernal Road is a six-lane arterial in the project vicinity. It extends from Harry Road in the west to the US 101 ramps in the east, where it becomes Silicon Valley Road. Bernal Road has a posted speed limit of 40 mph in the project vicinity with sidewalks and bike lanes on both sides of the street. Access to the project site is via its intersection at Santa Teresa Boulevard and the shopping center driveways on Bernal Road.

Existing Pedestrian and Bicycle Facilities

There are sidewalks along all streets in the study area. There are crosswalks with pedestrian signal heads at all signalized intersections within the project vicinity on Santa Teresa Boulevard, Bernal Road, Martinvale Lane, and Chantilley Lane.

Class II striped bike lanes are present on Santa Teresa Boulevard and Bernal Road in the project vicinity (Figure 5).

No other bike lanes or shared bike routes are present on the neighborhood streets in the immediate vicinity of the project site. However, the surrounding neighborhood streets, such as Martinvale Lane and Chantilley Lane, carry low traffic volumes and are conducive to bicyclists.

Transit Service

Existing bus service in the project area is provided by the Santa Clara Valley Transportation Authority (VTA). The study area is served directly by two bus routes (local route 68 and express route 182). The closest bus stop for these bus routes is on northbound Santa Teresa Boulevard in front of the project site. For the southbound direction, the closest bus stop is on Santa Teresa Boulevard north of Bernal Road, approximately 750 feet from the site.

Local Route 68 runs from the Gilroy Transit Center to the San Jose Diridon Transit Center between 4:00 AM and 11:30 PM, with a headway of 18-24 minutes. The route also stops at the Santa Teresa light rail station approximately 1.1 miles north of the project site.

Express Route 182 runs from Palo Alto to IBM on Bailey Avenue. It provides one southbound run arriving at IBM at 8:31 AM and one northbound run leaving IBM at 5:03 PM on weekdays. The route also stops at the Santa Teresa light rail station.

Existing Intersection Lane Configurations and Traffic Volumes

The existing lane configurations at the study intersections were determined by observations in the field and are shown on Figure 6.

Existing traffic volumes were obtained from new traffic counts and the 2018 CMP Annual Monitoring Report. The existing peak-hour intersection volumes are shown on Figure 7. New intersection turning-movement counts conducted for this analysis are included in Appendix A.

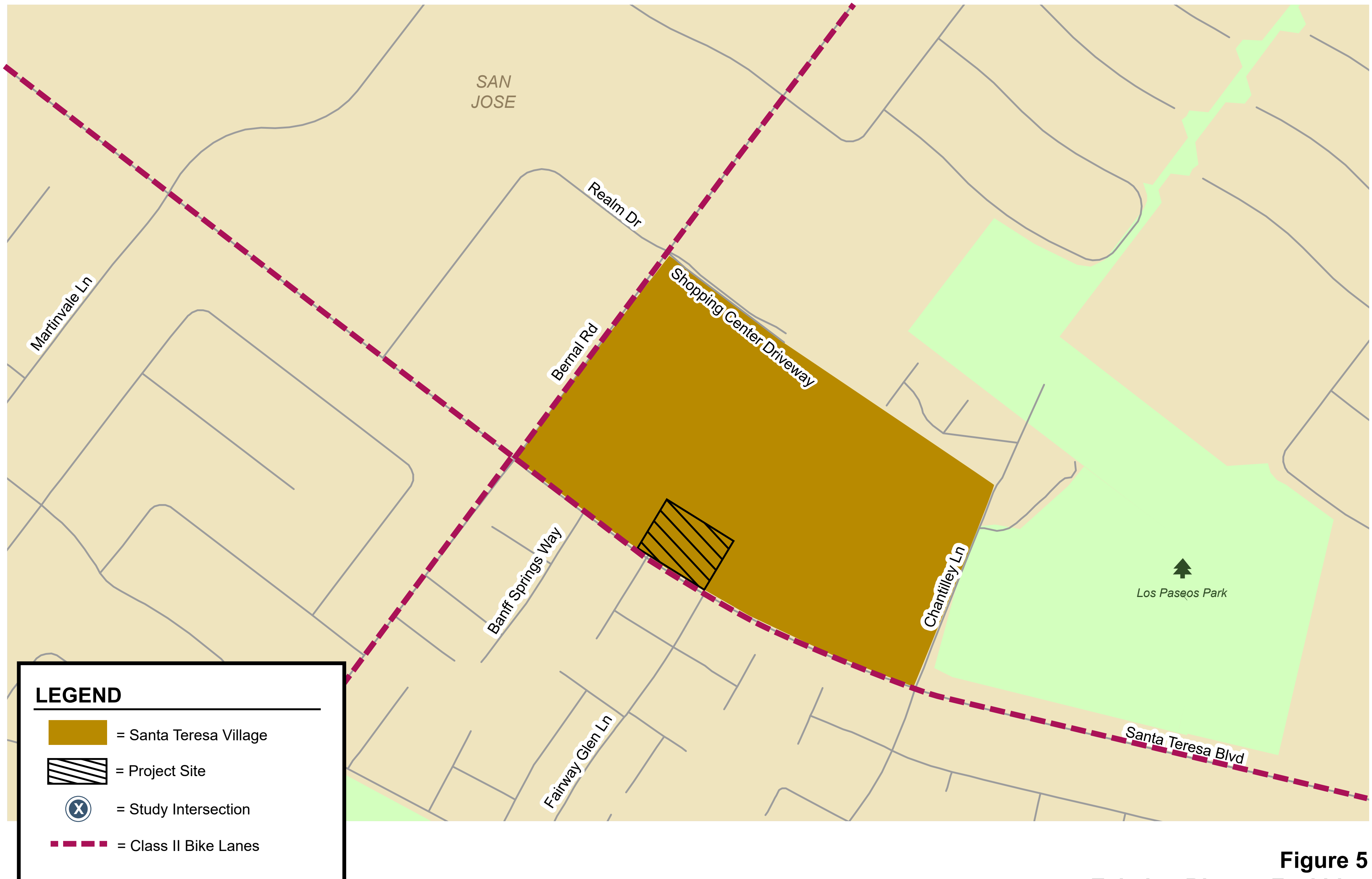

Figure 5
Existing Bicycle Facilities

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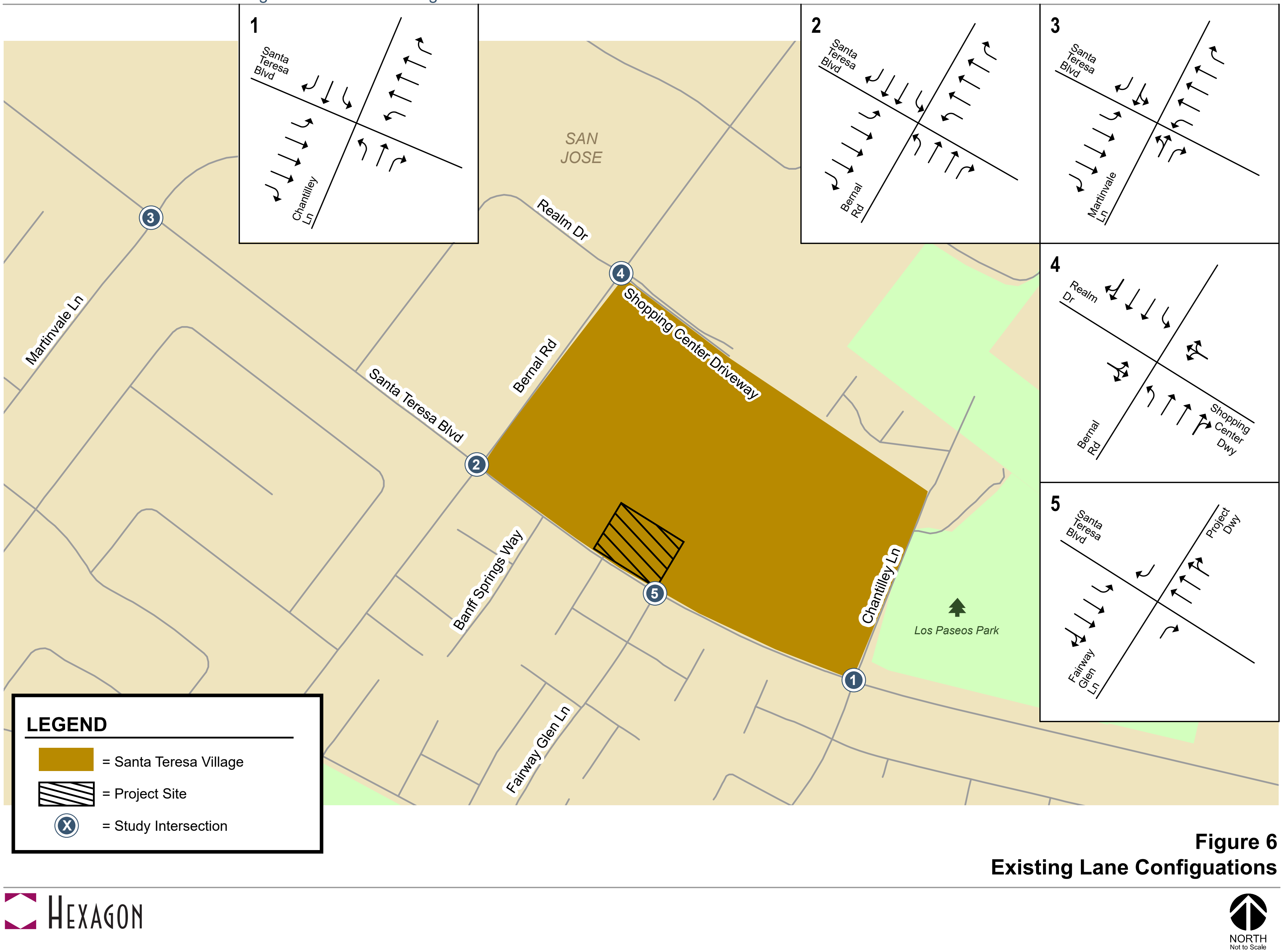

Figure 6
Existing Lane Configuations

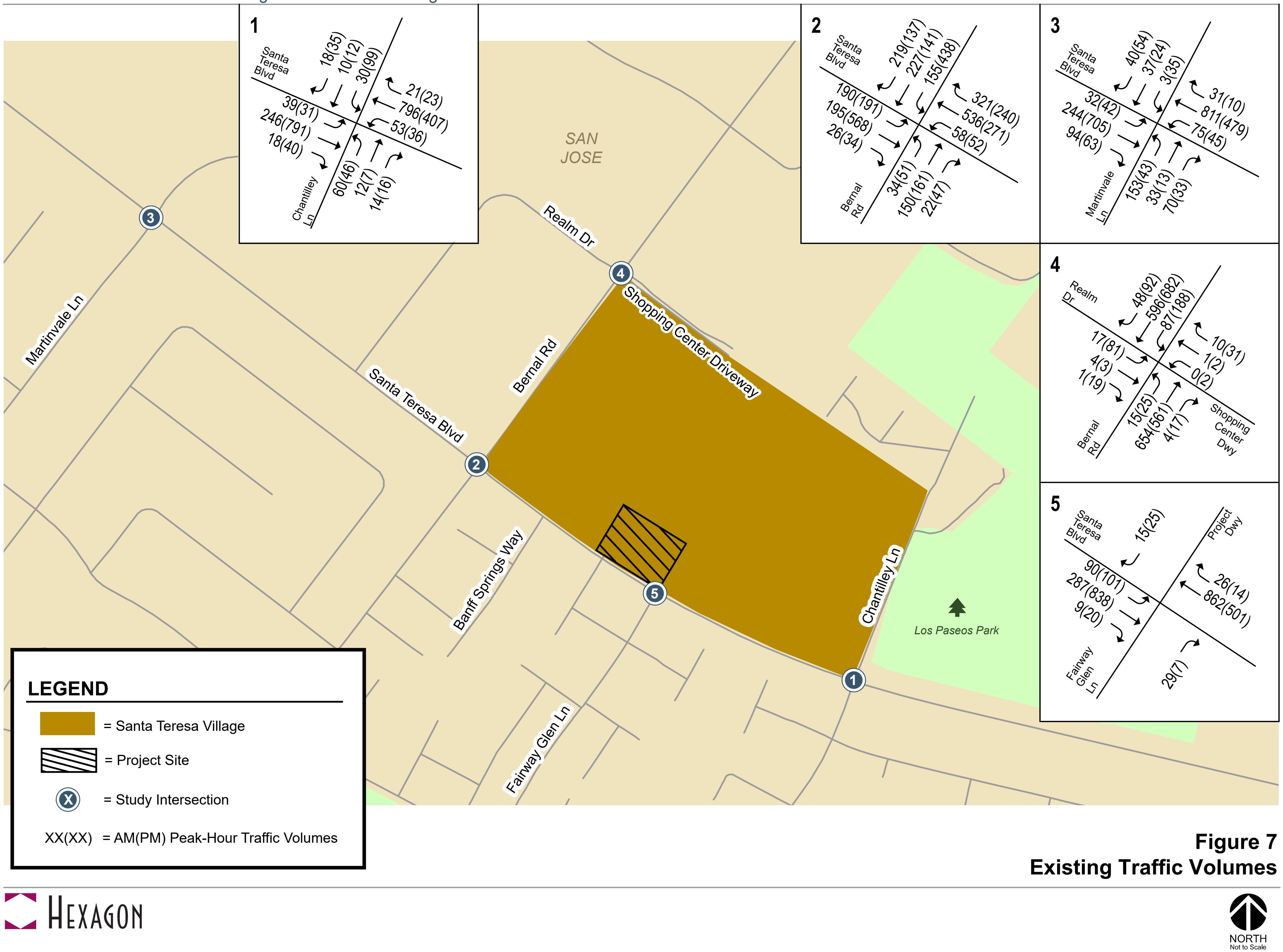

Figure 7
Existing Traffic Volumes

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Intersection Traffic Operations

Intersection traffic operations at study intersections were evaluated against the City of San Jose level of service standard (LOS D) and CMP level of service standard (LOS E). The results of the intersection level of service analysis (see Table 4) show that all study intersections currently operate at an acceptable level of service during both the AM and PM peak hours of traffic. The intersection level of service calculation sheets are included in Appendix B.

Table 4
Existing Level of Service

Intersection	Peak Hour	Count Date	Avg. Delay	LOS
1 Santa Teresa Boulevard and Chantilley Lane	AM	05/07/19	13.0	B
	PM	05/07/19	15.5	B
2 Santa Teresa Boulevard and Bernal Road*	AM	05/07/19	29.0	C
	PM	12/18/18	35.0	D+
3 Santa Teresa Boulevard and Martinvale Lane	AM	05/07/19	20.2	C+
	PM	05/07/19	15.1	B
4 Realm Drive and Bernal Road	AM	05/07/19	18.1	B-
	PM	05/07/19	28.3	C

* Denotes the CMP designated Intersection

Observed Existing Traffic Conditions

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

AM and PM field observations conducted in May 2019 revealed that overall the study intersections operate well, and the level of service calculations accurately reflect existing conditions. At the Santa Teresa Boulevard and Bernal Road intersection, the westbound left-turn queue on Bernal Road occasionally filled the storage pocket, but the vehicle queue cleared within one signal cycle. There were no other observed operational issues at the study intersections or project driveways.

3.
CEQA Transportation Analysis

This chapter describes the CEQA transportation analysis, including the area VMT, project VMT impact, mitigation measures to reduce the VMT impact, and cumulative transportation impact.

Area VMT

As described in Chapter 1, the project is located in a high-VMT area with the area VMT exceed the thresholds of significant for employment uses (see Figure 3). Based on the VMT evaluation tool, the existing area VMT for employment uses in the project vicinity is 14.93 per worker while the regional average VMT is 14.37 per worker.

Project-Level VMT Impact Analysis

Project VMT

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. Usually, the San Jose VMT Evaluation Tool is used to estimate the project VMT, based on the project location, type of development, project description, and proposed trip reduction measures. However, because the project is constructing an addition to an existing shopping center that generates regional traffic and would potentially result in a change in travel patterns of nearby shopping centers, the project must use the City's Travel Demand Model (model) to estimate the project VMT. Based on the VMT thresholds of significance (see Table 1), the project would result in a significant CEQA transportation impact and require mitigation measures to reduce VMT if there is an increase in citywide VMT due to the project.

The project's transportation analysis zone (TAZ 670) in the City model is comprised of the area bounded by Bernal Road, Monterey Road, Avenida Espana and Santa Teresa Boulevard. In addition to the Santa Teresa Village Shopping Center, the area is mostly residential and includes 730 residential units, two schools, a church and a park. The shopping center is located at the southeast corner of the Santa Teresa Boulevard and Bernal Road intersection. Based on the City's 2015 land use data base, the retail/commercial portion of this TAZ has 477 jobs.

The City's model was used to calculate the change in VMT resulting from the proposed limited-service restaurant at the Santa Teresa Village Shopping Center. The underlying premise is that the new restaurant would not cause an increase in trips but rather result in a change in trip making because some people would come to the proposed restaurant instead of other nearby restaurants. In order to estimate the impact on VMT with the model, the project's additional 7,116 square feet of building area was converted to 18 retail jobs, using a ratio of one retail job per 400 square feet. City staff provided a map of three similar neighborhood shopping areas near the project site (see Figure 4), located at the Cottle road/Great Oaks Parkway intersection, the Snell Avenue/Santa Teresa Boulevard intersection, and at the Snell Avenue/Blossom Hill Road intersection. These shopping areas are in TAZs 663, 678, and 549, respectively. It was assumed that some employees would leave their jobs at these nearby shopping centers and would go to work at the proposed restaurant instead. Similarly, it was assumed that some customers would dine at the new restaurant, rather than eat at restaurants at the nearby shopping centers. In order to reflect this, 18 retail jobs (6 at each site) were removed from the TAZs where these three nearby shopping areas are located and added to the project TAZ. These job changes were then made in the 2015 land use file and the model was run, with and without the project. Restaurant trips are considered recreational trips and are reflected in the model as "social/recreational" trips. Daily VMT for work and social/recreational trips, with and without the project, were calculated for the affected TAZs.

The model results showed that the project would cause a net increase of 21 VMT per day. The work trips would result in 27 more daily VMT and the social/recreational trips would result in a decrease of 6 daily VMT.

Project Impacts and Mitigation Measures

Project Impact: Because the limited service restaurant would result in a net increase in VMT, the project would result in a significant CEQA transportation impact based on the threshold of significance for retail uses. Therefore, mitigation measures are required to reduce VMT to baseline conditions.

Mitigation Measures: The VMT evaluation tool was used to identify the possible mitigation measures. Because the tool is designed to evaluate a list of selected VMT reduction measures that can be applied to a residential or office development, the project was evaluated as an office development in the tool to identify measures that can be applied to the project to reduce VMT associated with workers. The general office square footage equivalent of the restaurant calculates to 126,078 s.f. as shown in Table 5.

Table 5
Fast Casual Restaurant to General Office Conversion

Land Use	ITE Land Use Code	Size		Daily Trips: Trip Rate		Daily Trips: Trips
Proposed Land Use						
Fast Casual Restaurants	Fast Casual Restaurant (Land Use 930)	7,116	s.f.	172.63	per 1000 s.f.	1,228
Equivalent Land Use						
General Office	General office Building (Land use 710)			9.74	per 1000 s.f.	1,228
Equivalent Square Footage		**126,078**	**s.f.**			

All trip rates are from ITE Trip Generation Manual, 10th Edition, 2017

To use the VMT evaluation tool, the total daily VMT was converted to the daily VMT per worker based on the number of jobs estimated for the project. The project would generate 18 jobs and would result in an increase of 1.17 VMT per job (21 VMT/18 jobs = 1.17). Therefore, the VMT evaluation tool was used to identify mitigation measures that would reduce the VMT per worker by at least 1.17.

Based on the list of selected VMT reduction measures included in the VMT evaluation tool, it is recommended the project implement the following mitigation measures to reduce the significant VMT impact.

- Provide end of trip bike facilities. The project proposes to provide 10 short-term bicycle parking spaces (5 bike racks) next to the project building, which is more than the 3 required bicycle parking spaces.
- Provide commute trip reduction marketing and education for employees. This would educate and encourage employees the use of transit, shared rides, and active modes, therefore lowering the number of single occupancy vehicle trips
- Provide a rideshare program. This would encourage employees to carpool with other employees and/or through ridematching services, which help employees find other commuters traveling in the same direction.

The project will be required to prepare a transportation demand management (TDM) plan that implement the VMT mitigation measures. The combination of the mitigation measures would reduce the project VMT per worker by 1.24 (or 8.3%) as compared to the Area VMT, which would make the project impact less than significant. The VMT estimate assumes that 5% of the workers would participate in the rideshare program. Appendix C presents the VMT evaluation tool summary report for the project with the mitigation measures. The TDM plan for the project is included in Appendix E.

Cumulative Impact Analysis

Projects must demonstrate consistency with the Envision San Jose 2040 General Plan to address cumulative impacts. The project is consistent with the General Plan goals and policies for the following reasons:

- The project would provide more bicycle parking spaces than the required spaces.
- As part of the mitigation measures, the project should implement TDM measures to minimize vehicle trip generation and reduce VMT.
- The project would construct 15-foot ADA compliant sidewalks along the project frontage per the Urban Village standards. Widening the sidewalks would improve pedestrian access to the transit stop and other destinations.

With the implementation of bike parking, mitigation measures for VMT, and wider sidewalks, the project would result in a less-than-significant cumulative impact.

Medical Office Alternative CEQA Transportation Analysis

Project-Level VMT Impacts and Mitigation Measures

As described in Chapter 1, the VMT evaluation tool is used to estimate the project VMT and determine whether the medical office would result in a significant VMT impact. The VMT analysis for the medical office was conducted by converting vehicle trips generated by the medical office to an equivalent general office square footage, which calculates to 25,462 s.f. of general office. The VMT evaluation summary report generated by the VMT evaluation tool for the medical office alternative is included in Appendix C. The VMT that would be generated by the medical office building is estimated to be 14.71 daily miles per worker. The project VMT level would be lower than the area VMT for employment uses (14.93 per worker) in the project vicinity. This is because the project would result in an increase in development diversity and employment density. However, the project VMT would still exceed the threshold of 12.21 per employee for office developments. Therefore, the office component of the project would result in a significant transportation impact on VMT.

Project Impact: The VMT generated by the medical office (14.71 VMT per employee) would exceed the threshold of 12.21 VMT per employee; therefore, the medical office would result in a significant transportation impact on VMT, and mitigation measures are required to reduce the VMT impact.

Mitigation Measures: Based on the list of selected VMT reduction measures included in the VMT evaluation tool, it is recommended the project implement the following TDM mitigation measure to reduce the significant VMT impact.

- Provide end of trip bike facilities. The project proposes to provide 10 short-term bicycle parking spaces (5 bike racks) next to the project building, which is more than the 2 required bicycle parking spaces.
- Provide commute trip reduction marketing and education for employees. This would educate and encourage employees the use of transit, shared rides, and active modes, therefore lowering the number of single occupancy vehicle trips.
- Provide a rideshare program. This would encourage employees to carpool with other employees and/or through ridematching services, which help employees find other commuters traveling in the same direction.

The project would be required to prepare a TDM plan that offers the commute trip reduction measures to 100% of the eligible office employees. The mitigation measures would reduce the project VMT per worker to 12.19 (a 18.4% VMT reduction as compared to the Area VMT), which would make the project impact less than significant. The VMT estimate assumes that 25% of the workers would participate in the rideshare program. Appendix C presents the VMT evaluation tool summary report for the medical office with the mitigation measures. The TDM plan for the project is included in Appendix E.

Cumulative Impact Analysis

The cumulative impact of the medical office alternative would be same as the cumulative impact described above for the proposed limited service restaurant. With the implementation of bike parking, mitigation measures for VMT, and wider sidewalks, the project would be consistent with the General Plan and would result in a less-than-significant cumulative impact.

4.
Local Transportation Analysis

This chapter describes the local transportation analysis including the method by which project traffic is estimated, intersection operations analysis for background plus project conditions, any adverse intersection traffic effects caused by the project, site access and on-site circulation review, and effects on bicycle, pedestrian, and transit facilities.

Intersection Operations Analysis

The intersection operations analysis is intended to quantify the operations of San Jose 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 located in the City of San Jose and are evaluated based on the City of San Jose's intersection analysis methodology and standards in determining potential adverse operational effects due to the project, as 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 magnitude of traffic added to the roadway system by a particular development is estimated by multiplying the applicable trip generation rates by the size of the development. Trip generation rates resulting from new development proposed within the City of San Jose typically are estimated using trip rates published in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*, 10th Edition. The limited service restaurant would provide fast casual food service. Therefore, the ITE trip generation rates for Fast Casual Restaurants[1] (Land Use 930) were used for this project.

Trip Adjustments and Reductions

According to the *Transportation Analysis Handbook,* location-based adjustments can be made based on the place type for a project parcel. The project is located in a suburban area with single-family homes. Therefore a 91% vehicle mode share can be applied for retail uses, reducing the trips by 9%.

Based on the ITE Trip Generation Handbook, 3rd Edition, a typical 44% pass-by trip reduction for quality restaurants can be applied to the daily and PM peak-hour trips for fast food restaurants. Pass-by trips are trips that would already drive by the site on Santa Teresa Boulevard and Bernal Road (and are therefore already counted in the existing traffic) but would turn into the site while passing by. Pass-by trips result in a reduction in through traffic on Santa Teresa Boulevard and Bernal Road and an equivalent increase in trips turning in and out of the project driveway.

Net Project Trips

After applying appropriate trip reductions, the project would generate 14 new trips during the AM peak hour and 52 trips during the PM peak hour (see Table 6).

Table 6
Limited Service Restaurant Trip Generation Estimates

			Daily		AM Peak Hour				PM Peak Hour			
			Trip		Trip	Trips			Trip	Trips		
Land Use	Size		Rate	Trips	Rate	In	Out	Total	Rate	In	Out	Total
Fast Casual Restaurants[1]	7,116	s.f.	172.63	1,228	2.07	10	5	15	14.13	56	45	101
- Location-Based Vehicle Mode Share (9%)[2]				-111		-1	0	-1		-5	-4	-9
- Pass-By Reduction (44%)[3]				-491		0	0	0		-22	-18	-40
Net Project Trips				**626**		**9**	**5**	**14**		**29**	**23**	**52**

Notes:
All trip rates (in trips per 1,000 s.f.) are from ITE Trip Generation Manual, 10th Edition, 2017.
1. Fast Casual Restaurant (Land Use 930): average trip rates for AM and PM peak hours are used. Daily trip rate is was derived based on the ratio of daily to PM peak-hour rate for Fast-Food Restaurant without Drive-Through (Land Use 933).
2. A 9% reduction was applied to the project 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 Suburban with Single-Family Homes area.
3. A typical 44% pass-by trip reduction was applied to daily and PM peak-hour trips based on the ITE Trip Generation Handbook, 3rd Edition, for quality restaurants.

Trip Distribution and Assignment

The directional distribution of site-generated traffic was estimated based on existing travel patterns on the surrounding roadway system and the locations of complementary land uses. The peak-hour vehicle trips associated with the project were added to the roadway network in accordance with the trip distribution pattern, the roadway network connections, and the locations of project driveways. Figure 8 shows the project trip distribution pattern and trip assignment.

[1] Based on the land use defined in the *Trip Generation Manual*, a fast casual restaurant is a sit down restaurant with no wait staff or table service. Customers typically order off a menu board, pay for food before the food is prepared and seat themselves. The menu generally contains higher quality made to order food items with fewer frozen or processed ingredients than fast food restaurants.

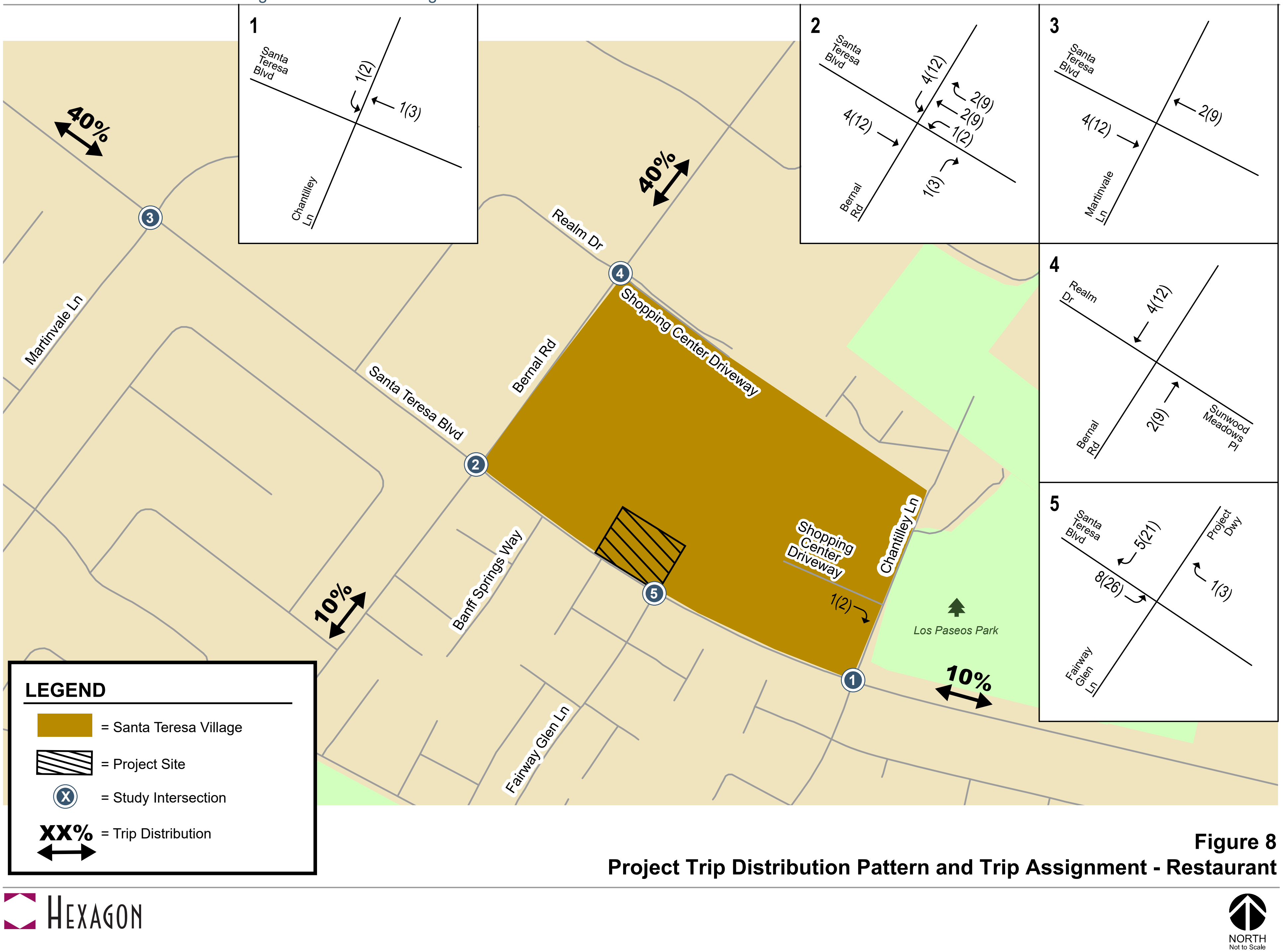

Figure 8
Project Trip Distribution Pattern and Trip Assignment - Restaurant

Because the project site is next to the main shopping center driveway on Santa Teresa Boulevard, it was assumed that most inbound trips would access the site via the main driveway. The outbound trips to southbound Santa Teresa Boulevard would exit the site via the shopping center driveway on Chantilley Lane, while all other outbound trips would exit the site via the main driveway. This assignment assumption accounts for most project trips at the project driveway for the purpose of identifying the operational issues at the driveway.

Pass-by trips were also assigned to the project driveway and the affected movements at the Santa Teresa Boulevard/Bernal Road and Santa Teresa Boulevard/Chantilley Lane intersections.

Medical Office Alternative Trip Estimates

Trips that would be generated by the medical office were estimated using average trip rates published in the ITE Trip Generation Manual for a Medical-Dental Office (Land Use 720). According to the *Transportation Analysis Handbook,* location-based adjustments can be made based on the place type for a project parcel. The project is located in a suburban area with single-family homes. Therefore a 95% vehicle mode share can be applied for retail uses, reducing the trips by 5%.

Additionally, the VMT reduction resulting from implementing the VMT reduction strategies in the VMT evaluation tool was included as part of the trip generation estimates for the office development. As discussed in Chapter 3, by implementing the VMT reduction strategies, the VMT level for the office development would be reduced from the existing level of 14.93 VMT per employee to 12.19 VMT per employee, which is an 18% reduction in VMT. The reduction was applied to the adjusted office trips (with location-based adjustment).

After applying appropriate trip reductions, the project alternative would generate 19 new trips (15 inbound and 4 outbound) during the AM peak hour and 20 new trips (6 inbound and 14 outbound) during the PM peak hour (see Table 7). Compared to the proposed limited service restaurant, the medical office is expected to generate a similar number of trips in the AM peak hour and fewer trips in the PM peak hour. Figure 9 shows the project trip distribution pattern and trip assignment.

Table 7
Medical Office Alternative Trip Generation Estimates

			Daily		AM Peak Hour				PM Peak Hour			
			Trip		Trip	Trips			Trip	Trips		
Land Use	Size		Rate	Trips	Rate	In	Out	Total	Rate	In	Out	Total
Medical Office[1]	7,116	s.f.	34.80	248	2.78	16	4	20	3.46	7	18	25
- Location-Based Vehicle Mode Share (5%)[2]				-12		-1	0	-1		0	-1	-1
- Project-Specific Trip Reduction (18%)[3]				-42		0	0	0		-1	-3	-4
Net Project Trips				**194**		**15**	**4**	**19**		**6**	**14**	**20**

Notes:
All trip rates (in trips per 1,000 s.f.) are from ITE Trip Generation Manual, 10th Edition, 2017.
1. Medical-Dental Office Building (Land Use 720): average trip rates are used.
2. A trip reduction was applied to the project 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 Suburban with Single-Family Homes area.
3. A trip reduction was applied based on the external trip adjustments obtained from the San Jose VMT Evaluation Tool.

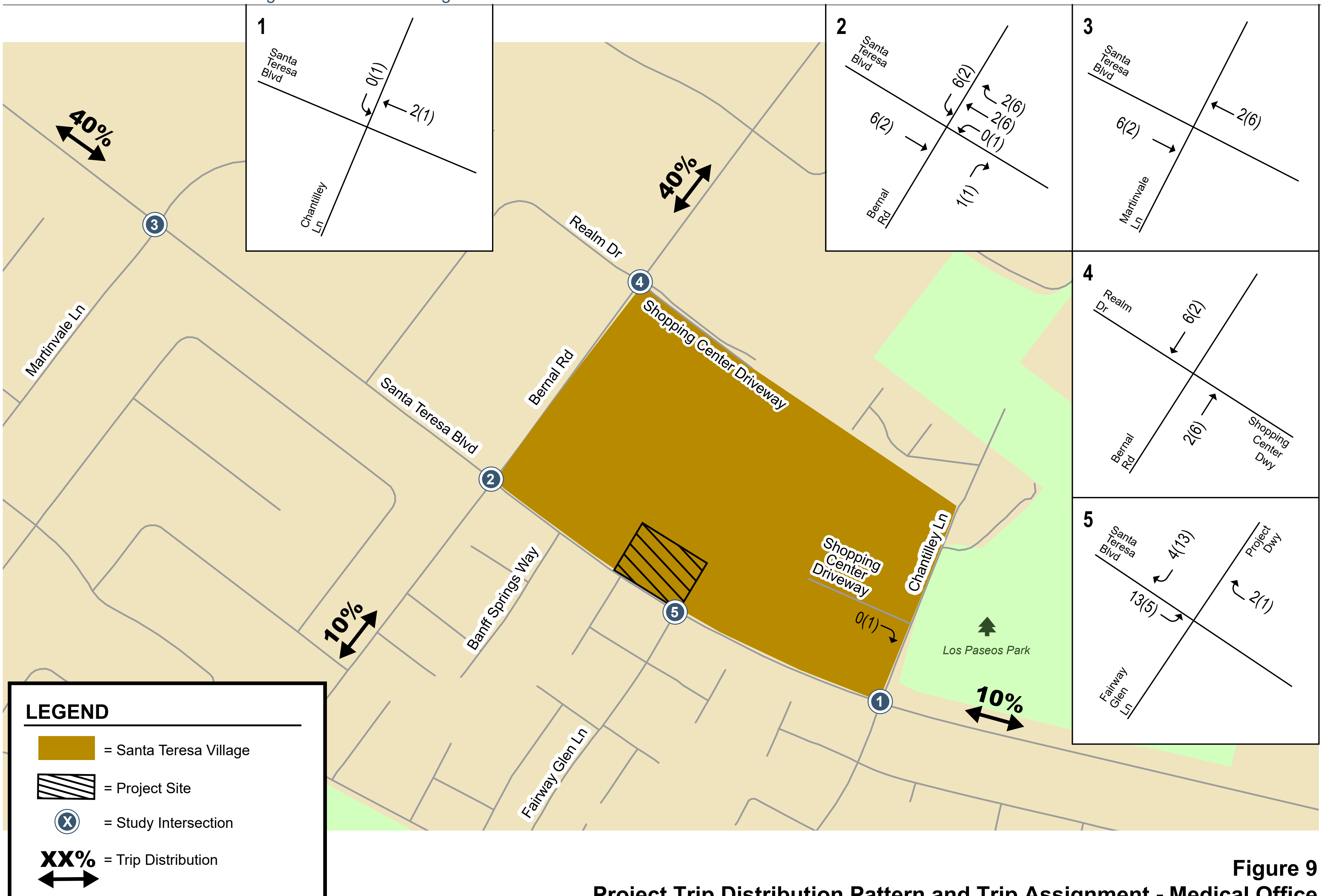

Figure 9
Project Trip Distribution Pattern and Trip Assignment - Medical Office

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NORTH
Not to Scale

Roadway Network under Background and Project Conditions

The roadway network under background conditions and background plus project conditions would be the same at all intersections as the existing roadway network, except for the Santa Teresa Boulevard and Bernal Road intersection. The iStar development will add a 2nd southbound left turn lane on Santa Teresa Boulevard. The intersection under background and background plus project conditions was evaluated with two southbound left-turn lanes.

Traffic Volumes under Background and Project Conditions

Background peak-hour traffic volumes were estimated by adding to existing volumes the estimated traffic from approved but not yet constructed developments. The added traffic from approved but not yet constructed developments was obtained from the City's Approved Trip Inventory (ATI) (see Appendix D). Background traffic volumes are shown on Figure 10. Background Plus Project traffic volumes are shown on Figure 11.

Intersection Traffic Operations under Background and Project Conditions

Intersection traffic operations at signalized study intersections were evaluated against the City of San Jose level of service standard (LOS D) and CMP level of service standard (LOS E). The results of the intersection level of service analysis (see Table 8) show that all four signalized study intersections would operate at an acceptable LOS. The intersection level of service calculation sheets are included in Appendix B.

At three study intersections, the average vehicle delay under background conditions is shown to decrease slightly compared to existing conditions. This occurs because the average delay that is calculated is a weighted average of all movements at the intersection. When background trips are added to individual intersection movements with low vehicle delays, the average delay for the entire intersection can decrease.

Table 8
Background Plus Project Intersection Levels of Service

		Background Conditions					
		No Project		With Project			
Intersection	Peak Hour	Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS	Incr. in Critical Delay (sec)	Incr. In Crit. V/C
1 Santa Teresa Boulevard and Chantilley Lane	AM	9.8	A	9.9	A	0.0	0.000
	PM	10.3	B+	10.4	B+	0.1	0.004
2 Santa Teresa Boulevard and Bernal Road*	AM	31.7	C	31.8	C	0.3	0.004
	PM	35.1	D+	35.8	D+	1.0	0.014
3 Santa Teresa Boulevard and Martinvale Lane	AM	15.3	B	15.3	B	0.0	0.001
	PM	10.0	B+	10.0	A	0.0	0.002
4 Realm Drive and Bernal Road	AM	13.5	B	13.5	B	0.0	0.001
	PM	26.9	C	26.7	C	-0.2	0.003

* Denotes the CMP designated Intersection

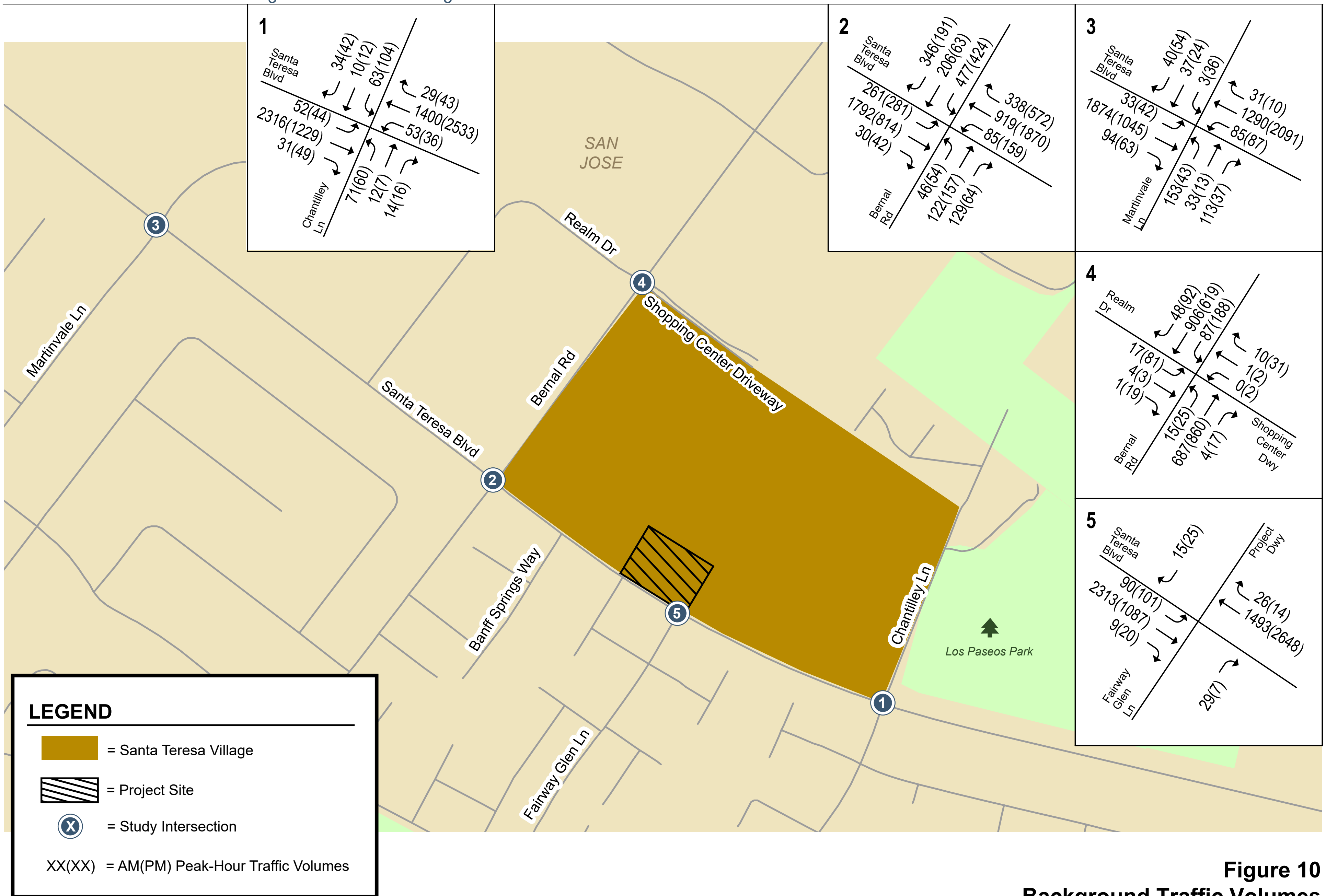


Figure 10
Background Traffic Volumes

HEXAGON

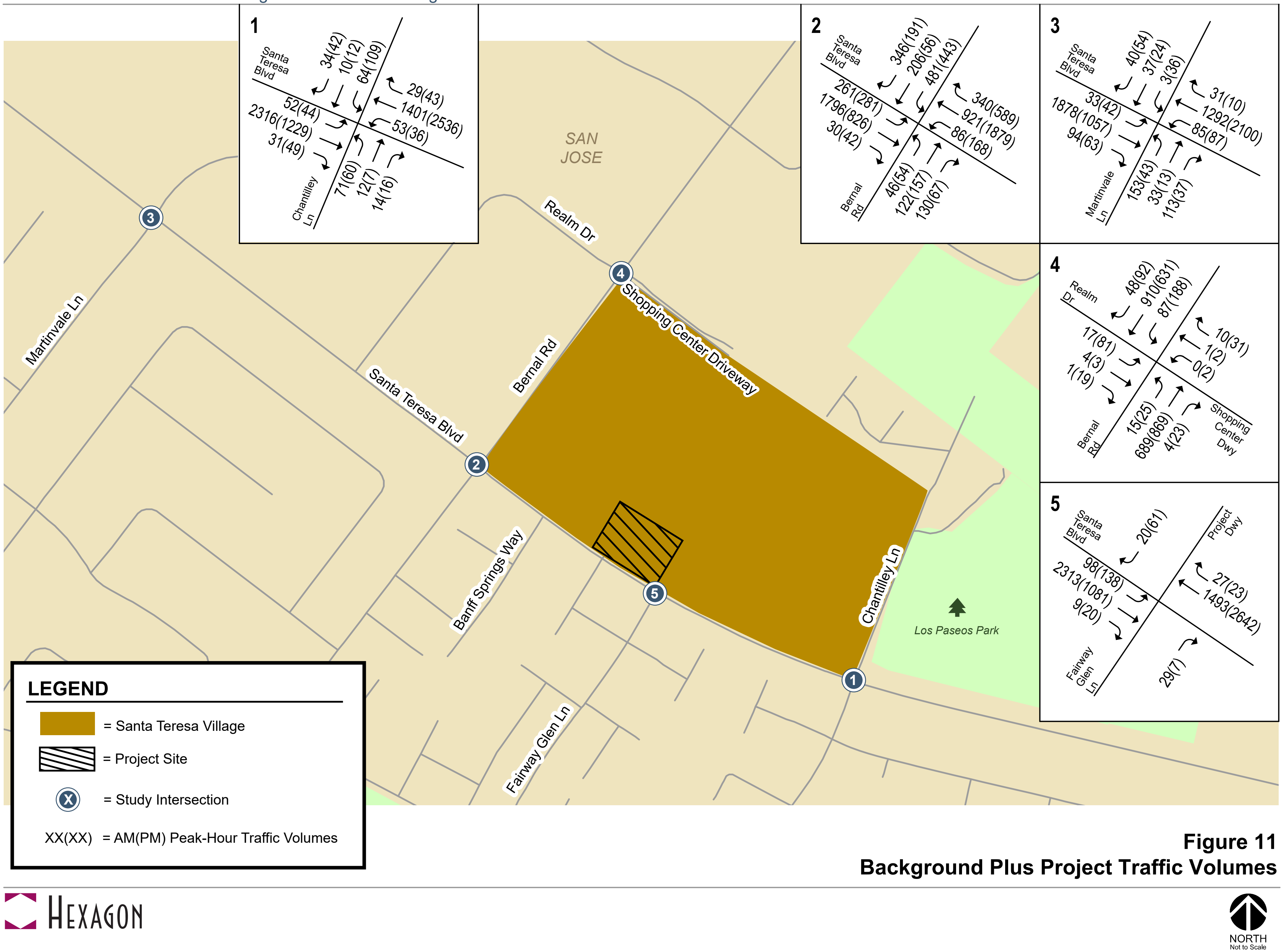


Figure 11
Background Plus Project Traffic Volumes

HEXAGON

Intersection Traffic Operations under Medical Office Alternative

The medical office is expected to generate a similar number of trips during the AM peak hour (15 inbound and 4 outbound) as the proposed restaurant (9 inbound and 5 outbound). As shown in Table 8, with the proposed limited service restaurant, all of the study intersections would operate at LOS C or better, well above the acceptable LOS D. Therefore, with the medical office, the study intersections are expected to operate at an acceptable level of service.

During the PM peak hour, the medical office is expected to generate fewer trips (6 inbound and 14 outbound) than the proposed restaurant (29 inbound and 23 outbound). With the proposed limited service restaurant, all the study intersections would operate at LOS D or better. With the medical office, the study intersections are expected to operate at an acceptable level of service during the PM peak hour as the intersections would operate either the same as or better than the analyzed restaurant.

Intersection Queuing Analysis

The queuing analysis (see Table 8) is based on vehicle queuing for left-turn movements at intersections where the project would add a noteworthy number of trips. Based on the project trip generation and trip distribution pattern, the following left-turn movements were evaluated as part of the intersection queuing analysis for this project:

- Westbound left turns from Chantilley Lane to Sana Teresa Boulevard
- Southbound left turns from Sana Teresa Boulevard to Project Driveway
- Northbound left turns from Santa Teresa Boulevard to Bernal Road
- Westbound left turns from Bernal Road to Santa Teresa Boulevard

The queuing analysis (see Table 9) indicates that the estimated 95th percentile left-turn vehicle queue would exceed the vehicle storage capacity for the westbound left-turn movement from Bernal Road to Santa Teresa Boulevard under background conditions, and the project trips would increase the vehicle queue by just one vehicle. Lengthening this turn pocket to accommodate the estimated maximum vehicle queue length is not a feasible option because of the eastbound left-turn pocket at the Realm Drive/Bernal Road intersection. Note that although field observations confirm that the left-turn traffic occasionally fills the turn pocket, long green time is assigned to the movement to accommodate the high left-turn volume and the left-turn queue clears within one signal cycle. There are two travel lanes provided for the low westbound through traffic on Bernal Road. Therefore, although the maximum left-turn queue would occasionally exceed the turn pocket storage, it is not expected to hinder the westbound traffic flow on Bernal Road.

Vehicle queuing also evaluated for the northbound right-turn movement from northbound Santa Teresa Boulevard onto eastbound Bernal Road. The right-turn lane currently provides 275 feet of vehicle storage, which can accommodate 11 vehicles. Field observations showed that there is no queue build up for the right turn movement in the AM and PM peak hours, as vehicles are able to make a right turn whenever there is a gap. The project would add 2 right turns during the AM peak hour and 9 right turns during the PM peak hour and is expected to result in a noticeable increase in vehicle queue for the right-turn movement.

Table 9
Queuing Analysis Summary

Analysis Scenario	Santa Teresa and Chantilley		Santa Teresa and Project Driveway		Santa Teresa and Bernal			
	WBL		SBL		NBL		WBL	
	AM	PM	AM	PM	AM	PM	AM	PM
Existing								
Cycle/Delay (sec)	92	92	10.3	8.7	106	124	106	124
Volume (vphpl)	30	99	90	101	58	52	155	438
Avg. Queue (veh/ln.)	1	3	0	0	2	2	5	12
Avg. Queue[1] (ft./ln)	25	75	0	0	50	50	125	300
95th %. Queue (veh/ln.)	2	5	1	1	4	4	8	18
95th %. Queue (ft./ln)	50	125	25	25	100	100	200	450
Storage (ft./ ln.)	200	200	175	175	200	200	350	350
Adequate (Y/N)	Y	Y	Y	Y	Y	Y	Y	**N**
Background								
Cycle/Delay (sec)	92	92	15.1	59.9	106	124	106	124
Volume (vphpl)	63	104	90	101	85	159	477	424
Avg. Queue (veh/ln.)	2	3	0	2	3	5	14	15
Avg. Queue[1] (ft./ln)	50	75	0	50	75	125	350	375
95th %. Queue (veh/ln.)	4	6	2	4	5	10	20	21
95th %. Queue (ft./ln)	100	150	50	100	125	250	500	525
Storage (ft./ ln.)	200	200	175	175	200	200	350	350
Adequate (Y/N)	Y	Y	Y	Y	Y	**N**	**N**	**N**
Background Plus Project								
Cycle/Delay (sec)	92	92	15.4	96.0	106	124	106	124
Volume (vphpl)	64	109	98	138	86	168	481	443
Avg. Queue (veh/ln.)	2	3	0	4	3	6	14	15
Avg. Queue[1] (ft./ln)	50	75	0	100	75	150	350	375
95th %. Queue (veh/ln.)	4	6	2	7	5	10	21	22
95th %. Queue (ft./ln)	100	150	50	175	125	250	525	550
Storage (ft./ ln.)	200	200	175	175	200	200	350	350
Adequate (Y/N)	Y	Y	Y	Y	Y	**N**	**N**	**N**

Notes:
WBL = westbound left movement; NBL = northbound left movement; SBL = southbound left movement
1. Vehicle queue calculations based on cycle length for signalized intersections and average delay for unsignalized intersections.
2. Assumes 25 feet per vehicle queued.

Medical Office Alternative

With the medical office, the vehicle queuing condition is expected to be similar to the proposed limited service restaurant in the AM peak hour and better than the proposed limited service restaurant in the PM peak hour. In the AM peak hour, the medical office is estimated to generate 6 more inbound trips than the restaurant and one fewer trip outbound. The increased inbound trips would potentially lengthen the 95th percentile left-turn vehicle queue for the westbound left-turn movement from Bernal Road to Santa Teresa Boulevard, which was estimated to exceed the vehicle storage capacity under background conditions. However, as describe above for the limited service restaurant, although the maximum left-turn queue would occasionally exceed the turn pocket storage, it is not expected to hinder the westbound traffic flow on Bernal Road.

During the PM peak hour, the medical office is estimated to generate 23 and 9 fewer inbound and outbound trips, respectively. Therefore, the vehicle queuing condition is expected to be better than the queuing condition with the limited service restaurant. As described above, the limited service restaurant would increase the left-turn vehicle queue for the westbound left-turn movement from Bernal Road to Santa Teresa Boulevard, which was estimated to exceed the vehicle storage capacity under existing and background conditions. The limited service restaurant would only increase the left-turn queue by one vehicle. Therefore, the medical office with much fewer trips is not expected to cause a noticeable increase in vehicle queue length for the movement.

Traffic Operations at Santa Teresa Boulevard and Project Driveway

The study analyzed one unsignalized intersection on Santa Teresa Boulevard at the main shopping center driveway where a southbound left-turn pocket is provided for the left-turn inbound traffic. Due to the raised center median on Santa Teresa Boulevard, outbound traffic from the driveway is restricted to right turns. A channelized southbound left-turn pocket provides left-turn access to the project site. Field observations show there is very little delay for vehicles turning into and out of the driveway during the AM and PM peak hours of traffic. Because outbound traffic is restricted to right turns, the vehicle delay would continue to be short under both background and background plus project conditions.

For the southbound left-turn movement at the driveway, because the approved developments would substantially increase the northbound Santa Teresa Boulevard volume, which reduce the gap for the left-turn vehicles to make turns, the vehicle delay in the PM peak hour is estimated to degrade from LOS A under existing conditions to LOS F (LOS C in the AM peak hour) under both background and background plus project conditions. The project would add 37 southbound left-turn vehicles during the PM peak hour. Although the project is expected to increase the vehicle queue for this left-turn movement, the storage pocket would be adequate to accommodate the maximum vehicle queue. Note that the analysis conservatively assumes that most inbound project trips would enter the site via the left-turn pocket. The project traffic at the left-turn pocket could be lower as some of the eastbound Bernal Road traffic can enter the site via the shopping center driveway on Bernal Road just east of Santa Teresa Boulevard, and some of the southbound Santa Teresa Boulevard traffic can also access the site via the same driveway by turning left onto eastbound Bernal Road. Therefore, the driveway intersection would operate adequately and is not expected to experience issues associated with vehicle queuing or delay.

Medical Office Alternative

The medical office would add fewer southbound left-turn vehicles during the PM peak hour at the project driveway. Therefore, the storage pocket would still be adequate to accommodate the maximum vehicle queue.

Neighborhood Interface

The project site can only be accessed via the shopping center driveways on Santa Teresa Boulevard, Bernal Road, and Chantilley Lane. Therefore, the project traffic is not expected to use any neighborhood residential streets or result in any cut through traffic in the adjacent neighborhoods.

Site Access and Circulation

The site access and circulation evaluation are based on the September 2019 site plan prepared by Ware Malcomb (see Figure 2). Site access and on-site circulation were reviewed in accordance with generally accepted traffic engineering standards.

Site Access

The project site would be located between two existing shopping center driveways on Santa Teresa Boulevard. Outbound traffic from both driveways is restricted to right turns. Inbound left turns can be made at the south driveway (main driveway), but only right turns can be made at the north driveway for inbound traffic. It is expected that most project trips would access the site via the main driveway. The site plan shows that the project would not alter either driveway, which are approximately 32 and 35 feet in width. Per City standards (City of San Jose Department of Transportation Geometric Guidelines), the driveway width with two-way traffic should be 26 feet.

Recommendation: The project should reduce the driveway widths of the driveways adjacent to the site to 26 feet, per City standards (City of San Jose Department of Transportation Geometric Guidelines).

Sight Distance

The project driveways are free and clear of obstructions for optimized sight distance. Adequate sight distance reduces the likelihood of a collision at driveways and provides drivers with the ability to locate sufficient gaps in traffic to exit a driveway. There are no roadway curves, street parking, or landscaping features that obstruct the vision of exiting drivers at any of the driveways. Therefore, sigh distance is adequate at the project driveways.

On-Site Circulation

On-site vehicular circulation was reviewed for the new parking provided for the proposed building, in accordance with City of San Jose design guidelines and generally accepted traffic engineering standards. The project would provide 90-degree parking spaces to the south and west sides of the proposed building with 2 two-way drive aisles accessing the parking spaces. The City’s standard minimum width for two-way drive aisles is 26 feet wide where 90-degree parking is provided. This allows sufficient room for vehicles to back out of the parking spaces. According to the site plan, the two-way drive aisles measure between 23 and 25 feet wide.

Recommendation: The City’s standard minimum width for two-way drive aisles is 26 feet where 90-degree parking is provided. The proposed two-way drive aisles would be between 23 and 25 feet wide. The project requires City approval for any proposed reduction in the standard drive aisle width.

Truck Access and Circulation

The project does not propose any freight loading docks/zones near the building. It is expected that delivery trucks would access the site via the existing driveways at the shopping center and perform loading activities within the adjacent parking lot.

Garbage Collection

The site plan shows a new trash enclosure to be located next to the parking stalls on the south side of the proposed building. Garbage vehicles would access the project site using the existing driveways on Santa Teresa Boulevard.

Emergency Vehicle Access

The City of San Jose Fire Department requires that all portions of the buildings are within 150 feet of a fire department access road and requires a minimum of 6 feet clearance from the property line along all sides of the building. The project would comply the requirements. The drive aisle directly south of the site that connects to the existing driveway on Santa Teresa Boulevard and the drive aisle directly east of the site that connects to the existing driveway on Bernal Road are designated as fire access lane for the project. Therefore, all areas of the proposed building would be within 150 feet of a fire access road.

Pedestrian, Bicycle, and Transit Analysis

All new development projects in San Jose should encourage multi-modal travel, consistent with the goals of the City's General Plan. It is the goal of the 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 all 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 Facilities

There are sidewalks along all streets and crosswalks with pedestrian signal heads at all signalized intersections in the study area. Overall, the existing pedestrian facilities provide good connectivity between the project site and the surrounding land uses and transit stops in the study area.

The site plan shows that the project would not alter the existing sidewalks and curbs along the project frontage on Santa Teresa Boulevard, but the project would add a pedestrian path that connects the sidewalks to the proposed building. Because the project is located within the Santa Teresa/Bernal Urban Village, the project should provide some improvements to enhance the pedestrian network beyond the site. As discussed under the CEQA transportation analysis in Chapter 3, the project would replace and widen the existing sidewalks along the project frontage to 15-foot ADA compliant sidewalks. Additionally, the project should narrow the existing driveways next to the project site to 26 feet. The mitigation measures would improve pedestrian access to the site.

Bicycle Facilities

The project site is served directly by striped bike lanes on Santa Teresa Boulevard and Bernal Road. Future restaurant employees and customers could utilize the bike lanes for recreational or commuting purposes. The project would provide 10 bicycle parking spaces in front of the proposed restaurant building.

The project would not remove any bicycle facilities, nor would it conflict with any adopted plans or policies for new bicycle facilities.

Transit Service

VTA's local bus route 68 and express route 182 run along Santa Teresa Boulevard and stop in front of the project site. The existing bus stop consists of a standard blue bus stop sign and a shelter with a bench. Because the project is located within the Santa Teresa/Bernal Urban Village, the project should provide some improvements to promote transit service. As discussed under the CEQA transportation analysis in Chapter 3, the project would replace and widen the existing sidewalks along the project frontage to 15-foot ADA compliant sidewalks to improve transit access.

Since the project site is served directly by a local bus route, it is reasonable to assume that some restaurant employees and customers would utilize the bus service. It is estimated that the small increase in transit demand generated by the proposed limited-service restaurant could be accommodated by the current available ridership capacity of the VTA bus service.

Parking

Parking provided on site was evaluated based on the City of San Jose parking standards (San Jose Municipal Code Chapter 20.90, Table 20-190). The vehicle parking requirement for neighborhood shopping center is one parking space per 225 square feet of floor area for a shopping center 100,000 s.f. or greater.

Twenty-seven (27) parking spaces are required for the proposed building with 7,116 square feet of gross floor area. The project proposes to construct 28 spaces, including 2 new accessible parking stalls adjacent to the new building. This meets the requirement for vehicle parking.

Noted that project would replace 66 existing parking spaces on site. With the 28 proposed parking spaces, there would be a reduction of 38 spaces in the shopping center. It is assumed that the overall parking spaces in the shopping center would still meet the City parking requirement.

The bicycle parking requirement for the proposed restaurant is one space per 3,000 square feet. The proposed 7,116 square foot limited service restaurant would require 3 bicycle parking spaces. The project proposes 10 bicycle parking spaces immediately outside of the proposed building. This exceeds the requirement for bicycle parking supply.

The motorcycle parking requirement for the proposed restaurant is one space per 20 required vehicle parking spaces. Therefore, the project must provide 2 motorcycle parking spaces. Two motorcycle parking spaces are shown on the site plan, in the southwest corner of the building. The project meets the City's motorcycle parking requirement.

Medical Office Alternative

The vehicle parking requirement for a medical office is one parking space per 250 square feet of floor area. Twenty-eight (28) parking spaces are required for the medical office alternative. The project proposes to construct 28 spaces, which would meet the requirement.

The bicycle parking requirement for the medical office is one space per 4,000 square feet. The proposed medical office would require 2 bicycle parking spaces. The project proposes to provide 10 bicycle parking spaces, which exceeds the requirement,

The proposed medical office does not have a requirement for motorcycle parking spaces.

5.
Conclusions

This study was conducted for the purpose of identifying the potential transportation impacts related to the proposed 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.* Based on the City of San Jose's Transportation Analysis Policy and *Transportation Analysis Handbook*, the TA report for the project includes a CEQA transportation analysis and a LTA. The CEQA transportation analysis comprises of an evaluation of VMT. The LTA supplements the CEQA transportation analysis by identifying transportation operational issues via an evaluation of weekday AM and PM peak-hour traffic conditions for four signalized intersections and one unsignalized intersection in the vicinity of the project site. The LTA also includes an analysis of site access, on-site circulation, parking, vehicle queueing, and effects to transit, bicycle, and pedestrian access.

CEQA Transportation Impacts

Based on the San Jose VMT Evaluation Tool, the existing area VMT for employment uses in the project vicinity is 14.93 per worker while the regional average VMT is 14.37 per worker. Because the area VMT is higher than the regional average VMT, the project is located in a high-VMT area for employment uses.

Limited Service Restaurant Project-Level VMT Impacts and Mitigation Measures

Project Impact: Because the proposed limited service restaurant would result in a net increase of 21 VMT for all employees (or 1.17 VMT per employee), the project would result in a significant CEQA transportation impact based on the threshold of significance for retail uses. Therefore, mitigation measures are required to reduce VMT to baseline conditions.

Mitigation Measures: It is recommended the project implement the following mitigation measures to reduce the significant VMT impact.

- Provide end of trip bike facilities. The project proposes to provide 10 short-term bicycle parking spaces (5 bike racks) next to the project building, which is more than the 3 required bicycle parking spaces.
- Provide commute trip reduction marketing and education for employees. This would educate and encourage employees the use of transit, shared rides, and active modes, therefore lowering the number of single occupancy vehicle trips.
- Provide a rideshare program. This would encourage employees to carpool with other employees and/or through ridematching services to help employees find other commuters traveling in the same direction.

The project will be required to prepare a transportation demand management (TDM) plan that implement the VMT mitigation measures. The combination of the mitigation measures would reduce the project VMT by 1.24 per worker (an 8.3% VMT reduction as compared to the Area VMT) or 22.32 for all workers. Therefore, the mitigation measures would reduce the project VMT to baseline conditions and make the project impact less than significant. The VMT estimate assumes that 5% of the workers would participate in the rideshare program.

CEQA Cumulative Impacts

The project is consistent with the General Plan goals and policies for the following reasons:

- The project would provide more bicycle parking spaces than required.
- As part of the mitigation measures, the project should implement TDM measures to minimize vehicle trip generation and reduce VMT.
- The project should construct 15-foot ADA compliant sidewalks along the project frontage per the Urban Village standards. Widening the sidewalks would improve pedestrian access to the transit stop and other destinations.

With the implementation of bicycle parking, mitigation measures for VMT, and wider sidewalks, the project would result in a less-than-significant cumulative impact.

Medical Office Project-Level VMT Impacts and Mitigation Measures

Project Impact: The VMT generated by the medical office (14.71 VMT per employee) would exceed the threshold of 12.21 VMT per employee; therefore, the medical office would result in a significant transportation impact on VMT, and mitigation measures are required to reduce the VMT impact.

Mitigation Measures: Based on the list of selected VMT reduction measures included in the VMT evaluation tool, it is recommended the project implement the following TDM mitigation measure to reduce the significant VMT impact.

- Provide end of trip bike facilities. The project proposes to provide 10 short-term bicycle parking spaces (5 bike racks) next to the project building, which is more than the 2 required bicycle parking spaces.
- Provide commute trip reduction marketing and education for employees. This would educate and encourage employees the use of transit, shared rides, and active modes, therefore lowering the number of single occupancy vehicle trips.
- Provide a rideshare program. This would encourage employees to carpool with other employees and/or through ridematching services, which help employees find other commuters traveling in the same direction.

The project would be required to prepare a TDM plan that offers the commute trip reduction measures to 100% of the eligible office employees. The mitigation measures would reduce the project VMT per worker to 12.19 (a 18.4% VMT reduction as compared to the Area VMT), which would make the project impact less than significant. The VMT estimate assumes that 25% of the workers would participate in the rideshare program.

Cumulative Impact Analysis

The cumulative impact of the medical office alternative would be same as the cumulative impact described above for the proposed limited service restaurant. With the implementation of bike parking, mitigation measures for VMT, and wider sidewalks, the project would be consistent with the General Plan and would result in a less-than-significant cumulative impact.

Local Transportation Analysis (LTA)

Project Trip Generation

Limited Service Restaurant Trip Estimates

Project trips were estimated using trip rates published in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*, 10th Edition. The trip generation rates for Fast-Food Restaurant (Land Code Use 930) were used for this project. A 9% trip reduction was applied to the trip generation estimate to account for non-vehicle mode share of the project area. A 44% pass-by trip reduction was applied to the PM peak-hour trips. With trip reductions, the project is estimated to generate 14 net new trips during the AM peak hour (9 inbound and 5 outbound) and 50 trips during the PM peak hour (27 inbound and 23 outbound).

Medical Office Alternative Trip Estimates

Trips that would be generated by the medical office were estimated using average trip rates published in the ITE Trip Generation Manual for a Medical-Dental Office (Land Use 720). A 5% trip reduction was applied to the trip generation estimate to account for non-vehicle mode share of the project area. By implementing VMT reduction strategies, the VMT level for the office development would be reduced from the existing level of 14.93 VMT per employee to 12.19 VMT per employee, which is an 18% reduction in VMT. The reduction was applied to the adjusted office trips (with location-based adjustment).

After applying appropriate trip reductions, the project alternative would generate 18 new trips (14 inbound and 4 outbound) during the AM peak hour and 19 new trips (6 inbound and 13 outbound) during the PM peak hour. Compared to the proposed limited service restaurant, the medical office is expected to generate a similar number of trips in the AM peak hour and fewer trips in the PM peak hour.

Intersection Traffic Operations

Based on the City of San Jose intersection operations analysis criteria, none of the signalized study intersections would be adversely affected by the limited service restaurant project. The medical office is expected to generate a similar number of trips as the proposed restaurant during the AM peak hour and fewer trips during the PM peak hour. As shown in Table ES-1, with the proposed limited service restaurant, all of the study intersections would operate at LOS D or better. Therefore, with the medical office, the study intersections are expected to operate at an acceptable level of service.

At the unsignalized project driveway intersection on Santa Teresa Boulevard, because outbound traffic is restricted to right turns, the vehicle delay would continue to be short under both background and background plus project conditions. For the southbound (inbound) left-turn movement at the driveway, because the approved developments would substantially increase the northbound Santa Teresa Boulevard volume, which reduce the gap for the left-turn vehicles to make turns, the vehicle delay in the PM peak hour is estimated to degrade from LOS A under existing conditions to LOS F (LOS C in the AM peak hour) under both background and background plus project conditions. The project would add 37 southbound left-turn vehicles during the PM peak hour. Although the project is expected to increase the maximum vehicle queue for this left-turn movement by 3 vehicles in the PM peak hour, the storage pocket would be adequate to accommodate the maximum vehicle queue. Note that the analysis conservatively assumes that most inbound project trips would enter the site via the left-turn pocket. The project traffic at the left-turn pocket could be lower as some of the eastbound Bernal Road traffic can enter the site via the shopping center driveway on Bernal Road just east of Santa Teresa Boulevard, and some of the southbound Santa Teresa Boulevard traffic can also access the site via the same driveway by turning left onto eastbound Bernal Road. Therefore, the driveway intersection would operate adequately and is not expected to experience issues associated with vehicle queuing or delay.

Vehicle Queuing Analysis

Vehicle queuing analysis was performed for left-turn movements at intersections where the project would add a noteworthy number of trips. The queuing analysis indicates that the estimated 95th percentile left-turn vehicle queue would exceed the vehicle storage capacity for the westbound left-turn movement from Bernal Road to Santa Teresa Boulevard under background conditions, and the project trips would increase the vehicle queue by just one vehicle. Lengthening this turn pocket to accommodate the estimated maximum vehicle queue length is not a feasible option because of the eastbound left-turn pocket at the Realm Drive/Bernal Road intersection. Note that although field observations confirm that the left-turn traffic occasionally fills the turn pocket, long green time is assigned to the movement to accommodate the high left-turn volume, and the left-turn queue clears within one signal cycle. There are two travel lanes provided for the low westbound through traffic on Bernal Road. Therefore, although the maximum left-turn queue would occasionally exceed the turn pocket storage, it is not expected to hinder the westbound traffic flow on Bernal Road.

Medical Office Alternative

With the medical office, the vehicle queuing condition is expected to be similar to the proposed limited service restaurant in the AM peak hour and better than the proposed limited service restaurant in the PM peak hour. The increased inbound trips during the AM peak hour would potentially lengthen the 95th percentile left-turn vehicle queue for the westbound left-turn movement from Bernal Road to Santa Teresa Boulevard, which was estimated to exceed the vehicle storage capacity under background conditions. However, as describe above for the limited service restaurant, although the maximum left-turn queue would occasionally exceed the turn pocket storage, it is not expected to hinder the westbound traffic flow on Bernal Road.

During the PM peak hour, the medical office is estimated to generate fewer inbound and outbound trips. Therefore, the vehicle queuing condition is expected to be better than the queuing condition with the limited service restaurant.

Other Transportation Issues

The proposed site plan shows adequate site access and on-site circulation, and no significant operational issues are expected to occur as a result of the project. The project would not have an adverse effect on the existing pedestrian, bicycle, or transit facilities in the area.

Recommendations:

- Reduce the driveway widths of the driveways adjacent to the site to 26 feet, per City standards (City of San Jose Department of Transportation Geometric Guidelines).
- The City’s standard minimum width for two-way drive aisles is 26 feet where 90-degree parking is provided. The proposed two-way drive aisles would be between 23 and 25 feet wide. The project requires City approval for any proposed reduction in the standard drive aisle width.

Limited Service Restaurant Building
At Santa Teresa Village
Transportation Analysis

Technical Appendices

January 28, 2020

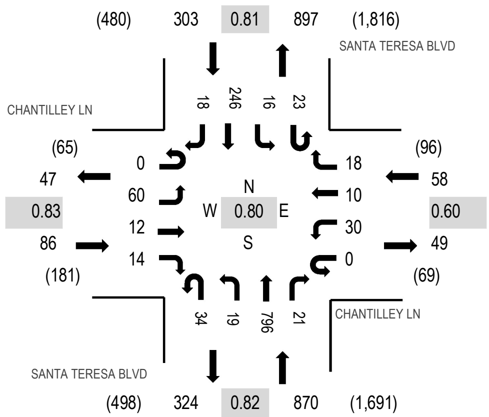
Appendix A

Traffic Counts

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

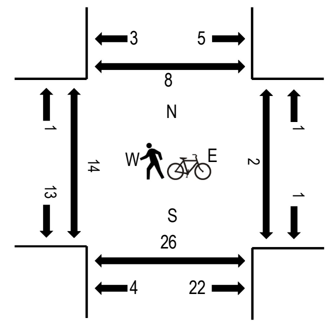
Location: 1 SANTA TERESA BLVD & CHANTILLEY LN AM
Date: Tuesday, May 7, 2019
Peak Hour: 08:00 AM - 09:00 AM
Peak 15-Minutes: 08:45 AM - 09:00 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	CHANTILLEY LN Eastbound U-Turn	Left	Thru	Right	CHANTILLEY LN Westbound U-Turn	Left	Thru	Right	SANTA TERESA BLVD Northbound U-Turn	Left	Thru	Right	SANTA TERESA BLVD Southbound U-Turn	Left	Thru	Right	Total	Rolling Hour	Pedestrian Crossings West	East	South	North
7:00 AM	0	16	0	0	0	8	1	4	0	0	179	5	7	1	26	0	247	1,131	2	0	3	1
7:15 AM	0	23	0	1	0	2	0	0	0	1	191	1	3	2	35	4	263	1,195	0	0	0	0
7:30 AM	0	27	0	3	0	7	1	4	0	3	209	5	0	2	34	5	300	1,221	0	0	0	2
7:45 AM	0	24	0	1	0	4	1	6	0	0	224	3	2	1	53	2	321	1,227	0	1	0	1
8:00 AM	0	16	0	5	0	8	0	4	10	3	211	4	5	3	41	1	311	1,317	1	1	2	1
8:15 AM	0	12	1	1	0	7	0	3	1	5	188	4	5	4	55	3	289		1	0	1	2
8:30 AM	0	15	4	4	0	6	2	4	2	2	170	4	6	3	81	3	306		6	0	15	3
8:45 AM	0	17	7	4	0	9	8	7	21	9	227	9	7	6	69	11	411		3	1	8	2

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound U-Turn	Left	Thru	Right	Westbound U-Turn	Left	Thru	Right	Northbound U-Turn	Left	Thru	Right	Southbound U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	59	11	14	0	30	10	18	34	19	782	21	23	16	234	18	1,289
Mediums	0	1	1	0	0	0	0	0	0	0	13	0	0	0	12	0	27
Total	0	60	12	14	0	30	10	18	34	19	796	21	23	16	246	18	1,317

All Traffic Data Services Inc.

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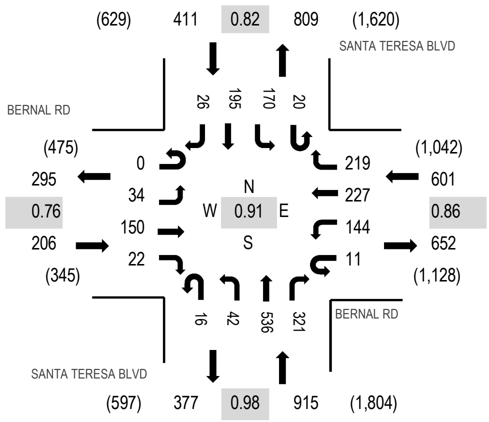
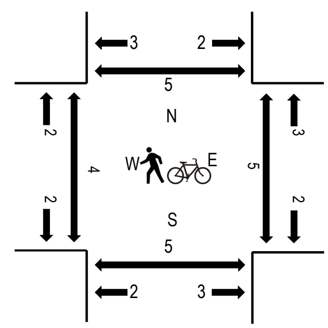
Location: 2 SANTA TERESA BLVD & BERNAL RD AM
Date: Tuesday, May 7, 2019
Peak Hour: 08:00 AM - 09:00 AM
Peak 15-Minutes: 08:45 AM - 09:00 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	BERNAL RD Eastbound U-Turn	Left	Thru	Right	BERNAL RD Westbound U-Turn	Left	Thru	Right	SANTA TERESA BLVD Northbound U-Turn	Left	Thru	Right	SANTA TERESA BLVD Southbound U-Turn	Left	Thru	Right	Total	Rolling Hour	Pedestrian Crossings West	East	South	North
7:00 AM	0	4	21	1	1	21	22	29	1	2	105	69	0	12	15	3	306	1,687	2	0	2	1
7:15 AM	0	6	22	6	5	20	25	27	3	8	137	79	1	24	20	1	384	1,964	0	0	0	0
7:30 AM	0	6	24	5	0	22	33	54	0	5	182	55	1	19	25	9	440	2,082	0	0	1	1
7:45 AM	0	9	31	4	9	28	53	92	1	8	157	77	1	28	48	11	557	2,106	1	0	0	2
8:00 AM	0	15	50	3	3	23	67	84	3	14	173	53	2	50	40	3	583	2,133	2	0	2	0
8:15 AM	0	9	44	5	4	45	47	47	2	10	126	70	5	43	38	7	502		0	0	1	1
8:30 AM	0	4	18	11	3	37	46	40	5	9	107	87	6	37	51	3	464		0	3	0	2
8:45 AM	0	6	38	3	1	39	67	48	6	9	130	111	7	40	66	13	584		2	0	2	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound U-Turn	Left	Thru	Right	Westbound U-Turn	Left	Thru	Right	Northbound U-Turn	Left	Thru	Right	Southbound U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	0	3
Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	33	146	22	11	141	221	212	16	41	528	314	20	161	186	25	2,077
Mediums	0	1	4	0	0	3	6	6	0	1	8	7	0	7	9	1	53
Total	0	34	150	22	11	144	227	219	16	42	536	321	20	170	195	26	2,133

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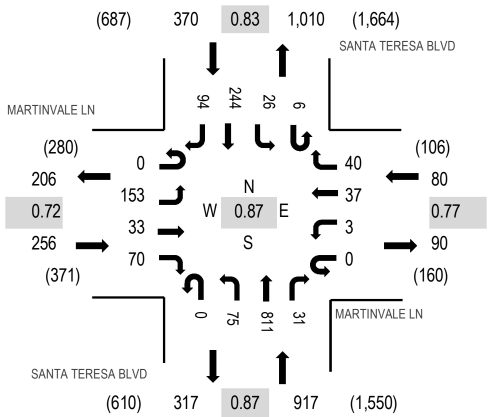
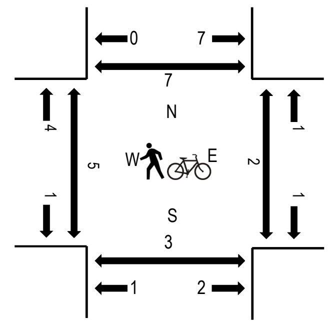
Location: 3 SANTA TERESA BLVD & MARTINVALE LN AM
Date: Tuesday, May 7, 2019
Peak Hour: 07:30 AM - 08:30 AM
Peak 15-Minutes: 08:00 AM - 08:15 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	MARTINVALE LN Eastbound U-Turn	Left	Thru	Right	MARTINVALE LN Westbound U-Turn	Left	Thru	Right	SANTA TERESA BLVD Northbound U-Turn	Left	Thru	Right	SANTA TERESA BLVD Southbound U-Turn	Left	Thru	Right	Total	Rolling Hour	Pedestrian Crossings West	East	South	North
7:00 AM	0	6	4	9	0	1	1	5	0	4	132	3	1	2	23	6	197	1,244	0	1	1	3
7:15 AM	0	16	4	9	0	0	0	4	0	5	165	3	1	2	40	5	254	1,516	0	1	1	1
7:30 AM	0	23	1	5	0	0	1	12	0	14	195	7	3	4	54	21	340	1,623	1	2	1	0
7:45 AM	0	51	6	15	0	0	13	10	0	20	233	10	1	6	56	32	453	1,570	0	0	1	0
8:00 AM	0	48	15	27	0	1	14	3	0	34	211	6	0	10	73	27	469	1,470	1	0	0	3
8:15 AM	0	31	11	23	0	2	9	15	0	7	172	8	2	6	61	14	361		2	0	1	4
8:30 AM	0	15	6	12	0	2	0	5	0	9	123	7	3	9	86	10	287		0	2	2	0
8:45 AM	0	18	4	12	0	2	3	3	2	10	157	13	0	13	95	21	353		0	1	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound U-Turn	Left	Thru	Right	Westbound U-Turn	Left	Thru	Right	Northbound U-Turn	Left	Thru	Right	Southbound U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2
Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	149	33	69	0	3	37	40	0	73	794	30	5	26	234	94	1,587
Mediums	0	4	0	1	0	0	0	0	0	2	16	1	1	0	9	0	34
Total	0	153	33	70	0	3	37	40	0	75	811	31	6	26	244	94	1,623

All Traffic Data Services Inc.

(303) 216-2439
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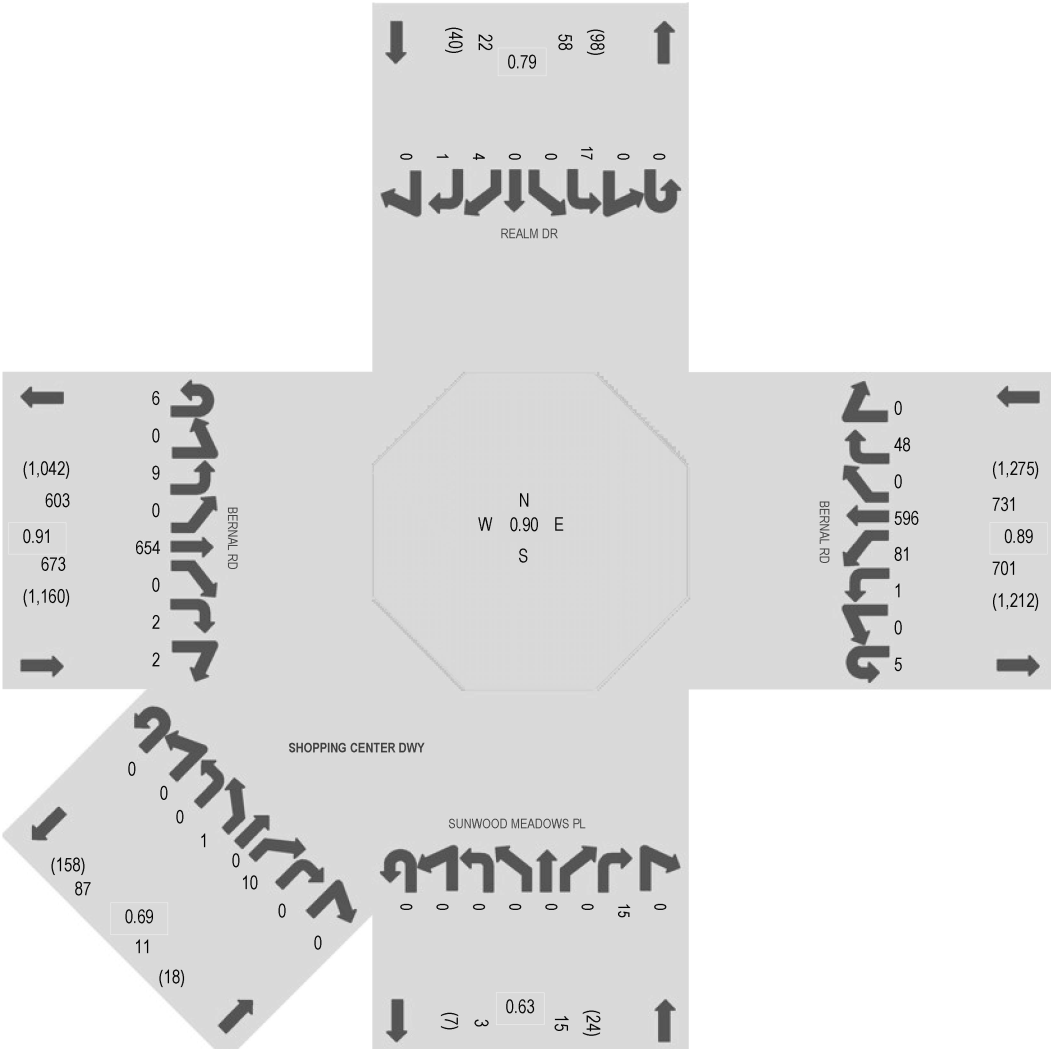
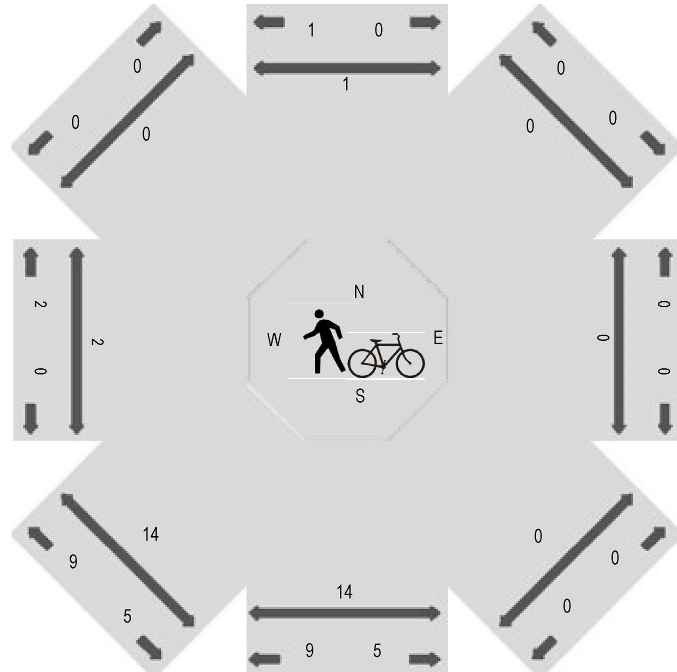
Location: 4 SUNWOOD MEADOWS PL & BERNAL RD AM
Date: Tuesday, May 7, 2019
Peak Hour: 08:00 AM - 09:00 AM
Peak 15-Minutes: 08:45 AM - 09:00 AM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles on Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	Westbound								Northwestbound								Northbound								Northeastbound							
	U	HL	L	BL	T	BR	R	HR	U	HL	L	BL	T	BR	R	HR	U	HL	L	BL	T	BR	R	HR	U	HL	L	BL	T	BR	R	HR
7:00 AM	0	0	0	8	69	0	5	0									0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0
7:15 AM	0	0	0	20	80	0	7	0									0	0	0	0	0	0	4	0	0	0	0	0	0	2	0	0
7:30 AM	1	0	0	22	120	0	6	0									0	0	0	0	0	0	2	0	0	1	0	0	0	1	0	0
7:45 AM	3	0	3	19	168	0	13	0									0	0	0	0	0	0	2	0	0	0	0	0	0	2	0	0
8:00 AM	4	0	0	19	175	0	8	0									0	0	0	0	0	0	6	0	0	0	0	0	0	2	0	0
8:15 AM	0	0	0	10	130	0	12	0									0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0
8:30 AM	0	0	0	24	128	0	15	0									0	0	0	0	0	0	5	0	0	0	0	0	0	4	0	0
8:45 AM	1	0	1	28	163	0	13	0									0	0	0	0	0	0	3	0	0	0	0	1	0	3	0	0
Count Total	9	0	4	150	1,033	0	79	0									0	0	0	0	0	0	24	0	0	1	0	1	0	16	0	0
Peak Hour	5	0	1	81	596	0	48	0									0	0	0	0	0	0	15	0	0	0	0	1	0	10	0	0

Interval Start Time	Eastbound								Southeastbound								Southbound								Southwestbound								Total	Rolling Hour
	U	HL	L	BL	T	BR	R	HR	U	HL	L	BL	T	BR	R	HR	U	HL	L	BL	T	BR	R	HR	U	HL	L	BL	T	BR	R	HR		
7:00 AM	0	0	2	0	112	0	0	0									0	0	7	0	0	0	0	0									205	1,065
7:15 AM	0	0	0	0	124	0	1	0									0	0	2	0	0	0	1	0									241	1,241
7:30 AM	0	0	2	0	114	0	0	0									0	0	3	0	0	1	0	0									273	1,326
7:45 AM	0	0	5	0	126	0	0	1									0	0	4	0	0	0	0	0									346	1,396
8:00 AM	1	0	2	0	159	0	0	1									0	0	4	0	0	0	0	0									381	1,452
8:15 AM	2	0	2	0	162	0	0	0									0	0	6	0	0	0	0	0									326	
8:30 AM	2	0	0	0	157	0	0	1									0	0	5	0	0	2	0	0									343	
8:45 AM	1	0	5	0	176	0	2	0									0	0	2	0	0	2	1	0									402	
Count Total	6	0	18	0	1,130	0	3	3									0	0	33	0	0	5	2	0									2,517	
Peak Hour	6	0	9	0	654	0	2	2									0	0	17	0	0	4	1	0									1,452	

Peak Rolling Hour Flow Rates

Vehicle Type	Westbound								Northwestbound								Northbound								Northeastbound							
	U	HL	L	BL	T	BR	R	HR	U	HL	L	BL	T	BR	R	HR	U	HL	L	BL	T	BR	R	HR	U	HL	L	BL	T	BR	R	HR
Articulated Trucks	0	0	0	0	0	0	0	0									0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles on Road	0	0	0	0	0	0	0	0									0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	5	0	1	79	577	0	48	0									0	0	0	0	0	0	14	0	0	0	0	1	0	8	0	0
Mediums	0	0	0	2	19	0	0	0									0	0	0	0	0	0	1	0	0	0	0	0	0	2	0	0
Count Total	5	0	1	81	596	0	48	0									0	0	0	0	0	0	15	0	0	0	0	1	0	10	0	0

Vehicle Type	Eastbound								Southeastbound								Southbound								Southwestbound								Total
	U	HL	L	BL	T	BR	R	HR	U	HL	L	BL	T	BR	R	HR	U	HL	L	BL	T	BR	R	HR	U	HL	L	BL	T	BR	R	HR	
Articulated Trucks	0	0	0	0	2	0	0	0									0	0	0	0	0	0	0	0									2
Bicycles on Road	0	0	0	0	0	0	0	0									0	0	0	0	0	0	0	0									0
Lights	6	0	9	0	633	0	2	0									0	0	17	0	0	3	1	0									1,404
Mediums	0	0	0	0	19	0	0	2									0	0	0	0	0	1	0	0									46
Count Total	6	0	9	0	654	0	2	2									0	0	17	0	0	4	1	0									1,452

All Traffic Data Services Inc.
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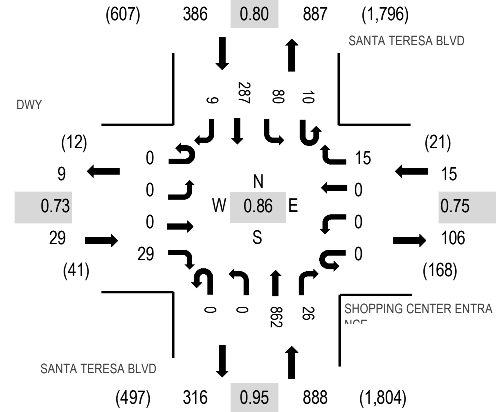
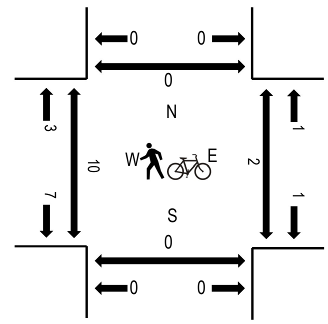
Location: 5 SANTA TERESA BLVD & SHOPPING CENTER ENTRANCE AM
Date: Tuesday, May 7, 2019
Peak Hour: 08:00 AM - 09:00 AM
Peak 15-Minutes: 08:45 AM - 09:00 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	DWY Eastbound U-Turn	Left	Thru	Right	SHOPPING CENTER ENTRANCE Westbound U-Turn	Left	Thru	Right	SANTA TERESA BLVD Northbound U-Turn	Left	Thru	Right	SANTA TERESA BLVD Southbound U-Turn	Left	Thru	Right	Total	Rolling Hour	Pedestrian Crossings West	East	South	North
7:00 AM	0	0	0	7	0	0	0	0	0	0	197	7	3	4	30	0	248	1,155	1	0	0	0
7:15 AM	0	0	0	4	0	0	0	2	0	0	216	5	7	6	40	1	281	1,222	1	1	0	0
7:30 AM	0	0	0	1	0	0	0	4	0	0	231	11	4	7	41	1	300	1,240	1	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	243	6	2	16	58	1	326	1,262	0	2	0	0
8:00 AM	0	0	0	6	0	0	0	4	0	0	222	13	2	21	46	1	315	1,318	0	0	0	0
8:15 AM	0	0	0	8	0	0	0	2	0	0	196	2	3	16	72	0	299		4	1	0	0
8:30 AM	0	0	0	10	0	0	0	4	0	0	196	7	5	21	79	0	322		5	1	0	0
8:45 AM	0	0	0	5	0	0	0	5	0	0	248	4	0	22	90	8	382		1	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound U-Turn	Left	Thru	Right	Westbound U-Turn	Left	Thru	Right	Northbound U-Turn	Left	Thru	Right	Southbound U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	0	0	29	0	0	0	13	0	0	847	26	10	79	274	9	1,287
Mediums	0	0	0	0	0	0	0	2	0	0	15	0	0	1	13	0	31
Total	0	0	0	29	0	0	0	15	0	0	862	26	10	80	287	9	1,318

Location: 1 SANTA TERESA BLVD & CHANTILLEY LN PM
Date: Tuesday, May 7, 2019
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

All Traffic Data Services Inc.
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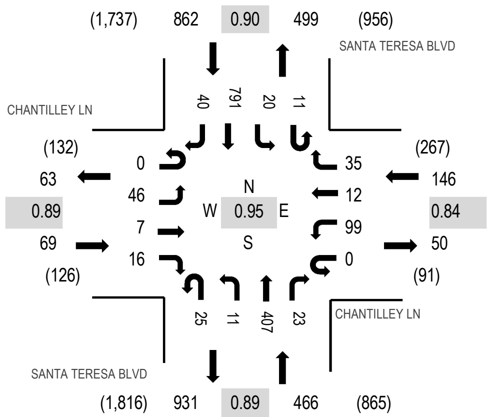
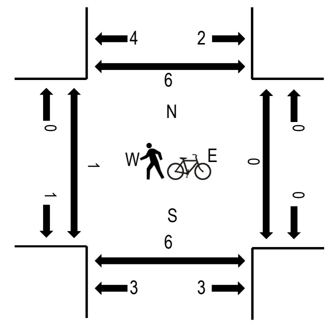
Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	CHANTILLEY LN Eastbound U-Turn	Left	Thru	Right	CHANTILLEY LN Westbound U-Turn	Left	Thru	Right	SANTA TERESA BLVD Northbound U-Turn	Left	Thru	Right	SANTA TERESA BLVD Southbound U-Turn	Left	Thru	Right	Total	Rolling Hour	Pedestrian Crossings West	East	South	North
4:00 PM	0	9	1	2	0	21	1	10	1	2	114	3	2	5	229	12	412	1,504	0	4	2	0
4:15 PM	0	15	1	1	0	26	5	5	0	2	93	3	1	3	196	5	356	1,496	1	3	1	2
4:30 PM	0	17	0	1	0	13	2	8	5	1	73	3	5	5	197	15	345	1,532	0	1	1	0
4:45 PM	0	15	1	5	0	18	1	6	18	4	108	1	1	4	201	8	391	1,543	0	0	1	1
5:00 PM	0	12	3	2	0	29	5	11	6	2	108	4	2	3	212	5	404	1,491	0	0	2	3
5:15 PM	0	8	3	8	0	30	2	7	0	2	93	9	5	6	209	10	392		0	0	1	0
5:30 PM	0	11	0	1	0	22	4	11	1	3	98	9	3	7	169	17	356		0	0	0	1
5:45 PM	0	9	0	1	0	18	4	8	0	5	82	12	6	5	174	15	339		0	0	1	1

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound U-Turn	Left	Thru	Right	Westbound U-Turn	Left	Thru	Right	Northbound U-Turn	Left	Thru	Right	Southbound U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	46	6	14	0	98	12	35	25	10	400	22	11	20	767	40	1,506
Mediums	0	0	1	2	0	1	0	0	0	1	7	1	0	0	24	0	37
Total	0	46	7	16	0	99	12	35	25	11	407	23	11	20	791	40	1,543

All Traffic Data Services Inc.
(303) 216-2439
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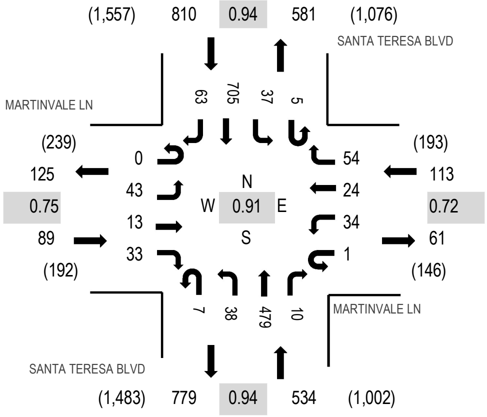
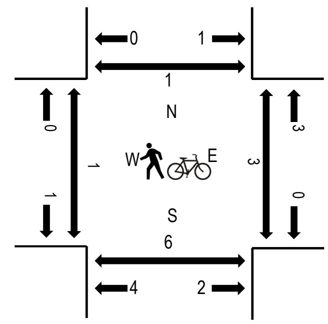
Location: 3 SANTA TERESA BLVD & MARTINVALE LN PM
Date: Tuesday, May 7, 2019
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	MARTINVALE LN Eastbound U-Turn	Left	Thru	Right	MARTINVALE LN Westbound U-Turn	Left	Thru	Right	SANTA TERESA BLVD Northbound U-Turn	Left	Thru	Right	SANTA TERESA BLVD Southbound U-Turn	Left	Thru	Right	Total	Rolling Hour	Pedestrian Crossings West	East	South	North
4:00 PM	0	12	11	11	0	5	4	11	1	9	108	5	1	11	170	21	380	1,449	1	2	3	0
4:15 PM	0	10	4	10	0	4	5	14	3	10	90	10	0	12	139	16	327	1,496	1	4	0	1
4:30 PM	0	14	4	6	0	7	7	15	1	13	105	3	2	20	160	9	366	1,546	0	0	1	0
4:45 PM	0	6	4	10	0	6	10	9	3	5	124	2	2	5	169	21	376	1,542	0	0	3	0
5:00 PM	0	12	2	10	0	15	3	23	1	6	138	2	1	8	193	13	427	1,495	0	0	1	0
5:15 PM	0	11	3	7	1	6	4	7	2	14	112	3	0	4	183	20	377		0	1	1	1
5:30 PM	0	14	3	10	0	4	8	7	1	11	118	8	0	7	159	12	362		0	5	4	3
5:45 PM	0	10	1	7	0	2	4	12	0	3	88	3	0	10	178	11	329		0	0	1	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound U-Turn	Left	Thru	Right	Westbound U-Turn	Left	Thru	Right	Northbound U-Turn	Left	Thru	Right	Southbound U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	43	12	33	1	34	24	54	7	38	470	10	5	36	693	63	1,523
Mediums	0	0	1	0	0	0	0	0	0	0	9	0	0	1	11	0	22
Total	0	43	13	33	1	34	24	54	7	38	479	10	5	37	705	63	1,546

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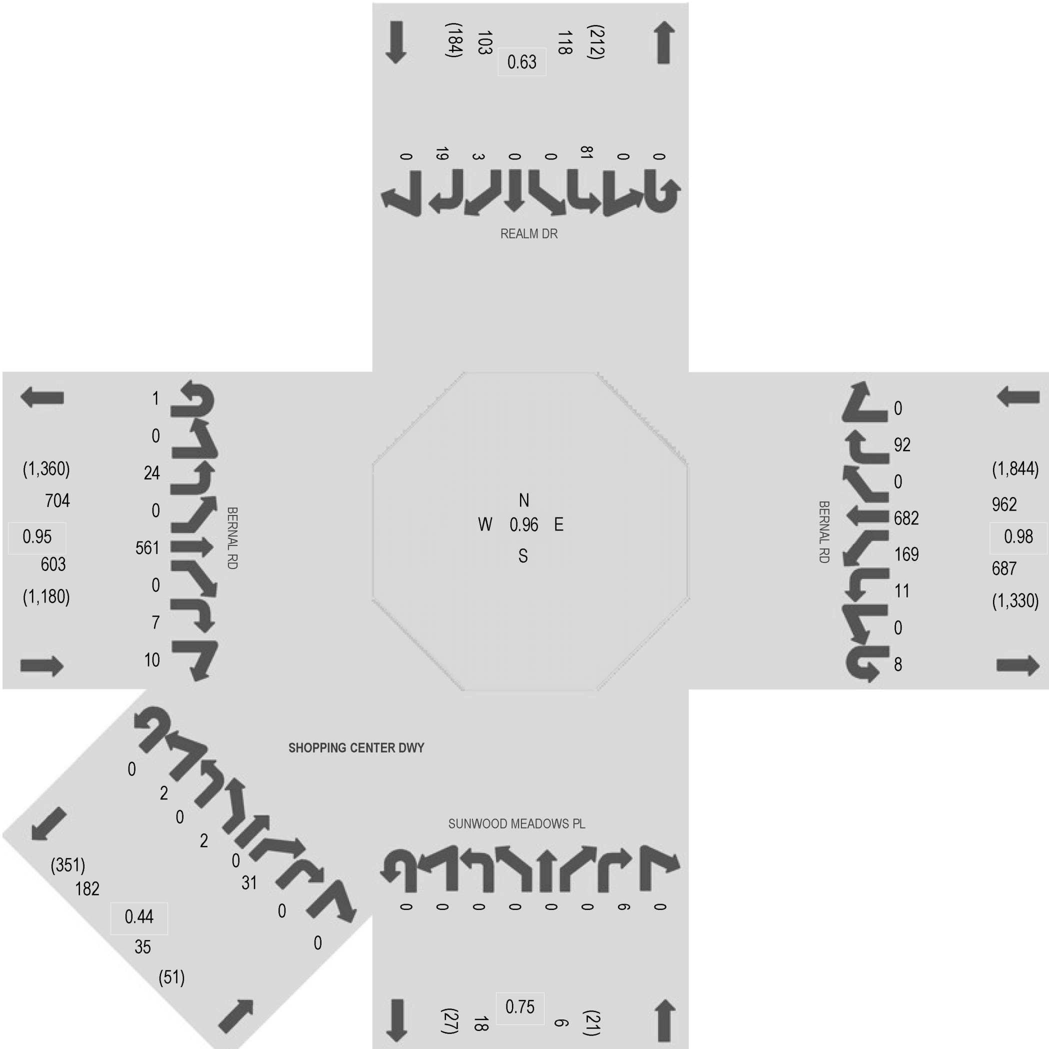
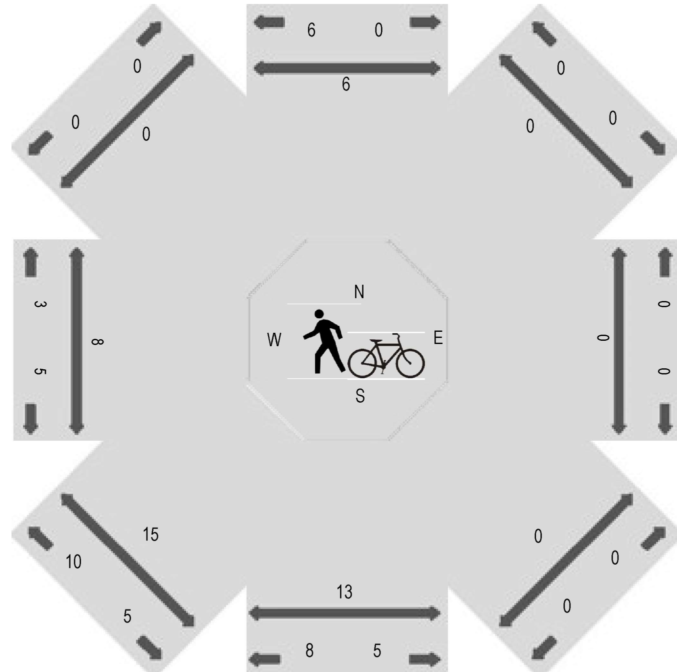
Location: 4 SUNWOOD MEADOWS PL & BERNAL RD PM
Date: Tuesday, May 7, 2019
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles on Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	Westbound								Northwestbound								Northbound								Northeastbound							
	U	HL	L	BL	T	BR	R	HR	U	HL	L	BL	T	BR	R	HR	U	HL	L	BL	T	BR	R	HR	U	HL	L	BL	T	BR	R	HR
4:00 PM	1	0	0	30	156	0	15	0									0	0	0	0	0	0	5	0	0	0	0	1	0	3	0	0
4:15 PM	0	0	2	37	156	0	14	0									0	0	0	0	0	0	5	0	0	0	0	0	0	3	0	0
4:30 PM	2	0	3	43	173	0	19	0									0	0	0	0	0	0	4	0	0	0	0	0	0	2	0	0
4:45 PM	0	0	1	44	151	0	35	0									0	0	0	0	0	0	1	0	0	1	0	0	0	6	0	0
5:00 PM	4	0	0	39	171	0	29	0									0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
5:15 PM	2	0	2	44	182	0	13	0									0	0	0	0	0	0	3	0	0	1	0	1	0	6	0	0
5:30 PM	1	0	1	47	159	0	22	0									0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0
5:45 PM	1	0	8	39	170	0	28	0									0	0	0	0	0	0	3	0	0	1	0	1	0	18	0	0
Count Total	11	0	17	323	1,318	0	175	0									0	0	0	0	0	0	21	0	0	3	0	3	0	45	0	0
Peak Hour	8	0	11	169	682	0	92	0									0	0	0	0	0	0	6	0	0	2	0	2	0	31	0	0

Interval Start Time	Eastbound								Southeastbound								Southbound								Southwestbound								Total	Rolling Hour
	U	HL	L	BL	T	BR	R	HR	U	HL	L	BL	T	BR	R	HR	U	HL	L	BL	T	BR	R	HR	U	HL	L	BL	T	BR	R	HR		
4:00 PM	0	0	4	0	152	0	1	2									0	0	9	0	0	1	6	0									386	1,571
4:15 PM	2	0	2	0	134	0	2	3									0	0	16	0	0	4	1	0									381	1,630
4:30 PM	1	0	0	0	141	0	0	1									0	0	14	0	0	1	3	0									407	1,689
4:45 PM	1	0	4	0	126	0	0	1									0	0	19	0	0	2	5	0									397	1,688
5:00 PM	1	0	7	0	142	0	2	2									0	0	35	0	0	1	11	0									445	1,709
5:15 PM	0	0	3	0	155	0	0	0									0	0	24	0	0	0	4	0									440	
5:30 PM	0	0	5	0	144	0	2	2									0	0	14	0	0	2	1	0									406	
5:45 PM	0	0	9	0	120	0	3	6									0	0	8	0	0	0	3	0									418	
Count Total	5	0	34	0	1,114	0	10	17									0	0	139	0	0	11	34	0									3,280	
Peak Hour	1	0	24	0	561	0	7	10									0	0	81	0	0	3	19	0									1,709	

Peak Rolling Hour Flow Rates

Vehicle Type	Westbound								Northwestbound								Northbound								Northeastbound							
	U	HL	L	BL	T	BR	R	HR	U	HL	L	BL	T	BR	R	HR	U	HL	L	BL	T	BR	R	HR	U	HL	L	BL	T	BR	R	HR
Articulated Trucks	0	0	0	2	2	0	0	0									0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Bicycles on Road	0	0	0	0	0	0	0	0									0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	8	0	10	164	673	0	91	0									0	0	0	0	0	0	6	0	0	2	0	2	0	29	0	0
Mediums	0	0	1	3	7	0	1	0									0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Count Total	8	0	11	169	682	0	92	0									0	0	0	0	0	0	6	0	0	2	0	2	0	31	0	0

Vehicle Type	Eastbound								Southeastbound								Southbound								Southwestbound								Total
	U	HL	L	BL	T	BR	R	HR	U	HL	L	BL	T	BR	R	HR	U	HL	L	BL	T	BR	R	HR	U	HL	L	BL	T	BR	R	HR	
Articulated Trucks	0	0	0	0	0	0	0	0									0	0	0	0	0	1	0	0									6
Bicycles on Road	0	0	0	0	0	0	0	0									0	0	0	0	0	0	0	0									0
Lights	1	0	24	0	556	0	6	10									0	0	77	0	0	2	18	0									1,679
Mediums	0	0	0	0	5	0	1	0									0	0	4	0	0	0	1	0									24
Count Total	1	0	24	0	561	0	7	10									0	0	81	0	0	3	19	0									1,709

Location: 5 SANTA TERESA BLVD & SHOPPING CENTER ENTRANCE PM
Date: Tuesday, May 7, 2019
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

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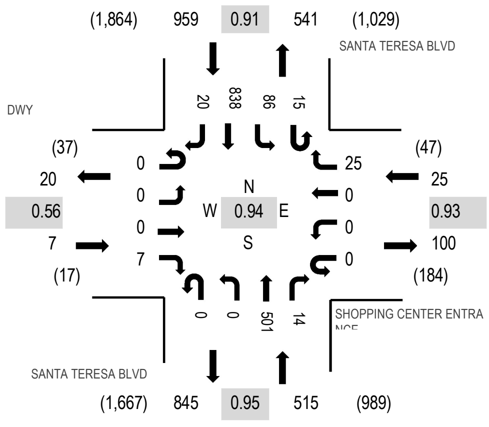
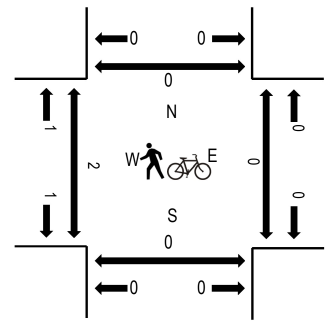
Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	DWY Eastbound U-Turn	Left	Thru	Right	SHOPPING CENTER ENTRANCE Westbound U-Turn	Left	Thru	Right	SANTA TERESA BLVD Northbound U-Turn	Left	Thru	Right	SANTA TERESA BLVD Southbound U-Turn	Left	Thru	Right	Total	Rolling Hour	Pedestrian Crossings West	East	South	North
4:00 PM	0	0	0	1	0	0	0	4	0	0	130	8	6	14	217	2	382	1,469	0	2	0	0
4:15 PM	0	0	0	2	0	0	0	7	0	0	116	3	0	13	211	7	359	1,487	1	0	0	0
4:30 PM	0	0	0	3	0	0	0	4	0	0	112	1	1	21	206	1	349	1,495	0	0	0	0
4:45 PM	0	0	0	2	0	0	0	6	0	0	133	3	4	25	203	3	379	1,506	1	0	0	0
5:00 PM	0	0	0	2	0	0	0	6	0	0	127	0	3	19	238	5	400	1,448	0	0	0	0
5:15 PM	0	0	0	1	0	0	0	7	0	0	116	8	3	22	206	4	367		0	0	0	0
5:30 PM	0	0	0	2	0	0	0	6	0	0	125	3	5	20	191	8	360		0	0	0	0
5:45 PM	0	0	0	4	0	0	0	7	0	0	100	4	1	20	178	7	321		5	0	0	0

Peak Rolling Hour Flow Rates

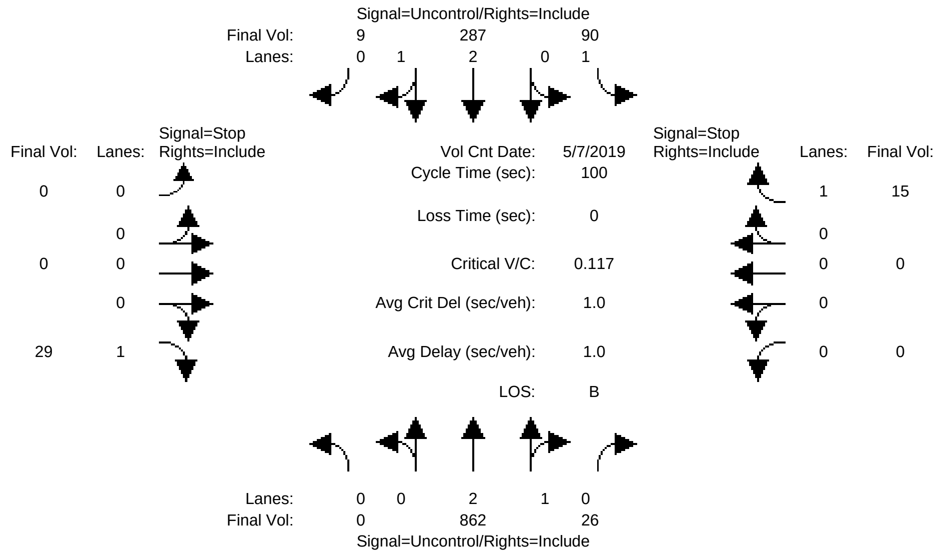
Vehicle Type	Eastbound U-Turn	Left	Thru	Right	Westbound U-Turn	Left	Thru	Right	Northbound U-Turn	Left	Thru	Right	Southbound U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	0	0	7	0	0	0	25	0	0	495	14	15	84	822	20	1,482
Mediums	0	0	0	0	0	0	0	0	0	0	6	0	0	0	16	0	22
Total	0	0	0	7	0	0	0	25	0	0	501	14	15	86	838	20	1,506

Appendix B

Level of Service Calculations

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

Intersection #5: SANTA TERESA/PRJ DWY




```
Approach:     North Bound     South Bound      East Bound      West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 7 May 2019 << 8:00 - 9:00 AM
Base Vol:      0  862   26    90  287    9    0    0   29    0    0   15
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  862   26    90  287    9    0    0   29    0    0   15
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  862   26    90  287    9    0    0   29    0    0   15
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  862   26    90  287    9    0    0   29    0    0   15
Reduct Vol:     0    0    0     0    0    0    0    0    0    0    0    0
FinalVolume:    0  862   26    90  287    9    0    0   29    0    0   15
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx   6.9 xxxxx xxxx   6.9
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx   3.3 xxxxx xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   888 xxxx xxxxx  xxxx xxxx   100  xxxx xxxx   300
Potent Cap.: xxxx xxxx xxxxx   771 xxxx xxxxx  xxxx xxxx   942  xxxx xxxx   702
Move Cap.:   xxxx xxxx xxxxx   771 xxxx xxxxx  xxxx xxxx   942  xxxx xxxx   702
Volume/Cap:  xxxx xxxx  xxxx  0.12 xxxx  xxxx  xxxx xxxx  0.03  xxxx xxxx  0.02
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   0.4 xxxx xxxxx  xxxx xxxx   0.1  xxxx xxxx   0.1
Control Del:xxxxx xxxx xxxxx  10.3 xxxx xxxxx xxxxx xxxx   8.9 xxxxx xxxx  10.2
LOS by Move:    *    *     *     B    *     *     *    *     A     *    *     B
Movement:    LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:    xxxxxx          xxxxxx             8.9            10.2
ApproachLOS:       *               *               A               B
Note: Queue reported is the number of cars per lane.
                 Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #5 SANTA TERESA/PRJ DWY
********************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
```



```
Approach:     North Bound     South Bound      East Bound      West Bound
Movement:    L - T - R   L - T - R   L - T - R   L - T - R
------------|---------------||---------------||---------------||---------------|
Control:      Uncontrolled    Uncontrolled     Stop Sign       Stop Sign
Lanes:       0  0  2  1  0   1  0  2  1  0   0  0  0  0  1   0  0  0  0  1
Initial Vol:   0  862   26   90  287    9    0    0   29    0    0   15
ApproachDel:    xxxxxx         xxxxxx            8.9           10.2
------------|---------------||---------------||---------------||---------------|
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=1318]
  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=0.0]
  FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=15]
  FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1318]
  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 #5 SANTA TERESA/PRJ DWY
********************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:     North Bound     South Bound      East Bound      West Bound
Movement:    L - T - R   L - T - R   L - T - R   L - T - R
------------|---------------||---------------||---------------||---------------|
Control:      Uncontrolled    Uncontrolled     Stop Sign       Stop Sign
Lanes:       0  0  2  1  0   1  0  2  1  0   0  0  0  0  1   0  0  0  0  1
Initial Vol:   0  862   26   90  287    9    0    0   29    0    0   15
------------|---------------||---------------||---------------||---------------|
Major Street Volume:           1274
Minor Approach Volume:          29
Minor Approach Volume Threshold: 201
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

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


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

Intersection #5: SANTA TERESA/PRJ DWY

```
                         Signal=Uncontrol/Rights=Include
             Final Vol:  9        2313       90
                 Lanes:  0    1     2     0   1

                  Signal=Stop                                 Signal=Stop
Final Vol:  Lanes:  Rights=Include     Vol Cnt Date:  5/7/2019  Rights=Include   Lanes:  Final Vol:
                                     Cycle Time (sec):   100
    0         0                                                                    1        15
                                       Loss Time (sec):   0
              0                                                                    0
    0         0                           Critical V/C:  0.202                     0         0
              0                   Avg Crit Del (sec/veh):  0.5                     0
   29         1                        Avg Delay (sec/veh):  0.5                   0         0
                                                  LOS:    C

                 Lanes:  0    0     2     1   0
             Final Vol:  0        1493       26
                         Signal=Uncontrol/Rights=Include
```

```
Approach:     North Bound     South Bound      East Bound      West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 7 May 2019 << 8:00 - 9:00 AM
Base Vol:       0  862   26    90  287    9    0    0   29    0    0   15
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  862   26    90  287    9    0    0   29    0    0   15
Added Vol:      0    0    0     0    0    0    0    0    0    0    0    0
ATI AM:         0  631    0     0 2026    0    0    0    0    0    0    0
Initial Fut:    0 1493   26    90 2313    9    0    0   29    0    0   15
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 1493   26    90 2313    9    0    0   29    0    0   15
Reduct Vol:     0    0    0     0    0    0    0    0    0    0    0    0
FinalVolume:    0 1493   26    90 2313    9    0    0   29    0    0   15
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx   6.9 xxxxx xxxx   6.9
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx   3.3 xxxxx xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  1519 xxxx xxxxx  xxxx xxxx   776  xxxx xxxx   511
Potent Cap.: xxxx xxxx xxxxx   445 xxxx xxxxx  xxxx xxxx   345  xxxx xxxx   513
Move Cap.:   xxxx xxxx xxxxx   445 xxxx xxxxx  xxxx xxxx   345  xxxx xxxx   513
Volume/Cap:  xxxx xxxx  xxxx  0.20 xxxx  xxxx  xxxx xxxx  0.08  xxxx xxxx  0.03
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   0.7 xxxx xxxxx  xxxx xxxx   0.3  xxxx xxxx   0.1
Control Del:xxxxx xxxx xxxxx  15.1 xxxx xxxxx xxxxx xxxx  16.4 xxxxx xxxx  12.2
LOS by Move:    *    *    *     C    *    *    *    *    C    *    *    B
Movement:    LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *    *     *    *    *    *    *    *    *    *    *
ApproachDel:    xxxxxx          xxxxxx           16.4            12.2
ApproachLOS:       *               *               C               B
Note: Queue reported is the number of cars per lane.
                  Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #5 SANTA TERESA/PRJ DWY
********************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
```

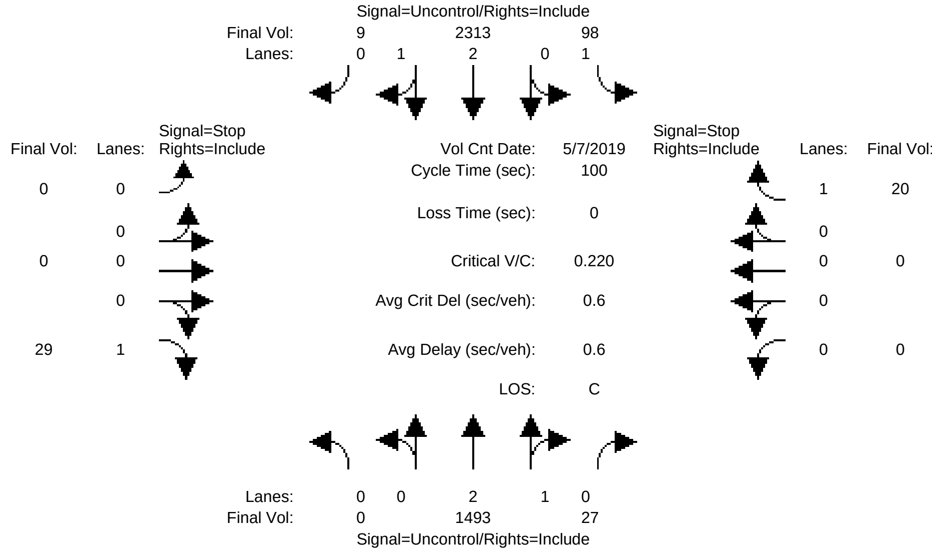
```
Approach:     North Bound     South Bound      East Bound      West Bound
Movement:    L - T - R   L - T - R   L - T - R   L - T - R
------------|---------------||---------------||---------------||---------------|
Control:     Uncontrolled    Uncontrolled     Stop Sign       Stop Sign
Lanes:       0  0  2  1  0   1  0  2  1  0   0  0  0  0  1   0  0  0  0  1
Initial Vol:   0 1493   26   90 2313    9    0    0   29    0    0   15
ApproachDel:   xxxxxx         xxxxxx          16.4            12.2
------------|---------------||---------------||---------------||---------------|
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=3975]
  SUCCEED - Total volume greater than or equal to 800 for intersection
          with four or more approaches.
--------------------------------------------------------------------------------
Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
  FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=15]
  FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=3975]
  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 #5 SANTA TERESA/PRJ DWY
********************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:     North Bound     South Bound      East Bound      West Bound
Movement:    L - T - R   L - T - R   L - T - R   L - T - R
------------|---------------||---------------||---------------||---------------|
Control:     Uncontrolled    Uncontrolled     Stop Sign       Stop Sign
Lanes:       0  0  2  1  0   1  0  2  1  0   0  0  0  0  1   0  0  0  0  1
Initial Vol:   0 1493   26   90 2313    9    0    0   29    0    0   15
------------|---------------||---------------||---------------||---------------|
Major Street Volume:           3931
Minor Approach Volume:          29
Minor Approach Volume Threshold: -187 [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.
```

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

Intersection #5: SANTA TERESA/PRJ DWY




```
Approach:     North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 7 May 2019 << 8:00 - 9:00 AM
Base Vol:      0 1493    26    90 2313     9     0     0    29     0     0    15
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   0 1493    26    90 2313     9     0     0    29     0     0    15
Added Vol:     0    0     1     8    0     0     0     0     0     0     0     5
PasserByVol:   0    0     0     0    0     0     0     0     0     0     0     0
Initial Fut:   0 1493    27    98 2313     9     0     0    29     0     0    20
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    0 1493    27    98 2313     9     0     0    29     0     0    20
Reduct Vol:    0    0     0     0    0     0     0     0     0     0     0     0
FinalVolume:   0 1493    27    98 2313     9     0     0    29     0     0    20
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx   6.9 xxxxx xxxx   6.9
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx   3.3 xxxxx xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  1520 xxxx xxxxx  xxxx xxxx   776  xxxx xxxx   511
Potent Cap.: xxxx xxxx xxxxx   445 xxxx xxxxx  xxxx xxxx   345  xxxx xxxx   513
Move Cap.:   xxxx xxxx xxxxx   445 xxxx xxxxx  xxxx xxxx   345  xxxx xxxx   513
Volume/Cap:  xxxx xxxx  xxxx  0.22 xxxx  xxxx  xxxx xxxx  0.08  xxxx xxxx  0.04
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   0.8 xxxx xxxxx  xxxx xxxx   0.3  xxxx xxxx   0.1
Control Del:xxxxx xxxx xxxxx  15.4 xxxx xxxxx xxxxx xxxx  16.4 xxxxx xxxx  12.3
LOS by Move:   *    *     *     C    *     *     *    *     C     *    *     B
Movement:    LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:    *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:    xxxxxx          xxxxxx            16.4            12.3
ApproachLOS:       *               *                C               B
Note: Queue reported is the number of cars per lane.
                 Peak Hour Delay Signal Warrant Report
*********************************************************************************
Intersection #5 SANTA TERESA/PRJ DWY
*********************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
```



```
Approach:     North Bound     South Bound      East Bound      West Bound
Movement:    L - T - R   L - T - R   L - T - R   L - T - R
------------|---------------||---------------||---------------||---------------|
Control:      Uncontrolled    Uncontrolled     Stop Sign       Stop Sign
Lanes:       0  0  2  1  0   1  0  2  1  0   0  0  0  0  1   0  0  0  0  1
Initial Vol:   0 1493   27   98 2313    9    0    0   29    0    0   20
ApproachDel:   xxxxxx        xxxxxx           16.4           12.3
------------|---------------||---------------||---------------||---------------|
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=3989]
  SUCCEED - Total volume greater than or equal to 800 for intersection
          with four or more approaches.
--------------------------------------------------------------------------------
Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
  FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=20]
  FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=3989]
  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 #5 SANTA TERESA/PRJ DWY
********************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:     North Bound     South Bound      East Bound      West Bound
Movement:    L - T - R   L - T - R   L - T - R   L - T - R
------------|---------------||---------------||---------------||---------------|
Control:      Uncontrolled    Uncontrolled     Stop Sign       Stop Sign
Lanes:       0  0  2  1  0   1  0  2  1  0   0  0  0  0  1   0  0  0  0  1
Initial Vol:   0 1493   27   98 2313    9    0    0   29    0    0   20
------------|---------------||---------------||---------------||---------------|
Major Street Volume:          3940
Minor Approach Volume:          29
Minor Approach Volume Threshold: -188 [less than minimum of 100]
--------------------------------------------------------------------------------
```

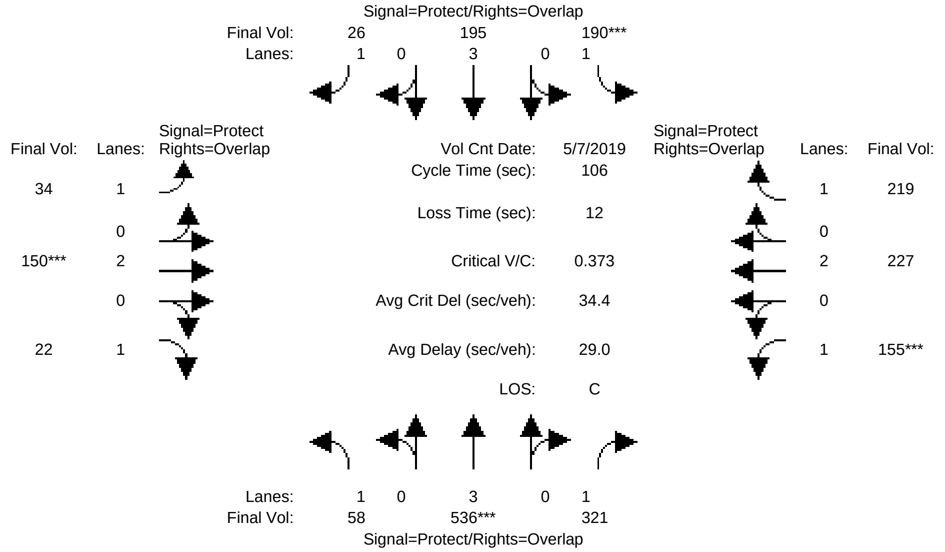
SIGNAL WARRANT DISCLAIMER

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.

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

Intersection #3075: BERNAL/SANTA TERESA



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: >> Count Date: 7 May 2019 << 8:00-9:00 AM												
Base Vol:	58	536	321	190	195	26	34	150	22	155	227	219
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:	58	536	321	190	195	26	34	150	22	155	227	219
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:	58	536	321	190	195	26	34	150	22	155	227	219
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:	58	536	321	190	195	26	34	150	22	155	227	219
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	58	536	321	190	195	26	34	150	22	155	227	219
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:	58	536	321	190	195	26	34	150	22	155	227	219
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	3.00	1.00	1.00	3.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1750	5700	1750	1750	5700	1750	1750	3800	1750	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.03	0.09	0.18	0.11	0.03	0.01	0.02	0.04	0.01	0.09	0.06	0.13
Crit Moves:		****		****				****		****		
Green Time:	23.7	26.7	51.9	30.9	33.9	48.9	15.0	11.2	34.9	25.2	21.4	52.3
Volume/Cap:	0.15	0.37	0.37	0.37	0.11	0.03	0.14	0.37	0.04	0.37	0.30	0.25
Uniform Del:	33.0	32.7	16.9	29.9	25.4	15.6	39.8	44.1	24.1	33.8	35.9	15.6
IncremntDel:	0.2	0.2	0.3	0.5	0.0	0.0	0.3	0.6	0.0	0.6	0.2	0.2
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	33.2	32.9	17.2	30.3	25.4	15.6	40.1	44.7	24.1	34.4	36.1	15.7
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:	33.2	32.9	17.2	30.3	25.4	15.6	40.1	44.7	24.1	34.4	36.1	15.7
LOS by Move:	C-	C-	B	C	C	B	D	D	C	C-	D+	B
DesignQueue:	3	8	11	9	3	1	2	4	1	8	5	7

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

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

Intersection #3075: BERNAL/SANTA TERESA

Signal=Protect/Rights=Overlap
Final Vol: 30 1792*** 261
Lanes: 1 0 3 0 2

Signal=Protect Rights=Overlap (West approach)
Final Vol: 46 / 122*** / 129
Lanes: 1 / 0 / 2 / 0 / 1

Vol Cnt Date: 5/7/2019
Cycle Time (sec): 106
Loss Time (sec): 12
Critical V/C: 0.753
Avg Crit Del (sec/veh): 34.9
Avg Delay (sec/veh): 31.7
LOS: C

Signal=Protect Rights=Overlap (East approach)
Lanes: 1 / 0 / 2 / 0 / 1
Final Vol: 346 / 206 / 477***

Lanes: 1 0 3 0 1
Final Vol: 85*** 919 338
Signal=Protect/Rights=Overlap

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: >> Count Date: 7 May 2019 << 8:00-9:00 AM												
Base Vol:	58	536	321	190	195	26	34	150	22	155	227	219
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:	58	536	321	190	195	26	34	150	22	155	227	219
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI AM:	27	383	17	71	1597	4	12	-28	107	322	-21	127
Initial Fut:	85	919	338	261	1792	30	46	122	129	477	206	346
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	85	919	338	261	1792	30	46	122	129	477	206	346
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	85	919	338	261	1792	30	46	122	129	477	206	346
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:	85	919	338	261	1792	30	46	122	129	477	206	346
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.83	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	3.00	1.00	2.00	3.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1750	5700	1750	3150	5700	1750	1750	3800	1750	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.05	0.16	0.19	0.08	0.31	0.02	0.03	0.03	0.07	0.27	0.05	0.20
Crit Moves:	****				****			****		****		
Green Time:	7.0	31.9	67.6	16.4	41.2	57.9	16.7	10.0	17.0	35.8	29.1	45.4
Volume/Cap:	0.74	0.54	0.30	0.54	0.81	0.03	0.17	0.34	0.46	0.81	0.20	0.46
Uniform Del:	48.6	30.9	8.6	41.3	28.9	11.1	38.6	44.9	40.3	32.0	29.5	21.6
IncremntDel:	21.6	0.3	0.2	1.2	2.3	0.0	0.3	0.6	1.2	8.1	0.1	0.5
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	70.2	31.2	8.8	42.5	31.2	11.1	38.9	45.5	41.5	40.1	29.6	22.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	70.2	31.2	8.8	42.5	31.2	11.1	38.9	45.5	41.5	40.1	29.6	22.0
LOS by Move:	E	C	A	D	C	B+	D+	D	D	D	C	C+
DesignQueue:	5	13	8	8	23	1	2	3	7	22	4	13

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

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

Intersection #3075: BERNAL/SANTA TERESA

Signal=Protect/Rights=Overlap
Final Vol: 30 1796*** 261
Lanes: 1 0 3 0 2

Signal=Protect
Final Vol: Lanes: Rights=Overlap

46 1
0
122*** 2
0
130 1

Vol Cnt Date: 5/7/2019
Cycle Time (sec): 106
Loss Time (sec): 12
Critical V/C: 0.757
Avg Crit Del (sec/veh): 35.2
Avg Delay (sec/veh): 31.8
LOS: C

Signal=Protect
Rights=Overlap Lanes: Final Vol:
1 346
0
2 206
0
1 481***

Lanes: 1 0 3 0 1
Final Vol: 86*** 921 340
Signal=Protect/Rights=Overlap

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: >> Count Date: 7 May 2019 << 8:00-9:00 AM												
Base Vol:	85	919	338	261	1792	30	46	122	129	477	206	346
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:	85	919	338	261	1792	30	46	122	129	477	206	346
Added Vol:	1	2	2	0	4	0	0	0	1	4	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	86	921	340	261	1796	30	46	122	130	481	206	346
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:	86	921	340	261	1796	30	46	122	130	481	206	346
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	86	921	340	261	1796	30	46	122	130	481	206	346
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:	86	921	340	261	1796	30	46	122	130	481	206	346
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.83	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	3.00	1.00	2.00	3.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1750	5700	1750	3150	5700	1750	1750	3800	1750	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.05	0.16	0.19	0.08	0.32	0.02	0.03	0.03	0.07	0.27	0.05	0.20
Crit Moves:	****				****		****			****		
Green Time:	7.0	31.8	67.7	16.3	41.1	57.9	16.7	10.0	17.0	35.9	29.1	45.4
Volume/Cap:	0.74	0.54	0.30	0.54	0.81	0.03	0.17	0.34	0.46	0.81	0.20	0.46
Uniform Del:	48.6	31.0	8.6	41.4	29.0	11.1	38.6	44.9	40.4	32.0	29.5	21.6
IncremntDel:	22.8	0.3	0.2	1.2	2.4	0.0	0.3	0.6	1.2	8.4	0.1	0.5
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	71.4	31.3	8.7	42.6	31.4	11.1	38.9	45.5	41.6	40.4	29.6	22.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	71.4	31.3	8.7	42.6	31.4	11.1	38.9	45.5	41.6	40.4	29.6	22.0
LOS by Move:	E	C	A	D	C	B+	D+	D	D	D	C	C+
DesignQueue:	5	13	8	8	24	1	2	3	7	22	4	13

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

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

Intersection #3392: CHANTILLEY/SANTA TERESA

Signal=Protect/Rights=Include
Final Vol: 18 246 39***
Lanes: 1 0 3 0 1

Signal=Permit Rights=Include (West approach)
Final Vol: 60*** Lanes: 1
Lanes: 0
Final Vol: 12 Lanes: 1
Lanes: 0
Final Vol: 14 Lanes: 1

Vol Cnt Date: 5/7/2019
Cycle Time (sec): 92
Loss Time (sec): 9
Critical V/C: 0.217
Avg Crit Del (sec/veh): 10.1
Avg Delay (sec/veh): 13.0
LOS: B

Signal=Permit Rights=Include (East approach)
Lanes: 1 Final Vol: 18
Lanes: 0
Lanes: 1 Final Vol: 10
Lanes: 0
Lanes: 1 Final Vol: 30

Lanes: 1 0 3 0 1
Final Vol: 53 796*** 21
Signal=Protect/Rights=Include

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 7 May 2019 << 8:00-9:00												
Base Vol:	53	796	21	39	246	18	60	12	14	30	10	18
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	53	796	21	39	246	18	60	12	14	30	10	18
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:	53	796	21	39	246	18	60	12	14	30	10	18
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	53	796	21	39	246	18	60	12	14	30	10	18
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	53	796	21	39	246	18	60	12	14	30	10	18
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	53	796	21	39	246	18	60	12	14	30	10	18
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	3.00	1.00	1.00	3.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1750	5700	1750	1750	5700	1750	1750	1900	1750	1750	1900	1750
Capacity Analysis Module:												
Vol/Sat:	0.03	0.14	0.01	0.02	0.04	0.01	0.03	0.01	0.01	0.02	0.01	0.01
Crit Moves:		****		****			****					
Green Time:	28.2	59.1	59.1	9.4	40.3	40.3	14.5	14.5	14.5	14.5	14.5	14.5
Volume/Cap:	0.10	0.22	0.02	0.22	0.10	0.02	0.22	0.04	0.05	0.11	0.03	0.07
Uniform Del:	22.8	6.8	6.0	37.9	15.2	14.7	33.8	32.8	32.9	33.2	32.8	33.0
IncremntDel:	0.1	0.0	0.0	0.6	0.0	0.0	0.4	0.1	0.1	0.2	0.0	0.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	22.9	6.9	6.0	38.5	15.2	14.7	34.2	32.9	33.0	33.4	32.9	33.1
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:	22.9	6.9	6.0	38.5	15.2	14.7	34.2	32.9	33.0	33.4	32.9	33.1
LOS by Move:	C+	A	A	D+	B	B	C-	C-	C-	C-	C-	C-
DesignQueue:	2	5	0	2	2	1	3	1	1	1	0	1

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

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

Intersection #3392: CHANTILLEY/SANTA TERESA

Signal=Protect/Rights=Include

	L		T		R
Final Vol:	31		2316***		52
Lanes:	1	0	3	0	1

Final Vol:	Lanes:	Signal=Permit Rights=Include			Signal=Permit Rights=Include	Lanes:	Final Vol:
			Vol Cnt Date:	5/7/2019			
71***	1		Cycle Time (sec):	92		1	34
			Loss Time (sec):	9			
	0					0	
12	1		Critical V/C:	0.529		1	10
	0		Avg Crit Del (sec/veh):	8.1		0	
14	1		Avg Delay (sec/veh):	9.8		1	63
			LOS:	A			

	L		T		R
Lanes:	1	0	3	0	1
Final Vol:	53***		1400		29

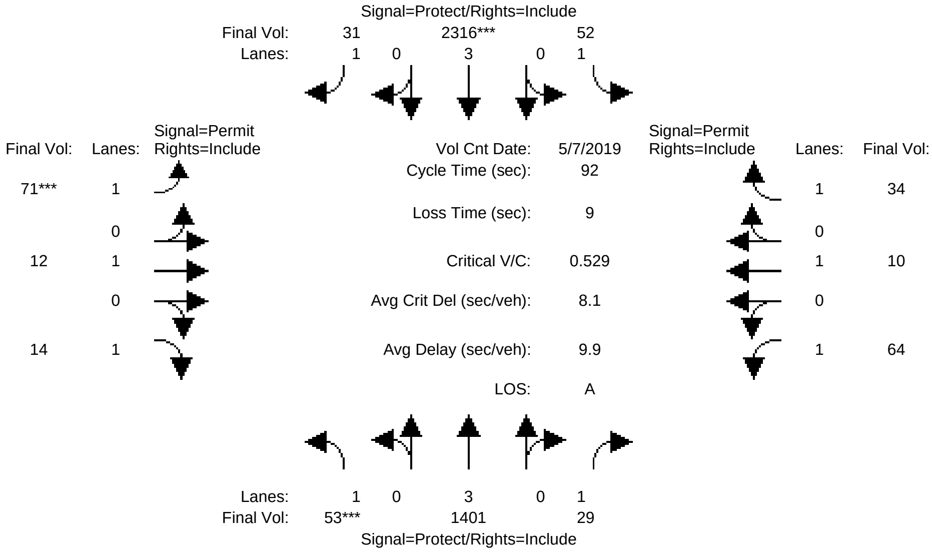
Signal=Protect/Rights=Include

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 7 May 2019 << 8:00-9:00												
Base Vol:	53	796	21	39	246	18	60	12	14	30	10	18
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	53	796	21	39	246	18	60	12	14	30	10	18
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI AM:	0	604	8	13	2070	13	11	0	0	33	0	16
Initial Fut:	53	1400	29	52	2316	31	71	12	14	63	10	34
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	53	1400	29	52	2316	31	71	12	14	63	10	34
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	53	1400	29	52	2316	31	71	12	14	63	10	34
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	53	1400	29	52	2316	31	71	12	14	63	10	34
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	3.00	1.00	1.00	3.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1750	5700	1750	1750	5700	1750	1750	1900	1750	1750	1900	1750
Capacity Analysis Module:												
Vol/Sat:	0.03	0.25	0.02	0.03	0.41	0.02	0.04	0.01	0.01	0.04	0.01	0.02
Crit Moves:	****				****		****					
Green Time:	7.0	55.7	55.7	17.3	66.0	66.0	10.0	10.0	10.0	10.0	10.0	10.0
Volume/Cap:	0.40	0.41	0.03	0.16	0.57	0.02	0.37	0.06	0.07	0.33	0.05	0.18
Uniform Del:	40.5	9.5	7.3	31.3	6.2	3.7	38.1	36.8	36.8	37.9	36.7	37.3
IncremntDel:	2.0	0.1	0.0	0.2	0.2	0.0	1.2	0.1	0.2	1.0	0.1	0.5
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	42.4	9.6	7.3	31.5	6.4	3.7	39.3	36.9	37.0	38.9	36.8	37.7
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:	42.4	9.6	7.3	31.5	6.4	3.7	39.3	36.9	37.0	38.9	36.8	37.7
LOS by Move:	D	A	A	C	A	A	D	D+	D+	D+	D+	D+
DesignQueue:	3	10	1	2	12	0	4	1	1	3	0	2

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

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

Intersection #3392: CHANTILLEY/SANTA TERESA

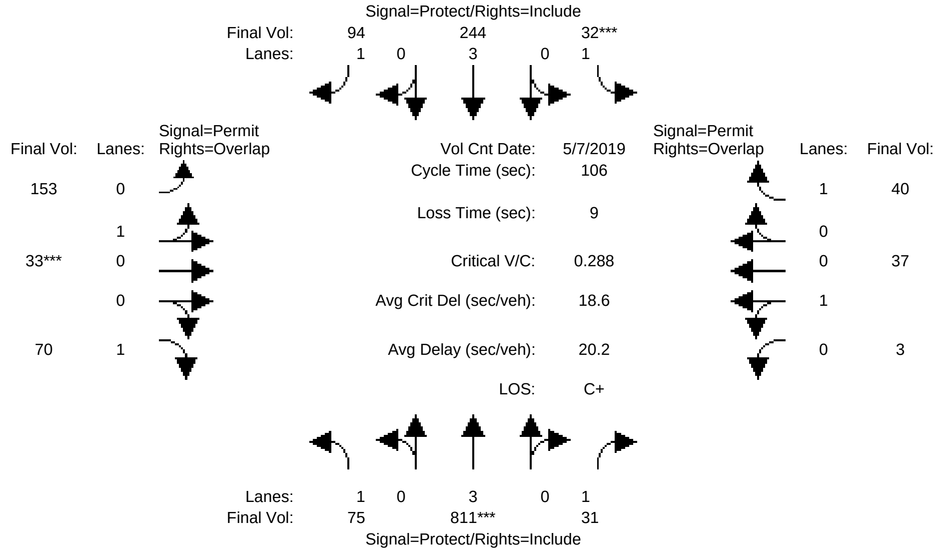


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 7 May 2019 << 8:00-9:00												
Base Vol:	53	1400	29	52	2316	31	71	12	14	63	10	34
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	53	1400	29	52	2316	31	71	12	14	63	10	34
Added Vol:	0	1	0	0	0	0	0	0	0	1	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	53	1401	29	52	2316	31	71	12	14	64	10	34
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	53	1401	29	52	2316	31	71	12	14	64	10	34
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	53	1401	29	52	2316	31	71	12	14	64	10	34
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	53	1401	29	52	2316	31	71	12	14	64	10	34
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	3.00	1.00	1.00	3.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1750	5700	1750	1750	5700	1750	1750	1900	1750	1750	1900	1750
Capacity Analysis Module:												
Vol/Sat:	0.03	0.25	0.02	0.03	0.41	0.02	0.04	0.01	0.01	0.04	0.01	0.02
Crit Moves:	****				****		****					
Green Time:	7.0	55.7	55.7	17.3	66.0	66.0	10.0	10.0	10.0	10.0	10.0	10.0
Volume/Cap:	0.40	0.41	0.03	0.16	0.57	0.02	0.37	0.06	0.07	0.34	0.05	0.18
Uniform Del:	40.5	9.5	7.3	31.3	6.2	3.7	38.1	36.8	36.8	37.9	36.7	37.3
IncremntDel:	2.0	0.1	0.0	0.2	0.2	0.0	1.2	0.1	0.2	1.1	0.1	0.5
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	42.4	9.6	7.3	31.5	6.4	3.7	39.3	36.9	37.0	39.0	36.8	37.7
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:	42.4	9.6	7.3	31.5	6.4	3.7	39.3	36.9	37.0	39.0	36.8	37.7
LOS by Move:	D	A	A	C	A	A	D	D+	D+	D+	D+	D+
DesignQueue:	3	10	1	2	12	0	4	1	1	3	0	2

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

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

Intersection #3673: MARTINVALE/SANTA TERESA

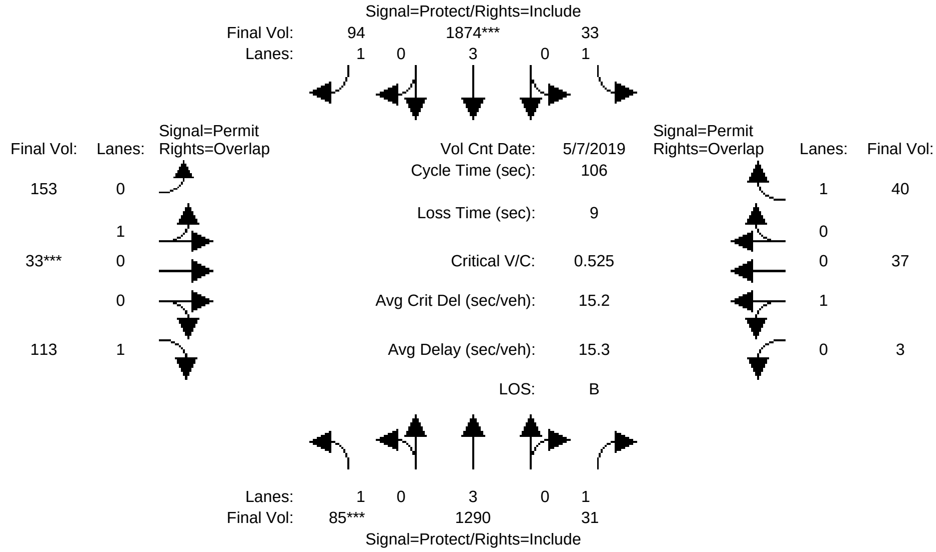


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 7 May 2019 << 7:30-8:30 AM												
Base Vol:	75	811	31	32	244	94	153	33	70	3	37	40
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:	75	811	31	32	244	94	153	33	70	3	37	40
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:	75	811	31	32	244	94	153	33	70	3	37	40
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:	75	811	31	32	244	94	153	33	70	3	37	40
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	75	811	31	32	244	94	153	33	70	3	37	40
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:	75	811	31	32	244	94	153	33	70	3	37	40
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	0.95	0.95	0.92	0.95	0.95	0.92
Lanes:	1.00	3.00	1.00	1.00	3.00	1.00	0.82	0.18	1.00	0.07	0.93	1.00
Final Sat.:	1750	5700	1750	1750	5700	1750	1481	319	1750	135	1665	1750
Capacity Analysis Module:												
Vol/Sat:	0.04	0.14	0.02	0.02	0.04	0.05	0.10	0.10	0.04	0.02	0.02	0.02
Crit Moves:		****		****				****				
Green Time:	24.3	52.1	52.1	7.0	34.8	34.8	37.9	37.9	62.2	37.9	37.9	44.9
Volume/Cap:	0.19	0.29	0.04	0.28	0.13	0.16	0.29	0.29	0.07	0.06	0.06	0.05
Uniform Del:	32.9	16.0	13.9	47.1	25.0	25.3	24.4	24.4	9.4	22.4	22.4	18.0
IncremntDel:	0.2	0.1	0.0	1.3	0.0	0.1	0.3	0.3	0.0	0.0	0.0	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	33.1	16.0	13.9	48.4	25.0	25.4	24.7	24.7	9.4	22.4	22.4	18.1
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:	33.1	16.0	13.9	48.4	25.0	25.4	24.7	24.7	9.4	22.4	22.4	18.1
LOS by Move:	C-	B	B	D	C	C	C	C	A	C+	C+	B-
DesignQueue:	4	8	1	2	3	4	8	8	2	2	2	1

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

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

Intersection #3673: MARTINVALE/SANTA TERESA

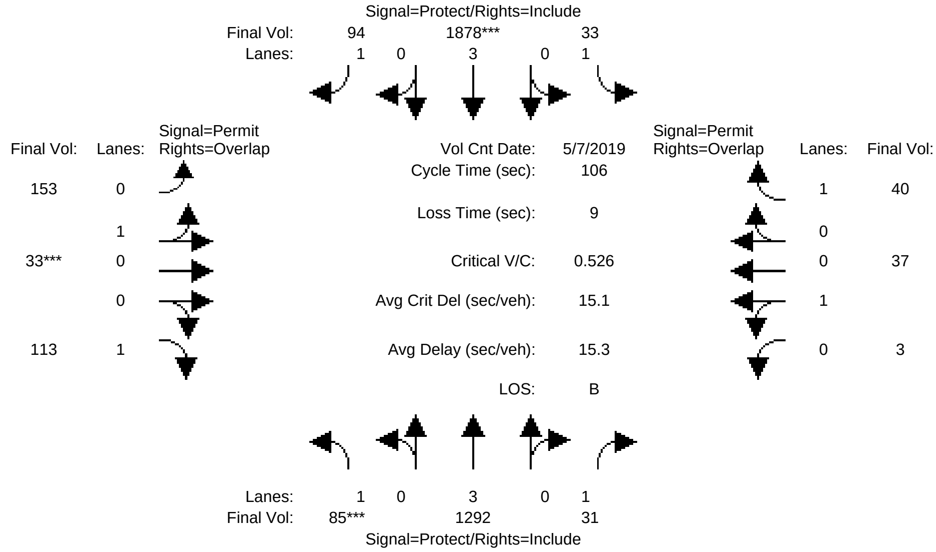


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 7 May 2019 << 7:30-8:30 AM												
Base Vol:	75	811	31	32	244	94	153	33	70	3	37	40
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:	75	811	31	32	244	94	153	33	70	3	37	40
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI AM:	10	479	0	1	1630	0	0	0	43	0	0	0
Initial Fut:	85	1290	31	33	1874	94	153	33	113	3	37	40
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	85	1290	31	33	1874	94	153	33	113	3	37	40
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	85	1290	31	33	1874	94	153	33	113	3	37	40
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:	85	1290	31	33	1874	94	153	33	113	3	37	40
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	0.95	0.95	0.92	0.95	0.95	0.92
Lanes:	1.00	3.00	1.00	1.00	3.00	1.00	0.82	0.18	1.00	0.07	0.93	1.00
Final Sat.:	1750	5700	1750	1750	5700	1750	1481	319	1750	135	1665	1750
Capacity Analysis Module:												
Vol/Sat:	0.05	0.23	0.02	0.02	0.33	0.05	0.10	0.10	0.06	0.02	0.02	0.02
Crit Moves:	****				****			****				
Green Time:	9.8	58.9	58.9	17.2	66.3	66.3	20.9	20.9	30.7	20.9	20.9	38.1
Volume/Cap:	0.53	0.41	0.03	0.12	0.53	0.09	0.53	0.53	0.22	0.11	0.11	0.06
Uniform Del:	45.9	13.5	10.6	37.9	11.1	7.8	38.1	38.1	28.6	35.0	35.0	22.3
IncremntDel:	3.2	0.1	0.0	0.2	0.1	0.0	1.5	1.5	0.2	0.1	0.1	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	49.0	13.6	10.6	38.1	11.2	7.9	39.6	39.6	28.9	35.1	35.1	22.3
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:	49.0	13.6	10.6	38.1	11.2	7.9	39.6	39.6	28.9	35.1	35.1	22.3
LOS by Move:	D	B	B+	D+	B+	A	D	D	C	D+	D+	C+
DesignQueue:	5	12	1	2	15	2	10	10	5	2	2	2

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

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

Intersection #3673: MARTINVALE/SANTA TERESA



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 7 May 2019 << 7:30-8:30 AM												
Base Vol:	85	1290	31	33	1874	94	153	33	113	3	37	40
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:	85	1290	31	33	1874	94	153	33	113	3	37	40
Added Vol:	0	2	0	0	4	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	85	1292	31	33	1878	94	153	33	113	3	37	40
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	85	1292	31	33	1878	94	153	33	113	3	37	40
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	85	1292	31	33	1878	94	153	33	113	3	37	40
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:	85	1292	31	33	1878	94	153	33	113	3	37	40
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	0.95	0.95	0.92	0.95	0.95	0.92
Lanes:	1.00	3.00	1.00	1.00	3.00	1.00	0.82	0.18	1.00	0.07	0.93	1.00
Final Sat.:	1750	5700	1750	1750	5700	1750	1481	319	1750	135	1665	1750
Capacity Analysis Module:												
Vol/Sat:	0.05	0.23	0.02	0.02	0.33	0.05	0.10	0.10	0.06	0.02	0.02	0.02
Crit Moves:	****				****		****					
Green Time:	9.8	59.0	59.0	17.2	66.4	66.4	20.8	20.8	30.6	20.8	20.8	38.0
Volume/Cap:	0.53	0.41	0.03	0.12	0.53	0.09	0.53	0.53	0.22	0.11	0.11	0.06
Uniform Del:	45.9	13.5	10.6	37.9	11.0	7.8	38.2	38.2	28.7	35.0	35.0	22.3
IncremntDel:	3.2	0.1	0.0	0.2	0.1	0.0	1.5	1.5	0.2	0.1	0.1	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	49.1	13.6	10.6	38.1	11.2	7.9	39.6	39.6	28.9	35.1	35.1	22.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	49.1	13.6	10.6	38.1	11.2	7.9	39.6	39.6	28.9	35.1	35.1	22.4
LOS by Move:	D	B	B+	D+	B+	A	D	D	C	D+	D+	C+
DesignQueue:	5	12	1	2	15	2	10	10	5	2	2	2

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

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

Intersection #3914: BERNAL/REALM

Signal=Split/Rights=Include
Final Vol: 1 4 17***
Lanes: 0 0 1! 0 0

Final Vol: Lanes: Signal=Protect Rights=Include

15 1
0
654*** 2
1
4 0

Vol Cnt Date: 5/7/2019
Cycle Time (sec): 106
Loss Time (sec): 9
Critical V/C: 0.203
Avg Crit Del (sec/veh): 18.2
Avg Delay (sec/veh): 18.1
LOS: B-

Signal=Protect Rights=Include Lanes: Final Vol:

0 48
1
2 596
0
1 87***

Lanes: 0 0 1! 0 0
Final Vol: 0 1*** 10
Signal=Split/Rights=Include

```
Approach:     North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:   10   10    10    10   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: >> Count Date: 7 May 2019 << 8:00 - 9:00 AM
Base Vol:      0    1    10    17    4     1    15  654     4    87  596    48
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   0    1    10    17    4     1    15  654     4    87  596    48
Added Vol:     0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:   0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   0    1    10    17    4     1    15  654     4    87  596    48
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    0    1    10    17    4     1    15  654     4    87  596    48
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   0    1    10    17    4     1    15  654     4    87  596    48
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   0    1    10    17    4     1    15  654     4    87  596    48
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.92 0.95  0.95  0.92 0.92  0.92  0.92 0.98  0.95  0.92 0.99  0.95
Lanes:       0.00 0.09  0.91  0.77 0.18  0.05  1.00 2.98  0.02  1.00 2.77  0.23
Final Sat.:    0  164  1636  1352  318    80  1750 5566    34  1750 5182   417
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.01  0.01  0.01 0.01  0.01  0.01 0.12  0.12  0.05 0.12  0.12
Crit Moves:       ****        ****                  ****        ****
Green Time:   0.0 10.0  10.0  10.0 10.0  10.0  28.1 54.1  54.1  22.9 48.9  48.9
Volume/Cap:  0.00 0.06  0.06  0.13 0.13  0.13  0.03 0.23  0.23  0.23 0.25  0.25
Uniform Del:  0.0 43.7  43.7  44.0 44.0  44.0  28.9 14.4  14.4  34.3 17.4  17.4
IncremntDel:  0.0  0.7   0.7   1.7  1.7   1.7   0.1  0.2   0.2   1.4  0.2   0.2
InitQueuDel:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
Delay Adj:   0.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Delay/Veh:    0.0 44.5  44.5  45.7 45.7  45.7  29.0 14.6  14.6  35.7 17.6  17.6
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:   0.0 44.5  44.5  45.7 45.7  45.7  29.0 14.6  14.6  35.7 17.6  17.6
LOS by Move:   A    D     D     D    D     D     C    B     B    D+    B     B
DesignQueue:   0    1     1     1    1     1     1    7     7     4    7     7
Note: Queue reported is the number of cars per lane.
```


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

Intersection #3914: BERNAL/REALM

Signal=Split/Rights=Include
Final Vol: 1 4 17***
Lanes: 0 0 1! 0 0

Signal=Protect Rights=Include (East Bound)
Final Vol: 15*** / 687 / 4
Lanes: 1 / 0 / 2 / 1 / 0

Vol Cnt Date: 5/7/2019
Cycle Time (sec): 106
Loss Time (sec): 9
Critical V/C: 0.216
Avg Crit Del (sec/veh): 9.4
Avg Delay (sec/veh): 13.5
LOS: B

Signal=Protect Rights=Include (West Bound)
Lanes: 0 / 1 / 2 / 0 / 1
Final Vol: 48 / 906*** / 87

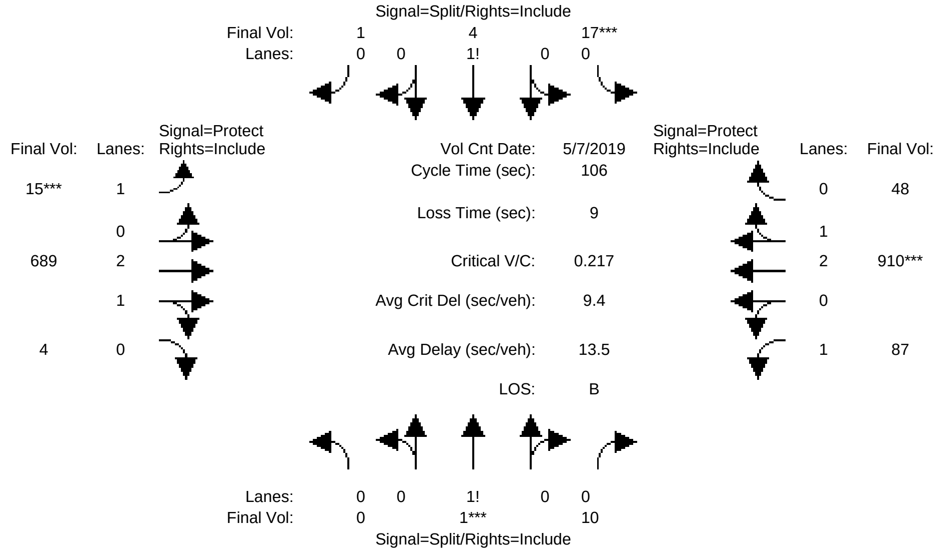
Lanes: 0 0 1! 0 0
Final Vol: 0 1*** 10
Signal=Split/Rights=Include

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	10	10	10	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: >> Count Date: 7 May 2019 << 8:00 - 9:00 AM												
Base Vol:	0	1	10	17	4	1	15	654	4	87	596	48
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1	10	17	4	1	15	654	4	87	596	48
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI AM:	0	0	0	0	0	0	0	33	0	0	310	0
Initial Fut:	0	1	10	17	4	1	15	687	4	87	906	48
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1	10	17	4	1	15	687	4	87	906	48
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1	10	17	4	1	15	687	4	87	906	48
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1	10	17	4	1	15	687	4	87	906	48
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	0.95	0.92	0.92	0.92	0.92	0.98	0.95	0.92	0.98	0.95
Lanes:	0.00	0.09	0.91	0.77	0.18	0.05	1.00	2.98	0.02	1.00	2.84	0.16
Final Sat.:	0	164	1636	1352	318	80	1750	5568	32	1750	5318	282
Capacity Analysis Module:												
Vol/Sat:	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.12	0.12	0.05	0.17	0.17
Crit Moves:		****		****			****			****		
Green Time:	0.0	10.0	10.0	10.0	10.0	10.0	7.0	50.2	50.2	26.8	70.0	70.0
Volume/Cap:	0.00	0.06	0.06	0.13	0.13	0.13	0.13	0.26	0.26	0.20	0.26	0.26
Uniform Del:	0.0	43.7	43.7	44.0	44.0	44.0	46.6	16.8	16.8	31.1	7.4	7.4
IncremntDel:	0.0	0.7	0.7	1.7	1.7	1.7	2.3	0.2	0.2	1.0	0.2	0.2
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	0.0	44.5	44.5	45.7	45.7	45.7	48.9	17.0	17.0	32.1	7.5	7.5
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:	0.0	44.5	44.5	45.7	45.7	45.7	48.9	17.0	17.0	32.1	7.5	7.5
LOS by Move:	A	D	D	D	D	D	D	B	B	C-	A	A
DesignQueue:	0	1	1	1	1	1	1	8	8	4	7	7

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

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

Intersection #3914: BERNAL/REALM

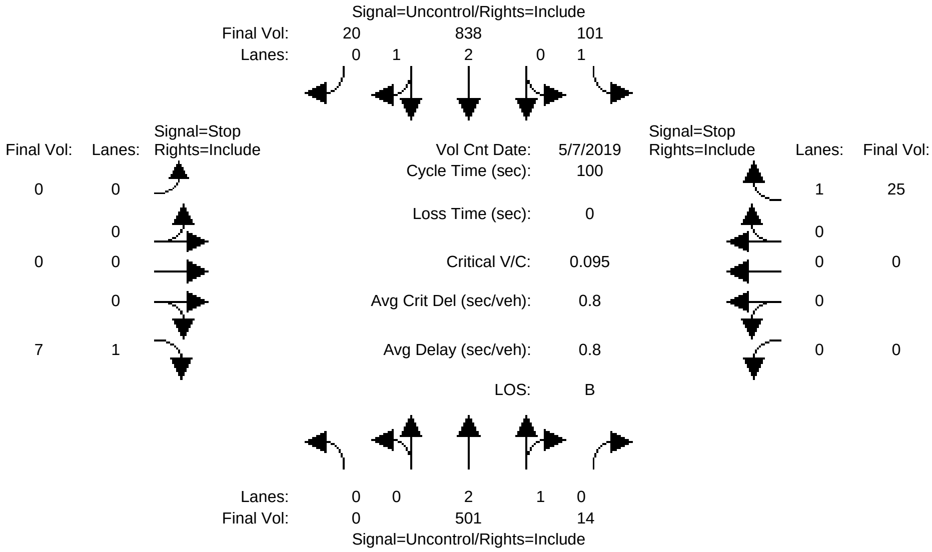


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 7 May 2019 << 8:00 - 9:00 AM												
Base Vol:	0	1	10	17	4	1	15	687	4	87	906	48
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1	10	17	4	1	15	687	4	87	906	48
Added Vol:	0	0	0	0	0	0	0	2	0	0	4	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	1	10	17	4	1	15	689	4	87	910	48
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1	10	17	4	1	15	689	4	87	910	48
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1	10	17	4	1	15	689	4	87	910	48
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1	10	17	4	1	15	689	4	87	910	48
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	0.95	0.92	0.92	0.92	0.92	0.98	0.95	0.92	0.98	0.95
Lanes:	0.00	0.09	0.91	0.77	0.18	0.05	1.00	2.98	0.02	1.00	2.84	0.16
Final Sat.:	0	164	1636	1352	318	80	1750	5568	32	1750	5319	281
Capacity Analysis Module:												
Vol/Sat:	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.12	0.12	0.05	0.17	0.17
Crit Moves:		****		****			****			****		
Green Time:	0.0	10.0	10.0	10.0	10.0	10.0	7.0	50.2	50.2	26.8	70.0	70.0
Volume/Cap:	0.00	0.06	0.06	0.13	0.13	0.13	0.13	0.26	0.26	0.20	0.26	0.26
Uniform Del:	0.0	43.7	43.7	44.0	44.0	44.0	46.6	16.8	16.8	31.1	7.4	7.4
IncremntDel:	0.0	0.7	0.7	1.7	1.7	1.7	2.3	0.2	0.2	1.0	0.2	0.2
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	0.0	44.5	44.5	45.7	45.7	45.7	48.9	17.0	17.0	32.1	7.5	7.5
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:	0.0	44.5	44.5	45.7	45.7	45.7	48.9	17.0	17.0	32.1	7.5	7.5
LOS by Move:	A	D	D	D	D	D	D	B	B	C-	A	A
DesignQueue:	0	1	1	1	1	1	1	8	8	4	7	7

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

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

Intersection #5: SANTA TERESA/PRJ DWY




```
Approach:     North Bound     South Bound      East Bound      West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 7 May 2019 << 4:45 - 5:45 PM
Base Vol:      0  501   14   101  838   20     0    0    7     0    0   25
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  501   14   101  838   20     0    0    7     0    0   25
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  501   14   101  838   20     0    0    7     0    0   25
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  501   14   101  838   20     0    0    7     0    0   25
Reduct Vol:     0    0    0     0    0    0     0    0    0     0    0    0
FinalVolume:    0  501   14   101  838   20     0    0    7     0    0   25
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx   6.9 xxxxx xxxx   6.9
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx   3.3 xxxxx xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   515 xxxx xxxxx  xxxx xxxx   289  xxxx xxxx   174
Potent Cap.: xxxx xxxx xxxxx  1061 xxxx xxxxx  xxxx xxxx   713  xxxx xxxx   846
Move Cap.:   xxxx xxxx xxxxx  1061 xxxx xxxxx  xxxx xxxx   713  xxxx xxxx   846
Volume/Cap:  xxxx xxxx  xxxx  0.10 xxxx  xxxx  xxxx xxxx  0.01  xxxx xxxx  0.03
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   0.3 xxxx xxxxx  xxxx xxxx   0.0  xxxx xxxx   0.1
Control Del:xxxxx xxxx xxxxx   8.7 xxxx xxxxx xxxxx xxxx  10.1 xxxxx xxxx   9.4
LOS by Move:    *    *     *     A    *     *     *    *     B     *    *     A
Movement:    LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:    xxxxxx          xxxxxx            10.1            9.4
ApproachLOS:       *               *                B               A
Note: Queue reported is the number of cars per lane.
                  Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #5 SANTA TERESA/PRJ DWY
********************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
```



```
Approach:     North Bound      South Bound      East Bound      West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:      Uncontrolled     Uncontrolled     Stop Sign       Stop Sign
Lanes:       0  0  2  1  0   1  0  2  1  0   0  0  0  0  1   0  0  0  0  1
Initial Vol:   0  501   14  101  838   20    0    0    7    0    0   25
ApproachDel:   xxxxxx          xxxxxx           10.1             9.4
------------|---------------||---------------||---------------||---------------|
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=1506]
   SUCCEED - Total volume greater than or equal to 800 for intersection
             with four or more approaches.
--------------------------------------------------------------------------------
Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
   FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=25]
   FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1506]
   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 #5 SANTA TERESA/PRJ DWY
********************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:     North Bound      South Bound      East Bound      West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:      Uncontrolled     Uncontrolled     Stop Sign       Stop Sign
Lanes:       0  0  2  1  0   1  0  2  1  0   0  0  0  0  1   0  0  0  0  1
Initial Vol:   0  501   14  101  838   20    0    0    7    0    0   25
------------|---------------||---------------||---------------||---------------|
Major Street Volume:           1474
Minor Approach Volume:           25
Minor Approach Volume Threshold: 151
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

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


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

Intersection #5: SANTA TERESA/PRJ DWY

```
                     Signal=Uncontrol/Rights=Include
          Final Vol:   20        1087        101
              Lanes:    0    1     2     0    1

          Signal=Stop                                Signal=Stop
Final Vol: Lanes: Rights=Include   Vol Cnt Date:      5/7/2019   Rights=Include   Lanes:  Final Vol:
                                   Cycle Time (sec):  100
    0        0                                                                      1        25
                                   Loss Time (sec):   0
             0                                                                      0
    0        0                     Critical V/C:      0.632                         0         0
             0                     Avg Crit Del (sec/veh): 1.7                      0
    7        1                     Avg Delay (sec/veh):    1.7                      0         0
                                   LOS:               F

              Lanes:    0    0     2     1    0
          Final Vol:    0         2648        14
                     Signal=Uncontrol/Rights=Include
```

```
Approach:     North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R   L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 7 May 2019 << 4:45 - 5:45 PM
Base Vol:      0  501    14   101  838    20     0    0     7     0    0    25
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  501    14   101  838    20     0    0     7     0    0    25
Added Vol:     0    0     0     0    0     0     0    0     0     0    0     0
ATI PM:        0 2147     0     0  249     0     0    0     0     0    0     0
Initial Fut:   0 2648    14   101 1087    20     0    0     7     0    0    25
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 2648    14   101 1087    20     0    0     7     0    0    25
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:   0 2648    14   101 1087    20     0    0     7     0    0    25
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx   6.9 xxxxx xxxx   6.9
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx   3.3 xxxxx xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  2662 xxxx xxxxx  xxxx xxxx   372  xxxx xxxx   890
Potent Cap.: xxxx xxxx xxxxx   160 xxxx xxxxx  xxxx xxxx   631  xxxx xxxx   290
Move Cap.:   xxxx xxxx xxxxx   160 xxxx xxxxx  xxxx xxxx   631  xxxx xxxx   290
Volume/Cap:  xxxx xxxx  xxxx  0.63 xxxx  xxxx  xxxx xxxx  0.01  xxxx xxxx  0.09
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   3.5 xxxx xxxxx  xxxx xxxx   0.0  xxxx xxxx   0.3
Control Del:xxxxx xxxx xxxxx  59.9 xxxx xxxxx xxxxx xxxx  10.8 xxxxx xxxx  18.6
LOS by Move:   *    *     *     F    *     *     *    *     B     *    *     C
Movement:    LT - LTR - RT   LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:    *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:    xxxxxx           xxxxxx             10.8             18.6
ApproachLOS:       *                *                 B                C
Note: Queue reported is the number of cars per lane.
                 Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #5 SANTA TERESA/PRJ DWY
********************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
```

```
Approach:     North Bound     South Bound      East Bound      West Bound
Movement:    L - T - R   L - T - R   L - T - R   L - T - R
------------|---------------||---------------||---------------||---------------|
Control:      Uncontrolled    Uncontrolled     Stop Sign       Stop Sign
Lanes:       0  0  2  1  0   1  0  2  1  0   0  0  0  0  1   0  0  0  0  1
Initial Vol:   0 2648   14  101 1087   20    0    0    7    0    0   25
ApproachDel:   xxxxxx         xxxxxx          10.8           18.6
------------|---------------||---------------||---------------||---------------|
Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
   FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=7]
   FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=3902]
   SUCCEED - Total volume greater than or equal to 800 for intersection
           with four or more approaches.
--------------------------------------------------------------------------------
Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
   FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=25]
   FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=3902]
   SUCCEED - Total volume greater than or equal to 800 for intersection
           with four or more approaches.
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
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"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 #5 SANTA TERESA/PRJ DWY
********************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:     North Bound     South Bound      East Bound      West Bound
Movement:    L - T - R   L - T - R   L - T - R   L - T - R
------------|---------------||---------------||---------------||---------------|
Control:      Uncontrolled    Uncontrolled     Stop Sign       Stop Sign
Lanes:       0  0  2  1  0   1  0  2  1  0   0  0  0  0  1   0  0  0  0  1
Initial Vol:   0 2648   14  101 1087   20    0    0    7    0    0   25
------------|---------------||---------------||---------------||---------------|
Major Street Volume:           3870
Minor Approach Volume:          25
Minor Approach Volume Threshold: -181 [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.
```

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

Intersection #5: SANTA TERESA/PRJ DWY

Signal=Uncontrol/Rights=Include

Final Vol:	20		1081		138
Lanes:	0	1	2	0	1

West side: Final Vol:	Lanes:	Signal=Stop Rights=Include			Signal=Stop Rights=Include	Lanes:	Final Vol:
0	0		Vol Cnt Date:	n/a		1	61
			Cycle Time (sec):	100			
	0		Loss Time (sec):	0		0	
0	0		Critical V/C:	0.866		0	0
	0		Avg Crit Del (sec/veh):	3.7		0	
7	1		Avg Delay (sec/veh):	3.7		0	0
			LOS:	F			

Lanes:	0	0	2	1	0
Final Vol:	0		2642		23

Signal=Uncontrol/Rights=Include

```
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 2648    14   101 1087    20     0    0     7     0    0    25
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 2648    14   101 1087    20     0    0     7     0    0    25
Added Vol:     0    0     3    26    0     0     0    0     0     0    0    21
Diverted Tr:   0   -6     6    11   -6     0     0    0     0     0    0    15
Initial Fut:   0 2642    23   138 1081    20     0    0     7     0    0    61
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 2642    23   138 1081    20     0    0     7     0    0    61
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:   0 2642    23   138 1081    20     0    0     7     0    0    61
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx   6.9 xxxxx xxxx   6.9
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx   3.3 xxxxx xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  2665 xxxx xxxxx  xxxx xxxx   370  xxxx xxxx   892
Potent Cap.: xxxx xxxx xxxxx   159 xxxx xxxxx  xxxx xxxx   633  xxxx xxxx   289
Move Cap.:   xxxx xxxx xxxxx   159 xxxx xxxxx  xxxx xxxx   633  xxxx xxxx   289
Volume/Cap:  xxxx xxxx  xxxx  0.87 xxxx  xxxx  xxxx xxxx  0.01  xxxx xxxx  0.21
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   6.0 xxxx xxxxx  xxxx xxxx   0.0  xxxx xxxx   0.8
Control Del:xxxxx xxxx xxxxx  96.0 xxxx xxxxx xxxxx xxxx  10.8 xxxxx xxxx  20.8
LOS by Move:    *    *     *     F    *     *     *    *     B     *    *     C
Movement:    LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:    xxxxxx           xxxxxx            10.8             20.8
ApproachLOS:       *                *                B                C
Note: Queue reported is the number of cars per lane.
                   Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #5 SANTA TERESA/PRJ DWY
********************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
```

```
Approach:     North Bound     South Bound      East Bound      West Bound
Movement:    L - T - R   L - T - R   L - T - R   L - T - R
------------|---------------||---------------||---------------||---------------|
Control:      Uncontrolled    Uncontrolled     Stop Sign       Stop Sign
Lanes:       0  0  2  1  0   1  0  2  1  0   0  0  0  0  1   0  0  0  0  1
Initial Vol:   0 2642   23  138 1081   20    0    0    7    0    0   61
ApproachDel:   xxxxxx         xxxxxx          10.8           20.8
------------|---------------||---------------||---------------||---------------|
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=3972]
   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=0.4]
   FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=61]
   FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=3972]
   SUCCEED - Total volume greater than or equal to 800 for intersection
            with four or more approaches.
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
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"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 #5 SANTA TERESA/PRJ DWY
********************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:     North Bound     South Bound      East Bound      West Bound
Movement:    L - T - R   L - T - R   L - T - R   L - T - R
------------|---------------||---------------||---------------||---------------|
Control:      Uncontrolled    Uncontrolled     Stop Sign       Stop Sign
Lanes:       0  0  2  1  0   1  0  2  1  0   0  0  0  0  1   0  0  0  0  1
Initial Vol:   0 2642   23  138 1081   20    0    0    7    0    0   61
------------|---------------||---------------||---------------||---------------|
Major Street Volume:           3904
Minor Approach Volume:          61
Minor Approach Volume Threshold: -184 [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.
```
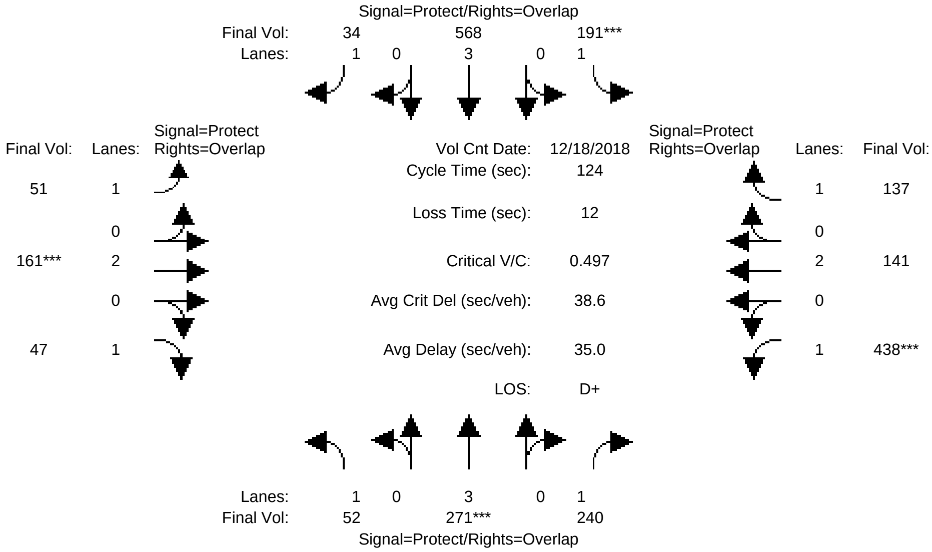

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing PM

Intersection #3075: BERNAL/SANTA TERESA

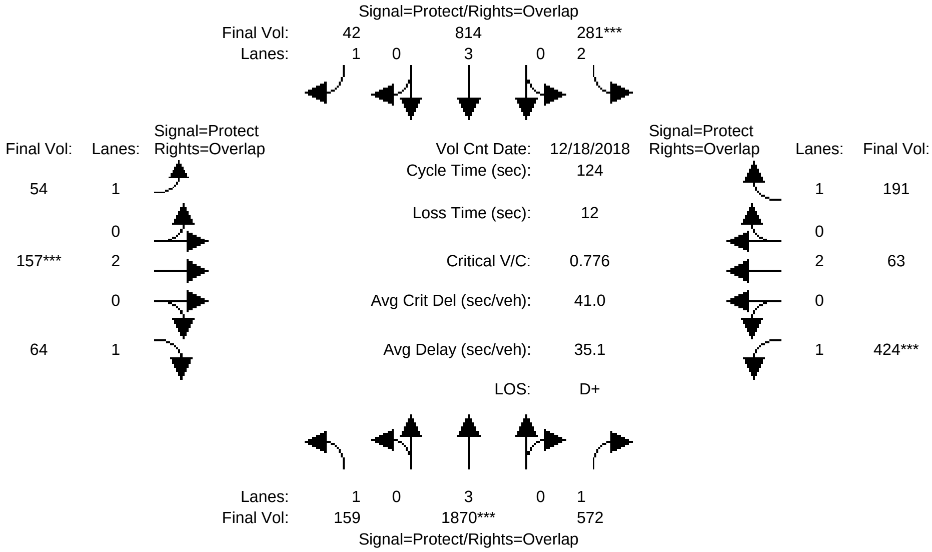


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 18 Dec 2018 << 4:30 - 5:30 PM												
Base Vol:	52	271	240	191	568	34	51	161	47	438	141	137
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:	52	271	240	191	568	34	51	161	47	438	141	137
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:	52	271	240	191	568	34	51	161	47	438	141	137
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:	52	271	240	191	568	34	51	161	47	438	141	137
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	52	271	240	191	568	34	51	161	47	438	141	137
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:	52	271	240	191	568	34	51	161	47	438	141	137
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	3.00	1.00	1.00	3.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1750	5700	1750	1750	5700	1750	1750	3800	1750	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.03	0.05	0.14	0.11	0.10	0.02	0.03	0.04	0.03	0.25	0.04	0.08
Crit Moves:		****		****				****		****		
Green Time:	14.1	11.9	74.2	27.2	24.9	55.0	30.0	10.6	24.7	62.4	42.9	70.1
Volume/Cap:	0.26	0.50	0.23	0.50	0.50	0.04	0.12	0.50	0.13	0.50	0.11	0.14
Uniform Del:	50.2	53.2	11.6	42.4	44.0	19.6	36.7	54.2	40.9	20.4	27.5	12.7
IncremntDel:	0.7	0.7	0.1	1.0	0.3	0.0	0.1	1.2	0.2	0.4	0.0	0.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	50.9	54.0	11.7	43.4	44.3	19.6	36.8	55.4	41.0	20.9	27.6	12.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	50.9	54.0	11.7	43.4	44.3	19.6	36.8	55.4	41.0	20.9	27.6	12.8
LOS by Move:	D	D-	B+	D	D	B-	D+	E+	D	C+	C	B
DesignQueue:	3	6	7	11	11	1	3	5	3	17	3	5

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

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

Intersection #3075: BERNAL/SANTA TERESA



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: >> Count Date: 18 Dec 2018 << 4:30 - 5:30 PM												
Base Vol:	52	271	240	191	568	34	51	161	47	438	141	137
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:	52	271	240	191	568	34	51	161	47	438	141	137
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI PM:	107	1599	332	90	246	8	3	-4	17	-14	-78	54
Initial Fut:	159	1870	572	281	814	42	54	157	64	424	63	191
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:	159	1870	572	281	814	42	54	157	64	424	63	191
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	159	1870	572	281	814	42	54	157	64	424	63	191
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:	159	1870	572	281	814	42	54	157	64	424	63	191
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.83	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	3.00	1.00	2.00	3.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1750	5700	1750	3150	5700	1750	1750	3800	1750	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.09	0.33	0.33	0.09	0.14	0.02	0.03	0.04	0.04	0.24	0.02	0.11
Crit Moves:		****		****				****		****		
Green Time:	25.1	50.7	88.2	13.8	39.4	59.0	19.5	10.0	35.1	37.5	27.9	41.7
Volume/Cap:	0.45	0.80	0.46	0.80	0.45	0.05	0.20	0.51	0.13	0.80	0.07	0.32
Uniform Del:	43.4	32.2	7.7	53.8	33.6	17.5	45.4	54.7	33.1	39.8	37.8	30.6
IncremntDel:	0.9	2.1	0.3	12.5	0.2	0.0	0.3	1.5	0.1	8.6	0.0	0.3
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	44.3	34.3	7.9	66.2	33.8	17.5	45.7	56.1	33.2	48.4	37.9	31.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	44.3	34.3	7.9	66.2	33.8	17.5	45.7	56.1	33.2	48.4	37.9	31.0
LOS by Move:	D	C-	A	E	C-	B	D	E+	C-	D	D+	C
DesignQueue:	10	28	14	11	13	2	3	5	3	24	2	10

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

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

Intersection #3075: BERNAL/SANTA TERESA

Signal=Protect/Rights=Overlap
Final Vol: 42 826 281***
Lanes: 1 0 3 0 2

	Final Vol:	Lanes:	Signal=Protect Rights=Overlap			Signal=Protect Rights=Overlap	Lanes:	Final Vol:
	54	1		Vol Cnt Date:	n/a		1	191
				Cycle Time (sec):	124			
		0		Loss Time (sec):	12		0	
	157***	2		Critical V/C:	0.790		2	56
		0		Avg Crit Del (sec/veh):	42.0		0	
	67	1		Avg Delay (sec/veh):	35.8		1	443***
				LOS:	D+			

Lanes: 1 0 3 0 1
Final Vol: 168 1879*** 589
Signal=Protect/Rights=Overlap

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:	159	1870	572	281	814	42	54	157	64	424	63	191
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:	159	1870	572	281	814	42	54	157	64	424	63	191
Added Vol:	2	9	9	0	12	0	0	0	3	12	0	0
Diverted Tr:	7	0	8	0	0	0	0	0	0	7	-7	0
Initial Fut:	168	1879	589	281	826	42	54	157	67	443	56	191
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:	168	1879	589	281	826	42	54	157	67	443	56	191
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	168	1879	589	281	826	42	54	157	67	443	56	191
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:	168	1879	589	281	826	42	54	157	67	443	56	191
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.83	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	3.00	1.00	2.00	3.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1750	5700	1750	3150	5700	1750	1750	3800	1750	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.10	0.33	0.34	0.09	0.14	0.02	0.03	0.04	0.04	0.25	0.01	0.11
Crit Moves:		****		****				****		****		
Green Time:	25.3	50.0	88.5	13.5	38.2	58.2	19.9	10.0	35.3	38.4	28.5	42.0
Volume/Cap:	0.47	0.82	0.47	0.82	0.47	0.05	0.19	0.51	0.13	0.82	0.06	0.32
Uniform Del:	43.4	32.9	7.7	54.0	34.7	17.9	45.1	54.7	33.0	39.5	37.3	30.4
IncremntDel:	1.0	2.4	0.3	14.1	0.2	0.0	0.3	1.5	0.1	9.4	0.0	0.3
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	44.4	35.3	8.0	68.1	34.9	17.9	45.4	56.1	33.1	48.9	37.4	30.7
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:	44.4	35.3	8.0	68.1	34.9	17.9	45.4	56.1	33.1	48.9	37.4	30.7
LOS by Move:	D	D+	A	E	C-	B	D	E+	C-	D	D+	C
DesignQueue:	10	28	14	11	14	2	3	5	4	25	1	10

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

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

Intersection #3392: CHANTILLEY/SANTA TERESA

Signal=Protect/Rights=Include
Final Vol: 40 791*** 31
Lanes: 1 0 3 0 1

Final Vol:	Lanes:	Signal=Permit Rights=Include			Signal=Permit Rights=Include	Lanes:	Final Vol:
			Vol Cnt Date:	5/7/2019			
46	1		Cycle Time (sec):	92		1	35
			Loss Time (sec):	9			
	0					0	
7	1		Critical V/C:	0.239		1	12
	0		Avg Crit Del (sec/veh):	12.7		0	
16	1		Avg Delay (sec/veh):	15.5		1	99***
			LOS:	B			

Lanes: 1 0 3 0 1
Final Vol: 36*** 407 23
Signal=Protect/Rights=Include

```
Approach:     North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R   L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     7   10    10     7   10    10    10   10    10    10   10    10
Y+R:         4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 7 May 2019 << 4:45 - 5:45 PM
Base Vol:      36  407    23    31  791    40    46    7    16    99   12    35
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:   36  407    23    31  791    40    46    7    16    99   12    35
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:   36  407    23    31  791    40    46    7    16    99   12    35
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:    36  407    23    31  791    40    46    7    16    99   12    35
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   36  407    23    31  791    40    46    7    16    99   12    35
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:   36  407    23    31  791    40    46    7    16    99   12    35
------------|---------------||---------------||---------------||---------------|
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 3.00  1.00  1.00 3.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Sat.:  1750 5700  1750  1750 5700  1750  1750 1900  1750  1750 1900  1750
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.02 0.07  0.01  0.02 0.14  0.02  0.03 0.00  0.01  0.06 0.01  0.02
Crit Moves:  ****                  ****                                ****
Green Time:   7.9 36.0  36.0  25.2 53.3  53.3  21.7 21.7  21.7  21.7 21.7  21.7
Volume/Cap:  0.24 0.18  0.03  0.06 0.24  0.04  0.11 0.02  0.04  0.24 0.03  0.08
Uniform Del: 39.2 18.3  17.3  24.7  9.4   8.3  27.5 26.9  27.1  28.4 27.0  27.4
IncremntDel:  0.8  0.0   0.0   0.1  0.0   0.0   0.1  0.0   0.0   0.3  0.0   0.1
InitQueuDel:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
Delay Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Delay/Veh:   40.1 18.4  17.3  24.7  9.5   8.3  27.7 26.9  27.1  28.7 27.0  27.5
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  40.1 18.4  17.3  24.7  9.5   8.3  27.7 26.9  27.1  28.7 27.0  27.5
LOS by Move:    D   B-     B     C    A     A     C    C     C     C    C     C
DesignQueue:    2    4     1     1    6     1     2    0     1     4    0     1
Note: Queue reported is the number of cars per lane.
```

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

Intersection #3392: CHANTILLEY/SANTA TERESA

```
                              Signal=Protect/Rights=Include
                   Final Vol:    49        1229        44***
                      Lanes:      1    0     3     0    1

            Signal=Permit                                     Signal=Permit
Final Vol:  Lanes:  Rights=Include      Vol Cnt Date:     5/7/2019   Rights=Include   Lanes:  Final Vol:
                                     Cycle Time (sec):      92
   60         1                                                                          1        42
                                      Loss Time (sec):       9
              0                                                                          0
    7         1                           Critical V/C:    0.586                         1        12
              0                      Avg Crit Del (sec/veh):  8.8                        0
   16         1                        Avg Delay (sec/veh):  10.3                        1       104***
                                                   LOS:      B+

                      Lanes:      1    0     3     0    1
                   Final Vol:    36        2533***      43
                              Signal=Protect/Rights=Include
```

```
Approach:     North Bound     South Bound      East Bound      West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     7   10    10     7   10    10    10   10    10    10   10    10
Y+R:          4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 7 May 2019 << 4:45 - 5:45 PM
Base Vol:      36  407    23    31  791    40    46    7    16    99   12    35
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:   36  407    23    31  791    40    46    7    16    99   12    35
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
ATI PM:         0 2126    20    13  438     9    14    0     0     5    0     7
Initial Fut:   36 2533    43    44 1229    49    60    7    16   104   12    42
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:    36 2533    43    44 1229    49    60    7    16   104   12    42
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   36 2533    43    44 1229    49    60    7    16   104   12    42
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:   36 2533    43    44 1229    49    60    7    16   104   12    42
------------|---------------||---------------||---------------||---------------|
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 3.00  1.00  1.00 3.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Sat.:  1750 5700  1750  1750 5700  1750  1750 1900  1750  1750 1900  1750
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.02 0.44  0.02  0.03 0.22  0.03  0.03 0.00  0.01  0.06 0.01  0.02
Crit Moves:       ****        ****                                ****
Green Time:  19.0 66.0  66.0   7.0 54.0  54.0  10.0 10.0  10.0  10.0 10.0  10.0
Volume/Cap:  0.10 0.62  0.03  0.33 0.37  0.05  0.32 0.03  0.08  0.55 0.06  0.22
Uniform Del: 29.5  6.6   3.8  40.3 10.0   8.1  37.8 36.7  36.9  38.9 36.8  37.4
IncremntDel:  0.1  0.3   0.0   1.5  0.1   0.0   1.0  0.1   0.2   3.3  0.1   0.6
InitQueuDel:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
Delay Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Delay/Veh:   29.7  6.9   3.8  41.7 10.1   8.1  38.8 36.7  37.1  42.2 36.9  38.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  29.7  6.9   3.8  41.7 10.1   8.1  38.8 36.7  37.1  42.2 36.9  38.0
LOS by Move:    C    A     A     D   B+     A    D+   D+    D+     D   D+    D+
DesignQueue:    2   14     1     2    9     1     3    0     1     5    1     2
Note: Queue reported is the number of cars per lane.
```

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

Intersection #3392: CHANTILLEY/SANTA TERESA

Signal=Protect/Rights=Include
Final Vol: 49 1229 44***
Lanes: 1 0 3 0 1

Final Vol:	Lanes:	Signal=Permit Rights=Include			Signal=Permit Rights=Include	Lanes:	Final Vol:
			Vol Cnt Date:	n/a			
60	1		Cycle Time (sec):	92		1	42
	0		Loss Time (sec):	9		0	
7	1		Critical V/C:	0.590		1	12
	0		Avg Crit Del (sec/veh):	9.0		0	
16	1		Avg Delay (sec/veh):	10.4		1	109***
			LOS:	B+			

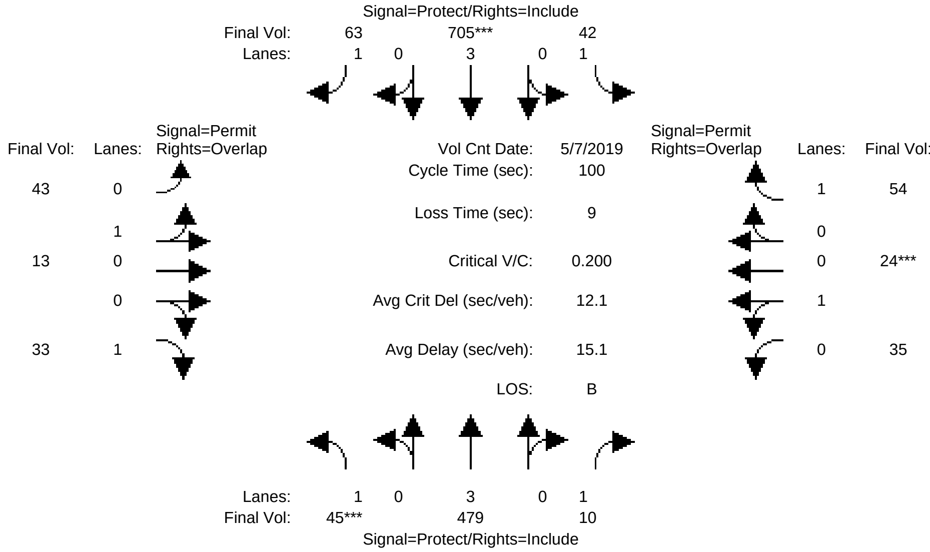
Lanes: 1 0 3 0 1
Final Vol: 36 2536*** 43
Signal=Protect/Rights=Include

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	36	2533	43	44	1229	49	60	7	16	104	12	42
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:	36	2533	43	44	1229	49	60	7	16	104	12	42
Added Vol:	0	3	0	0	0	0	0	0	0	2	0	0
Diverted Tr:	0	0	0	0	0	0	0	0	0	3	0	0
Initial Fut:	36	2536	43	44	1229	49	60	7	16	109	12	42
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:	36	2536	43	44	1229	49	60	7	16	109	12	42
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	36	2536	43	44	1229	49	60	7	16	109	12	42
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:	36	2536	43	44	1229	49	60	7	16	109	12	42
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	3.00	1.00	1.00	3.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1750	5700	1750	1750	5700	1750	1750	1900	1750	1750	1900	1750
Capacity Analysis Module:												
Vol/Sat:	0.02	0.44	0.02	0.03	0.22	0.03	0.03	0.00	0.01	0.06	0.01	0.02
Crit Moves:		****		****					****			
Green Time:	19.0	66.0	66.0	7.0	54.0	54.0	10.0	10.0	10.0	10.0	10.0	10.0
Volume/Cap:	0.10	0.62	0.03	0.33	0.37	0.05	0.32	0.03	0.08	0.57	0.06	0.22
Uniform Del:	29.5	6.6	3.8	40.3	10.0	8.1	37.8	36.7	36.9	39.0	36.8	37.4
IncremntDel:	0.1	0.3	0.0	1.5	0.1	0.0	1.0	0.1	0.2	4.2	0.1	0.6
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	29.7	6.9	3.8	41.7	10.1	8.1	38.8	36.7	37.1	43.2	36.9	38.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	29.7	6.9	3.8	41.7	10.1	8.1	38.8	36.7	37.1	43.2	36.9	38.0
LOS by Move:	C	A	A	D	B+	A	D+	D+	D+	D	D+	D+
DesignQueue:	2	14	1	2	9	1	3	0	1	5	1	2

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

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

Intersection #3673: MARTINVALE/SANTA TERESA

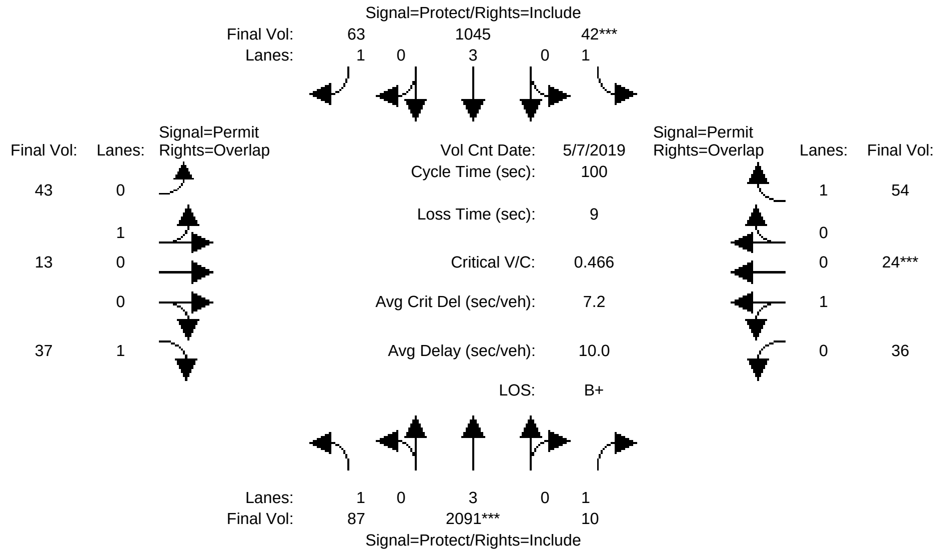


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 7 May 2019 << 4:30 - 5:30 PM												
Base Vol:	45	479	10	42	705	63	43	13	33	35	24	54
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:	45	479	10	42	705	63	43	13	33	35	24	54
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:	45	479	10	42	705	63	43	13	33	35	24	54
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:	45	479	10	42	705	63	43	13	33	35	24	54
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	45	479	10	42	705	63	43	13	33	35	24	54
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:	45	479	10	42	705	63	43	13	33	35	24	54
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	0.95	0.95	0.92	0.95	0.95	0.92
Lanes:	1.00	3.00	1.00	1.00	3.00	1.00	0.77	0.23	1.00	0.59	0.41	1.00
Final Sat.:	1750	5700	1750	1750	5700	1750	1382	418	1750	1068	732	1750
Capacity Analysis Module:												
Vol/Sat:	0.03	0.08	0.01	0.02	0.12	0.04	0.03	0.03	0.02	0.03	0.03	0.03
Crit Moves:	****				****					****		
Green Time:	12.8	43.9	43.9	30.7	61.8	61.8	16.4	16.4	29.2	16.4	16.4	47.1
Volume/Cap:	0.20	0.19	0.01	0.08	0.20	0.06	0.19	0.19	0.06	0.20	0.20	0.07
Uniform Del:	39.0	17.2	15.8	24.6	8.3	7.6	36.1	36.1	25.5	36.2	36.2	14.4
IncremntDel:	0.4	0.0	0.0	0.1	0.0	0.0	0.3	0.3	0.1	0.3	0.3	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	39.4	17.2	15.8	24.6	8.4	7.6	36.4	36.4	25.6	36.5	36.5	14.5
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:	39.4	17.2	15.8	24.6	8.4	7.6	36.4	36.4	25.6	36.5	36.5	14.5
LOS by Move:	D	B	B	C	A	A	D+	D+	C	D+	D+	B
DesignQueue:	2	5	0	2	5	1	3	3	1	3	3	2

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

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

Intersection #3673: MARTINVALE/SANTA TERESA



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 7 May 2019 << 4:30 - 5:30 PM												
Base Vol:	45	479	10	42	705	63	43	13	33	35	24	54
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:	45	479	10	42	705	63	43	13	33	35	24	54
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI PM:	42	1612	0	0	340	0	0	0	4	1	0	0
Initial Fut:	87	2091	10	42	1045	63	43	13	37	36	24	54
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:	87	2091	10	42	1045	63	43	13	37	36	24	54
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	87	2091	10	42	1045	63	43	13	37	36	24	54
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:	87	2091	10	42	1045	63	43	13	37	36	24	54
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	0.95	0.95	0.92	0.95	0.95	0.92
Lanes:	1.00	3.00	1.00	1.00	3.00	1.00	0.77	0.23	1.00	0.60	0.40	1.00
Final Sat.:	1750	5700	1750	1750	5700	1750	1382	418	1750	1080	720	1750
Capacity Analysis Module:												
Vol/Sat:	0.05	0.37	0.01	0.02	0.18	0.04	0.03	0.03	0.02	0.03	0.03	0.03
Crit Moves:		****		****						****		
Green Time:	22.4	74.0	74.0	7.0	58.6	58.6	10.0	10.0	32.4	10.0	10.0	17.0
Volume/Cap:	0.22	0.50	0.01	0.34	0.31	0.06	0.31	0.31	0.07	0.33	0.33	0.18
Uniform Del:	31.7	5.3	3.4	44.3	10.5	8.9	41.8	41.8	23.4	41.9	41.9	35.5
IncremntDel:	0.3	0.1	0.0	1.7	0.1	0.0	1.0	1.0	0.0	1.1	1.1	0.3
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	32.0	5.4	3.4	46.0	10.5	8.9	42.8	42.8	23.4	43.0	43.0	35.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	32.0	5.4	3.4	46.0	10.5	8.9	42.8	42.8	23.4	43.0	43.0	35.8
LOS by Move:	C	A	A	D	B+	A	D	D	C	D	D	D+
DesignQueue:	4	11	0	2	8	2	3	3	2	3	3	3

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

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

Intersection #3673: MARTINVALE/SANTA TERESA

Signal=Protect/Rights=Include
Final Vol: 63 1057 42***
Lanes: 1 0 3 0 1

Signal=Permit Rights=Overlap (West side) — Final Vol: 43, 13, 37; Lanes: 0, 1, 0, 0, 1

Vol Cnt Date: n/a
Cycle Time (sec): 100
Loss Time (sec): 9
Critical V/C: 0.468
Avg Crit Del (sec/veh): 7.2
Avg Delay (sec/veh): 10.0
LOS: A

Signal=Permit Rights=Overlap (East side) — Lanes: 1, 0, 0, 1, 0; Final Vol: 54, 24***, 36

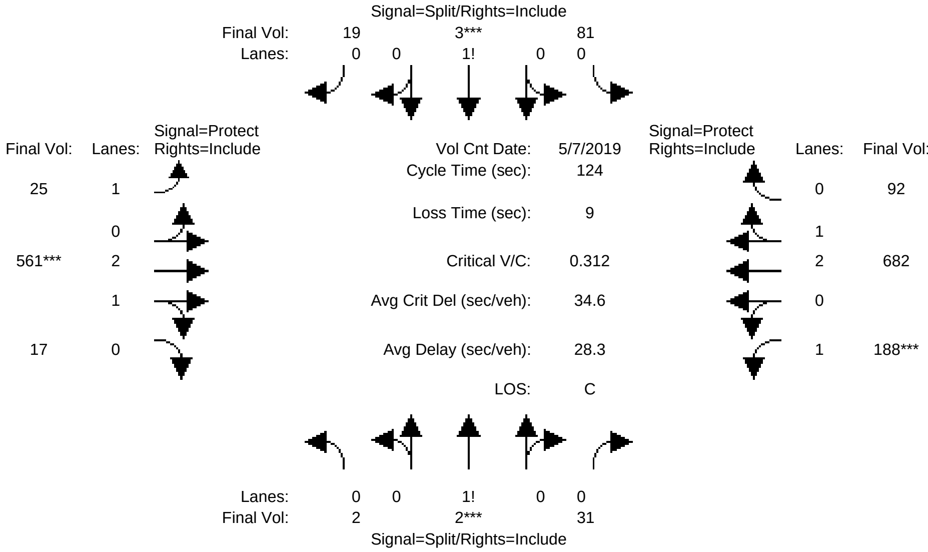
Lanes: 1 0 3 0 1
Final Vol: 87 2100*** 10
Signal=Protect/Rights=Include

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	87	2091	10	42	1045	63	43	13	37	36	24	54
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:	87	2091	10	42	1045	63	43	13	37	36	24	54
Added Vol:	0	9	0	0	12	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	87	2100	10	42	1057	63	43	13	37	36	24	54
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:	87	2100	10	42	1057	63	43	13	37	36	24	54
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	87	2100	10	42	1057	63	43	13	37	36	24	54
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:	87	2100	10	42	1057	63	43	13	37	36	24	54
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	0.95	0.95	0.92	0.95	0.95	0.92
Lanes:	1.00	3.00	1.00	1.00	3.00	1.00	0.77	0.23	1.00	0.60	0.40	1.00
Final Sat.:	1750	5700	1750	1750	5700	1750	1382	418	1750	1080	720	1750
Capacity Analysis Module:												
Vol/Sat:	0.05	0.37	0.01	0.02	0.19	0.04	0.03	0.03	0.02	0.03	0.03	0.03
Crit Moves:		****		****						****		
Green Time:	22.2	74.0	74.0	7.0	58.8	58.8	10.0	10.0	32.2	10.0	10.0	17.0
Volume/Cap:	0.22	0.50	0.01	0.34	0.32	0.06	0.31	0.31	0.07	0.33	0.33	0.18
Uniform Del:	31.8	5.4	3.4	44.3	10.4	8.8	41.8	41.8	23.5	41.9	41.9	35.5
IncremntDel:	0.3	0.1	0.0	1.7	0.1	0.0	1.0	1.0	0.0	1.1	1.1	0.3
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	32.1	5.4	3.4	46.0	10.5	8.8	42.8	42.8	23.5	43.0	43.0	35.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	32.1	5.4	3.4	46.0	10.5	8.8	42.8	42.8	23.5	43.0	43.0	35.8
LOS by Move:	C-	A	A	D	B+	A	D	D	C	D	D	D+
DesignQueue:	4	11	0	2	8	2	3	3	2	3	3	3

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

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

Intersection #3914: BERNAL/REALM

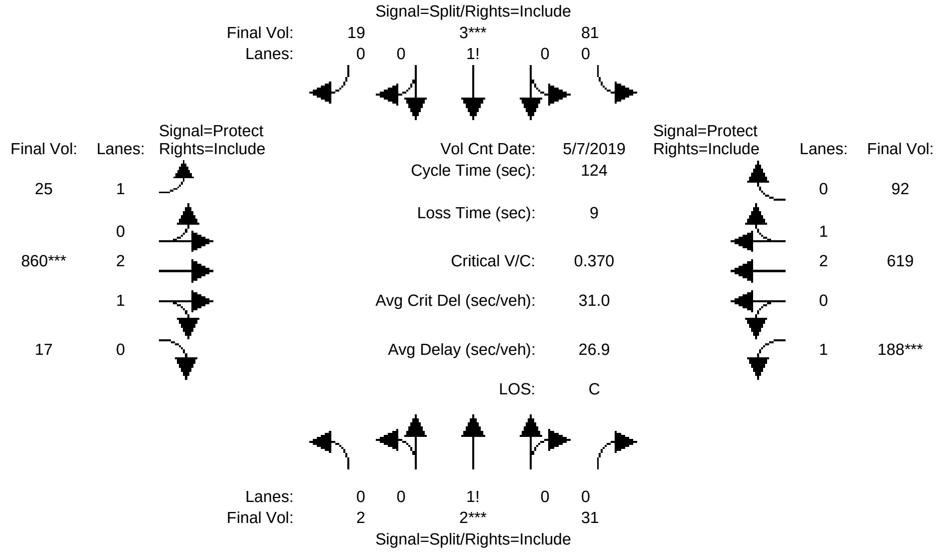


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 7 May 2019 << 5:00 - 6:00 PM												
Base Vol:	2	2	31	81	3	19	25	561	17	188	682	92
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:	2	2	31	81	3	19	25	561	17	188	682	92
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:	2	2	31	81	3	19	25	561	17	188	682	92
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:	2	2	31	81	3	19	25	561	17	188	682	92
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	2	2	31	81	3	19	25	561	17	188	682	92
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:	2	2	31	81	3	19	25	561	17	188	682	92
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.98	0.95	0.92	0.99	0.95
Lanes:	0.06	0.06	0.88	0.79	0.03	0.18	1.00	2.91	0.09	1.00	2.63	0.37
Final Sat.:	100	100	1550	1376	51	323	1750	5435	165	1750	4933	666
Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.02	0.06	0.06	0.06	0.01	0.10	0.10	0.11	0.14	0.14
Crit Moves:		****			****			****		****		
Green Time:	10.0	10.0	10.0	22.9	22.9	22.9	23.8	40.2	40.2	41.9	58.3	58.3
Volume/Cap:	0.25	0.25	0.25	0.32	0.32	0.32	0.07	0.32	0.32	0.32	0.29	0.29
Uniform Del:	53.5	53.5	53.5	43.8	43.8	43.8	41.1	31.6	31.6	30.5	20.2	20.2
IncremntDel:	4.2	4.2	4.2	2.6	2.6	2.6	0.4	0.5	0.5	1.4	0.3	0.3
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	57.6	57.6	57.6	46.3	46.3	46.3	41.5	32.0	32.0	31.9	20.5	20.5
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:	57.6	57.6	57.6	46.3	46.3	46.3	41.5	32.0	32.0	31.9	20.5	20.5
LOS by Move:	E+	E+	E+	D	D	D	D	C-	C-	C	C+	C+
DesignQueue:	2	2	2	6	6	6	2	9	9	10	10	10

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

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

Intersection #3914: BERNAL/REALM

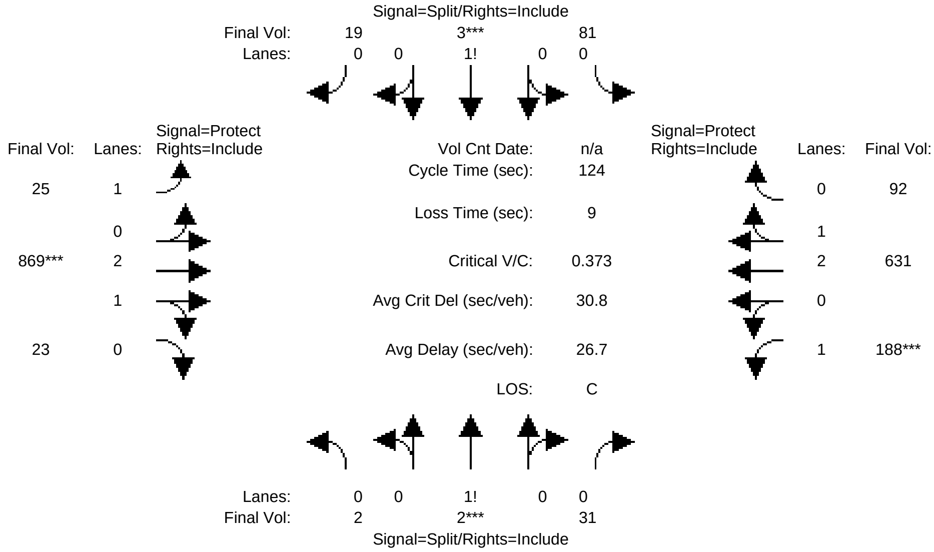


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 7 May 2019 << 5:00 - 6:00 PM												
Base Vol:	2	2	31	81	3	19	25	561	17	188	682	92
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:	2	2	31	81	3	19	25	561	17	188	682	92
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI PM:	0	0	0	0	0	0	0	299	0	0	-63	0
Initial Fut:	2	2	31	81	3	19	25	860	17	188	619	92
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:	2	2	31	81	3	19	25	860	17	188	619	92
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	2	2	31	81	3	19	25	860	17	188	619	92
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:	2	2	31	81	3	19	25	860	17	188	619	92
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.98	0.95	0.92	0.99	0.95
Lanes:	0.06	0.06	0.88	0.79	0.03	0.18	1.00	2.94	0.06	1.00	2.60	0.40
Final Sat.:	100	100	1550	1376	51	323	1750	5491	109	1750	4874	724
Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.02	0.06	0.06	0.06	0.01	0.16	0.16	0.11	0.13	0.13
Crit Moves:		****			****			****		****		
Green Time:	10.0	10.0	10.0	19.1	19.1	19.1	26.4	50.9	50.9	34.9	59.4	59.4
Volume/Cap:	0.25	0.25	0.25	0.38	0.38	0.38	0.07	0.38	0.38	0.38	0.26	0.26
Uniform Del:	53.5	53.5	53.5	47.1	47.1	47.1	38.9	25.5	25.5	35.8	19.3	19.3
IncremntDel:	4.2	4.2	4.2	4.0	4.0	4.0	0.3	0.5	0.5	2.2	0.2	0.2
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	57.6	57.6	57.6	51.2	51.2	51.2	39.3	26.0	26.0	38.1	19.5	19.5
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:	57.6	57.6	57.6	51.2	51.2	51.2	39.3	26.0	26.0	38.1	19.5	19.5
LOS by Move:	E+	E+	E+	D-	D-	D-	D	C	C	D+	B-	B-
DesignQueue:	2	2	2	7	7	7	1	13	13	10	9	9

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

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

Intersection #3914: BERNAL/REALM



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	10	10	10	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:	2	2	31	81	3	19	25	860	17	188	619	92
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:	2	2	31	81	3	19	25	860	17	188	619	92
Added Vol:	0	0	0	0	0	0	0	9	0	0	12	0
Diverted Tr:	0	0	0	0	0	0	0	0	6	0	0	0
Initial Fut:	2	2	31	81	3	19	25	869	23	188	631	92
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:	2	2	31	81	3	19	25	869	23	188	631	92
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	2	2	31	81	3	19	25	869	23	188	631	92
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:	2	2	31	81	3	19	25	869	23	188	631	92
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.98	0.95	0.92	0.99	0.95
Lanes:	0.06	0.06	0.88	0.79	0.03	0.18	1.00	2.92	0.08	1.00	2.60	0.40
Final Sat.:	100	100	1550	1376	51	323	1750	5455	144	1750	4886	712
Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.02	0.06	0.06	0.06	0.01	0.16	0.16	0.11	0.13	0.13
Crit Moves:		****			****			****		****		
Green Time:	10.0	10.0	10.0	19.0	19.0	19.0	26.2	51.4	51.4	34.6	59.9	59.9
Volume/Cap:	0.25	0.25	0.25	0.38	0.38	0.38	0.07	0.38	0.38	0.38	0.27	0.27
Uniform Del:	53.5	53.5	53.5	47.3	47.3	47.3	39.2	25.3	25.3	36.1	19.1	19.1
IncremntDel:	4.2	4.2	4.2	4.1	4.1	4.1	0.4	0.5	0.5	2.3	0.2	0.2
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	57.6	57.6	57.6	51.4	51.4	51.4	39.5	25.8	25.8	38.3	19.3	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:	57.6	57.6	57.6	51.4	51.4	51.4	39.5	25.8	25.8	38.3	19.3	19.3
LOS by Move:	E+	E+	E+	D-	D-	D-	D	C	C	D+	B-	B-
DesignQueue:	2	2	2	7	7	7	1	13	13	10	9	9

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

Appendix C

VMT Evaluation Tool Summary Report

CITY OF SAN JOSE VEHICLE MILES TRAVELED EVALUATION TOOL SUMMARY REPORT

PROJECT:

Name:	Santa Teresa Village	Tool Version:	2/29/2019
Location:	7028 Santa Teresa Blvd	Date:	1/28/2020
Parcel:	70628019	Parcel Type:	Suburb with Single-Family Homes

Proposed Parking Spaces   Vehicles: 28   Bicycles: 10

LAND USE:

Residential:

Single Family	0	DU
Multi Family	0	DU
Subtotal	0	DU

Percent of All Residential Units

Extremely Low Income (≤ 30% MFI)	0 % Affordable
Very Low Income (> 30% MFI, ≤ 50% MFI)	0 % Affordable
Low Income (> 50% MFI, ≤ 80% MFI)	0 % Affordable

Office:	126.1	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)	6
With Project Density (DU/Residential Acres in half-mile buffer)	6

Increase Development Diversity

Existing Activity Mix Index	0.72
With Project Activity Mix Index	0.73

Integrate Affordable and Below Market Rate

Extremely Low Income BMR units	0 %
Very Low Income BMR units	0 %
Low Income BMR units	0 %

Increase Employment Density

Existing Density (Jobs/Commercial Acres in half-mile buffer)	22
With Project Density (Jobs/Commercial Acres in half-mile buffer)	26

Tier 2 - Multimodal Infrastructure

Tier 3 - Parking

End of Trip Bike Facilities

Bicycle Parking Spaces Provided by Project	10 spaces
Project Provides Additional End-of-Trip Facilities Beyond Parking?	Yes

Tier 4 - TDM Programs

Commute Trip Reduction Marketing/ Education

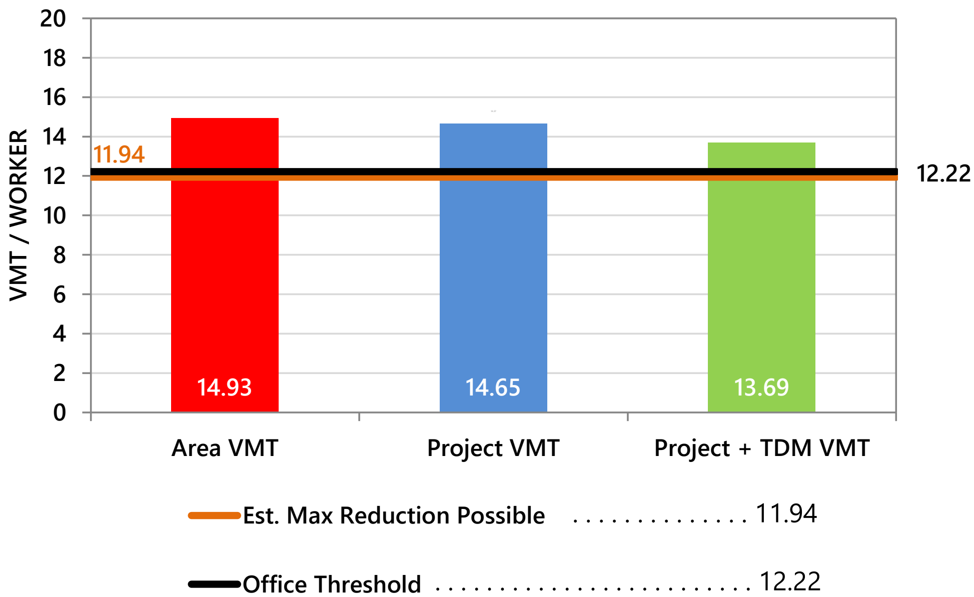
Percent of Eligible Employees	100 %

Ride-Sharing Programs

Percent of Eligible Eemployees	5 %

EMPLOYMENT ONLY

The tool estimates that the project would generate per non-industrial worker VMT above the City's threshold and per industrial worker VMT below the City's threshold.



CITY OF SAN JOSE VEHICLE MILES TRAVELED EVALUATION TOOL SUMMARY REPORT

PROJECT:

Name:	Santa Teresa Village	Tool Version:	2/29/2019
Location:	7028 Santa Teresa Blvd	Date:	1/28/2020
Parcel:	70628019	Parcel Type:	Suburb with Single-Family Homes

Proposed Parking Spaces Vehicles: 28 Bicycles: 10

LAND USE:

Residential:		Percent of All Residential Units	
Single Family	0 DU	Extremely Low Income (≤ 30% MFI)	0 % Affordable
Multi Family	0 DU	Very Low Income (> 30% MFI, ≤ 50% MFI)	0 % Affordable
Subtotal	0 DU	Low Income (> 50% MFI, ≤ 80% MFI)	0 % Affordable
Office:	25.46 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) 6
- With Project Density (DU/Residential Acres in half-mile buffer) 6

Increase Development Diversity

- Existing Activity Mix Index 0.72
- With Project Activity Mix Index 0.73

Integrate Affordable and Below Market Rate

- Extremely Low Income BMR units . . . . 0 %
- Very Low Income BMR units . . . . 0 %
- Low Income BMR units . . . . 0 %

Increase Employment Density

- Existing Density (Jobs/Commercial Acres in half-mile buffer) 22
- With Project Density (Jobs/Commercial Acres in half-mile buffer) 23

Tier 2 - Multimodal Infrastructure

Tier 3 - Parking

End of Trip Bike Facilities

- Bicycle Parking Spaces Provided by Project . . . . 10 spaces
- Project Provides Additional End-of-Trip Facilities Beyond Parking? . . . . Yes

Tier 4 - TDM Programs

Commute Trip Reduction Marketing/ Education

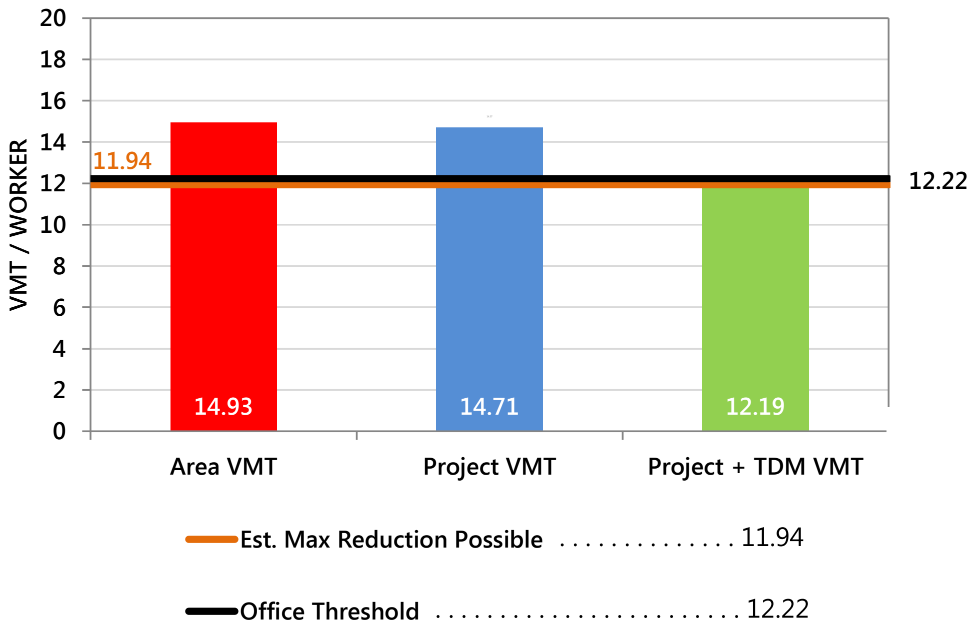
- Percent of Eligible Employees . . . . 100 %

Ride-Sharing Programs

- Percent of Eligible Eemployees . . . . 25 %

EMPLOYMENT ONLY

The tool estimates that the project would generate per non-industrial worker VMT below the City's threshold.



Appendix D

Approved Trips Inventory

Intersection of: BERNAL/SANTA TERESA

Traffix Node Number: 3075

Permit No. / 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
COYOTE REASSIGN COYOTE VALLEY NORTH COYOTE VALLEY	0	-97	-120	-66	-24	-3	-13	-58	0	-31	-28	-43
EDENVALE1 EDENVALE ZONE 1 EAST OF 101, NORTH OF SILVER CREEK VALLEY RD	0	0	12	10	0	0	0	6	0	3	1	3
EDENVALE2 EDENVALE ZONE 2 W/O 101, BOUNDED BY COTTLE RD, SANTA TERESA AND	0	39	0	35	9	4	19	0	0	0	0	144
EDENVALE3-4 EDENVALE ZONE 3&4 EAST OF 101, SOUTH OF SILVER CREEK VALLEY RD	0	0	26	83	0	0	0	13	0	6	3	20
EDENVALE3-4POOL EDENVALE AREA 3-4 POOL EAST OF 101, SOUTH OF SILVER CREEK VALLEY RD	0	0	3	9	0	0	0	1	0	0	0	3
HITACHI CREDIT HITACHI CREDIT 5600 COTTLE RD	0	24	0	0	5	2	6	0	0	0	0	0
NORTH COYOTE NORTH COYOTE VALLEY CAMPUS INDUSTRIAL NORTH COYOTE VALLEY	10	181	29	0	725	0	0	0	40	120	0	0
PDC04-100R&D ISTAR - R&D PORTION ROUTE 85/GREAT OAKS	0	10	10	0	2	0	0	10	0	2	2	0
PDC04-100RETAIL ISTAR - RETAIL PORTION ROUTE 85/GREAT OAKS	0	0	0	0	0	0	0	0	0	0	0	0
PDC12-028 RES ISTAR MIXED-USE	0	3	1	0	5	1	0	0	0	1	1	0
PDC99-053 CISCO NORTH COYOTE VALLEY	17	223	56	0	875	0	0	0	67	221	0	0

TOTAL:	27	383	17	71	1597	4	12	-28	107	322	-21	127

	LEFT	THRU	RIGHT
NORTH	71	1597	4
EAST	322	-21	127
SOUTH	27	383	17
WEST	12	-28	107

PM APPROVED TRIPS

04/30/2019

Intersection of: BERNAL/SANTA TERESA

Page No: 2

Traffix Node Number: 3075

Permit No. / 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
COYOTE REASSIGN COYOTE VALLEY NORTH COYOTE VALLEY	0	-10	-13	-63	-97	-15	-2	-7	0	-118	-107	-65
EDENVALE1 EDENVALE ZONE 1 EAST OF 101, NORTH OF SILVER CREEK VALLEY RD	0	0	1	1	0	0	0	0	0	12	6	12
EDENVALE2 EDENVALE ZONE 2 W/O 101, BOUNDED BY COTTLE RD, SANTA TERESA AND	0	4	0	142	39	19	2	0	0	0	0	15
EDENVALE3-4 EDENVALE ZONE 3&4 EAST OF 101, SOUTH OF SILVER CREEK VALLEY RD	0	0	3	9	0	0	0	1	0	26	13	83
EDENVALE3-4POOL EDENVALE AREA 3-4 POOL EAST OF 101, SOUTH OF SILVER CREEK VALLEY RD	0	0	0	1	0	0	0	0	0	3	1	9
HITACHI CREDIT HITACHI CREDIT 5600 COTTLE RD	0	7	0	0	18	4	2	0	0	0	0	0
NORTH COYOTE NORTH COYOTE VALLEY CAMPUS INDUSTRIAL NORTH COYOTE VALLEY	40	725	120	0	181	0	0	0	10	29	0	0
PDC04-100R&D ISTAR - R&D PORTION ROUTE 85/GREAT OAKS	0	1	1	0	9	0	0	1	0	9	9	0
PDC04-100RETAIL ISTAR - RETAIL PORTION ROUTE 85/GREAT OAKS	0	0	0	0	0	0	0	0	0	0	0	0

Intersection of: BERNAL/SANTA TERESA

Traffix Node Number: 3075

Permit No. / 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
PDC12-028 RES ISTAR MIXED-USE	0	5	1	0	2	0	1	1	0	1	0	0
PDC99-053 CISCO NORTH COYOTE VALLEY	67	867	219	0	94	0	0	0	7	24	0	0
TOTAL:	**107**	**1599**	**332**	**90**	**246**	**8**	**3**	**-4**	**17**	**-14**	**-78**	**54**

	LEFT	THRU	RIGHT
NORTH	90	246	8
EAST	-14	-78	54
SOUTH	107	1599	332
WEST	3	-4	17

Intersection of: CHANTILLEY/SANTA TERESA

Traffix Node Number: 3392

Permit No. / 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
EDENVALE1 EDENVALE ZONE 1 EAST OF 101, NORTH OF SILVER CREEK VALLEY RD	0	12	0	0	3	0	0	0	0	0	0	0
EDENVALE2 EDENVALE ZONE 2 W/O 101, BOUNDED BY COTTLE RD, SANTA TERESA AND	0	40	0	0	9	0	0	0	0	0	0	0
EDENVALE3-4 EDENVALE ZONE 3&4 EAST OF 101, SOUTH OF SILVER CREEK VALLEY RD	0	26	0	0	6	0	0	0	0	0	0	0
EDENVALE3-4POOL EDENVALE AREA 3-4 POOL EAST OF 101, SOUTH OF SILVER CREEK VALLEY RD	0	3	0	0	0	0	0	0	0	0	0	0
NORTH COYOTE NORTH COYOTE VALLEY CAMPUS INDUSTRIAL NORTH COYOTE VALLEY	0	221	5	0	887	0	0	0	0	20	0	0
PD14-045 7132 SANTA TERESA BLVD	0	5	0	13	1	13	11	0	0	0	0	16
PDC99-053 CISCO NORTH COYOTE VALLEY	0	297	3	0	1164	0	0	0	0	13	0	0
TOTAL:	**0**	**604**	**8**	**13**	**2070**	**13**	**11**	**0**	**0**	**33**	**0**	**16**

	LEFT	THRU	RIGHT
NORTH	13	2070	13
EAST	33	0	16
SOUTH	0	604	8
WEST	11	0	0

Intersection of: CHANTILLEY/SANTA TERESA

Traffix Node Number: 3392

Permit No. / 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
EDENVALE1 EDENVALE ZONE 1 EAST OF 101, NORTH OF SILVER CREEK VALLEY RD	0	1	0	0	12	0	0	0	0	0	0	0
EDENVALE2 EDENVALE ZONE 2 W/O 101, BOUNDED BY COTTLE RD, SANTA TERESA AND	0	4	0	0	39	0	0	0	0	0	0	0
EDENVALE3-4 EDENVALE ZONE 3&4 EAST OF 101, SOUTH OF SILVER CREEK VALLEY RD	0	3	0	0	26	0	0	0	0	0	0	0
EDENVALE3-4POOL EDENVALE AREA 3-4 POOL EAST OF 101, SOUTH OF SILVER CREEK VALLEY RD	0	0	0	0	3	0	0	0	0	0	0	0
NORTH COYOTE NORTH COYOTE VALLEY CAMPUS INDUSTRIAL NORTH COYOTE VALLEY	0	887	20	0	221	0	0	0	0	5	0	0
PD14-045 7132 SANTA TERESA BLVD	0	2	0	13	3	9	14	0	0	0	0	7
PDC99-053 CISCO NORTH COYOTE VALLEY	0	1229	0	0	134	0	0	0	0	0	0	0
TOTAL:	**0**	**2126**	**20**	**13**	**438**	**9**	**14**	**0**	**0**	**5**	**0**	**7**

	LEFT	THRU	RIGHT
NORTH	13	438	9
EAST	5	0	7
SOUTH	0	2126	20
WEST	14	0	0

AM APPROVED TRIPS

05/01/2019

Intersection of: MARTINVALE/SANTA TERESA

Traffix Node Number: 3673

Permit No. / 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
COYOTE REASSIGN COYOTE VALLEY NORTH COYOTE VALLEY	0	-183	0	0	-93	0	0	0	0	0	0	0
EDENVALE1 EDENVALE ZONE 1 EAST OF 101, NORTH OF SILVER CREEK VALLEY RD	0	2	0	0	6	0	0	0	3	0	0	0
EDENVALE2 EDENVALE ZONE 2 W/O 101, BOUNDED BY COTTLE RD, SANTA TERESA AND	0	202	0	1	49	0	0	0	0	0	0	0
EDENVALE3-4 EDENVALE ZONE 3&4 EAST OF 101, SOUTH OF SILVER CREEK VALLEY RD	1	18	0	0	77	0	0	0	6	0	0	0
EDENVALE3-4POOL EDENVALE AREA 3-4 POOL EAST OF 101, SOUTH OF SILVER CREEK VALLEY RD	0	1	0	0	9	0	0	0	0	0	0	0
HITACHI CREDIT HITACHI CREDIT 5600 COTTLE RD	0	30	0	0	7	0	0	0	0	0	0	0
NORTH COYOTE NORTH COYOTE VALLEY CAMPUS INDUSTRIAL NORTH COYOTE VALLEY	0	181	0	0	725	0	0	0	0	0	0	0
PDC04-100R&D ISTAR - R&D PORTION ROUTE 85/GREAT OAKS	0	10	0	0	2	0	0	0	0	0	0	0
PDC04-100RETAIL ISTAR - RETAIL PORTION ROUTE 85/GREAT OAKS	0	0	0	0	0	0	0	0	0	0	0	0
PDC12-028 RES ISTAR MIXED-USE	0	3	0	0	6	0	0	0	0	0	0	0
PDC99-053 CISCO NORTH COYOTE VALLEY	9	215	0	0	842	0	0	0	34	0	0	0

		M09 NBL	M08 NBT	M07 NBR	M03 SBL	M02 SBT	M01 SBR	M12 EBL	M11 EBT	M10 EBR	M06 WBL	M05 WBT	M04 WBR
	TOTAL:	**10**	**479**	**0**	**1**	**1630**	**0**	**0**	**0**	**43**	**0**	**0**	**0**

	LEFT	THRU	RIGHT
NORTH	1	1630	0
EAST	0	0	0
SOUTH	10	479	0
WEST	0	0	43

PM APPROVED TRIPS

05/01/2019

Intersection of: MARTINVALE/SANTA TERESA

Traffix Node Number: 3673

Permit No. / 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
COYOTE REASSIGN COYOTE VALLEY NORTH COYOTE VALLEY	0	-77	0	0	-175	0	0	0	0	0	0	0
EDENVALE1 EDENVALE ZONE 1 EAST OF 101, NORTH OF SILVER CREEK VALLEY RD	3	9	0	0	0	0	0	0	0	0	0	0
EDENVALE2 EDENVALE ZONE 2 W/O 101, BOUNDED BY COTTLE RD, SANTA TERESA AND	0	22	0	0	200	0	0	0	0	0	0	1
EDENVALE3-4 EDENVALE ZONE 3&4 EAST OF 101, SOUTH OF SILVER CREEK VALLEY RD	6	76	0	0	8	0	0	0	0	0	0	0
EDENVALE3-4POOL EDENVALE AREA 3-4 POOL EAST OF 101, SOUTH OF SILVER CREEK VALLEY RD	0	9	0	0	1	0	0	0	0	0	0	0
HITACHI CREDIT HITACHI CREDIT 5600 COTTLE RD	0	9	0	0	22	0	0	0	0	0	0	0
NORTH COYOTE NORTH COYOTE VALLEY CAMPUS INDUSTRIAL NORTH COYOTE VALLEY	0	725	0	0	181	0	0	0	0	0	0	0
PDC04-100R&D ISTAR - R&D PORTION ROUTE 85/GREAT OAKS	0	1	0	0	9	0	0	0	0	0	0	0
PDC04-100RETAIL ISTAR - RETAIL PORTION ROUTE 85/GREAT OAKS	0	0	0	0	0	0	0	0	0	0	0	0

Intersection of: MARTINVALE/SANTA TERESA

Traffix Node Number: 3673

Permit No. / 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
PDC12-028 RES ISTAR MIXED-USE	0	5	0	0	3	0	0	0	0	0	0	0
PDC99-053 CISCO NORTH COYOTE VALLEY	33	833	0	0	91	0	0	0	4	0	0	0
TOTAL:	**42**	**1612**	**0**	**0**	**340**	**0**	**0**	**0**	**4**	**0**	**0**	**1**

	LEFT	THRU	RIGHT
NORTH	0	340	0
EAST	0	0	1
SOUTH	42	1612	0
WEST	0	0	4

AM APPROVED TRIPS

05/03/2019

Intersection of: BERNAL/REALM

Traffix Node Number: 3914

Permit No. / 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
COYOTE REASSIGN COYOTE VALLEY NORTH COYOTE VALLEY	0	0	0	0	0	0	0	-245	0	0	-102	0
EDENVALE1 EDENVALE ZONE 1 EAST OF 101, NORTH OF SILVER CREEK VALLEY RD	0	0	0	0	0	0	0	28	0	0	7	0
EDENVALE2 EDENVALE ZONE 2 W/O 101, BOUNDED BY COTTLE RD, SANTA TERESA AND	0	0	0	0	0	0	0	36	0	0	144	0
EDENVALE3-4 EDENVALE ZONE 3&4 EAST OF 101, SOUTH OF SILVER CREEK VALLEY RD	0	0	0	0	0	0	0	123	0	0	30	0
EDENVALE3-4POOL EDENVALE AREA 3-4 POOL EAST OF 101, SOUTH OF SILVER CREEK VALLEY RD	0	0	0	0	0	0	0	15	0	0	3	0
PDC04-100R&D ISTAR - R&D PORTION ROUTE 85/GREAT OAKS	0	0	0	0	0	0	0	19	0	0	5	0
PDC04-100RETAIL ISTAR - RETAIL PORTION ROUTE 85/GREAT OAKS	0	0	0	0	0	0	0	0	0	0	0	0
PDC12-028 RES ISTAR MIXED-USE	0	0	0	0	0	0	0	1	0	0	2	0
PDC99-053 CISCO NORTH COYOTE VALLEY	0	0	0	0	0	0	0	56	0	0	221	0
TOTAL:	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**33**	**0**	**0**	**310**	**0**

	LEFT	THRU	RIGHT
NORTH	0	0	0
EAST	0	310	0
SOUTH	0	0	0
WEST	0	33	0

Intersection of: BERNAL/REALM

Traffix Node Number: 3914

Permit No. / 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
COYOTE REASSIGN COYOTE VALLEY NORTH COYOTE VALLEY	0	0	0	0	0	0	0	-83	0	0	-290	0
EDENVALE1 EDENVALE ZONE 1 EAST OF 101, NORTH OF SILVER CREEK VALLEY RD	0	0	0	0	0	0	0	3	0	0	31	0
EDENVALE2 EDENVALE ZONE 2 W/O 101, BOUNDED BY COTTLE RD, SANTA TERESA AND	0	0	0	0	0	0	0	142	0	0	16	0
EDENVALE3-4 EDENVALE ZONE 3&4 EAST OF 101, SOUTH OF SILVER CREEK VALLEY RD	0	0	0	0	0	0	0	13	0	0	122	0
EDENVALE3-4POOL EDENVALE AREA 3-4 POOL EAST OF 101, SOUTH OF SILVER CREEK VALLEY RD	0	0	0	0	0	0	0	1	0	0	14	0
PDC04-100R&D ISTAR - R&D PORTION ROUTE 85/GREAT OAKS	0	0	0	0	0	0	0	2	0	0	19	0
PDC04-100RETAIL ISTAR - RETAIL PORTION ROUTE 85/GREAT OAKS	0	0	0	0	0	0	0	0	0	0	0	0
PDC12-028 RES ISTAR MIXED-USE	0	0	0	0	0	0	0	2	0	0	1	0
PDC99-053 CISCO NORTH COYOTE VALLEY	0	0	0	0	0	0	0	219	0	0	24	0
TOTAL:	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**299**	**0**	**0**	**-63**	**0**

	LEFT	THRU	RIGHT
NORTH	0	0	0
EAST	0	-63	0
SOUTH	0	0	0
WEST	0	299	0

Appendix E

Transportation Demand Management Plan

Hexagon Transportation Consultants, Inc.

Limited Service Restaurant Building at Santa Teresa Village

Transportation Demand Management (TDM) Plan

Prepared for:

Bergman KPRS

December 5, 2019

Hexagon Transportation Consultants, Inc.
Hexagon Office: 4 North Second Street, Suite 400
San Jose, CA 95113
Phone: 408.971.6100
Hexagon Job Number: 19KK02
Client: Bergman KPRS

Table of Contents

List of Figures

1. Introduction

This transportation demand management (TDM) plan has been prepared for the proposed limited service restaurant at the Santa Teresa Village Shopping Center in San Jose, California. TDM is a combination of services, incentives, facilities, and actions that reduce single-occupant vehicle (SOV) trips to help relieve traffic congestion, parking demand, and air pollution problems. The purposes of TDM are to reduce the amount of traffic generated by new developments, promote more efficient utilization of existing transportation facilities, and ensure that new developments are designed to maximize the potential for alternative transportation usage.

The proposed restaurant would result in a net increase in regional VMT, which would result in a VMT impact. Therefore, it is required to prepare a TDM plan and implement TDM measures to reduce VMT to baseline conditions.

The project also proposes an alternative use for the building as a medical office. The TDM plan should also be implemented by the medical office. The VMT per employee generated by the medical office would exceed the threshold of significance for employment uses. Therefore, it is also required to prepare a TDM plan and implement TDM measure to reduce VMT below the threshold.

Project Description

The project site is located along Santa Teresa Boulevard between Bernal Road and Chantilley Lane (see Figure 1). The project would construct a limited service restaurant building with 7,116 square feet (s.f.) of floor area in the current Santa Teresa Village Shopping Center (see Figure 2). Access to the shopping center is currently provided by multiple driveways located on Bernal Road, Santa Teresa Boulevard, and Chantilley Lane. The proposed restaurant building would be located facing Santa Teresa Boulevard with direct access via the current driveway next to the site on Santa Teresa Boulevard. Due to the raised center median on Santa Teresa Boulevard, the driveway is limited to right turns only for outbound traffic with inbound left turns provided via the existing left-turn pocket on Santa Teresa Boulevard.

The project will provide 10 bicycle parking spaces immediately outside of the proposed building, which exceeds the requirement of 3 bicycle parking spaces for the 7,116 square foot restaurant. The proposed project is within the Santa Teresa Boulevard/Bernal Road Urban Village Area; therefore, the project will be required to construct a 15-foot ADA compliant sidewalk along the project frontage per the Urban Village standards.

Medical Office Alternative

The alternate project is to use the 7,116 s.f. building as a medical building. Access to the project would not change from the proposed restaurant project.

Same as the proposed restaurant project, the project will provide 10 bicycle parking spaces, which exceeds the requirement of 2 bicycle parking spaces for the 7,116 s.f. medical office. The project will be required to construct a 15-foot ADA compliant sidewalk along the project frontage per the Urban Village standards.

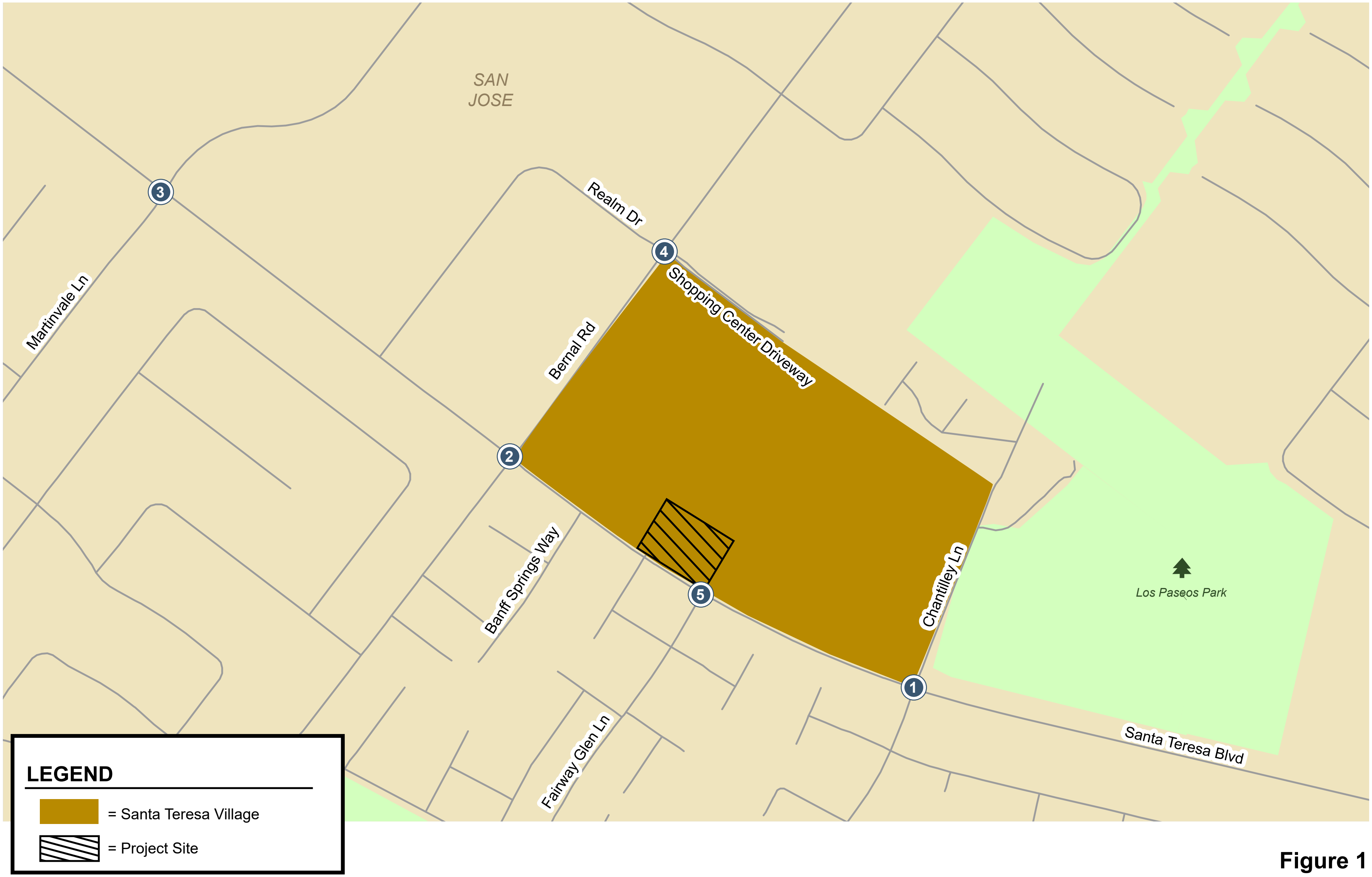


Figure 1
Site Location and Study Intersections

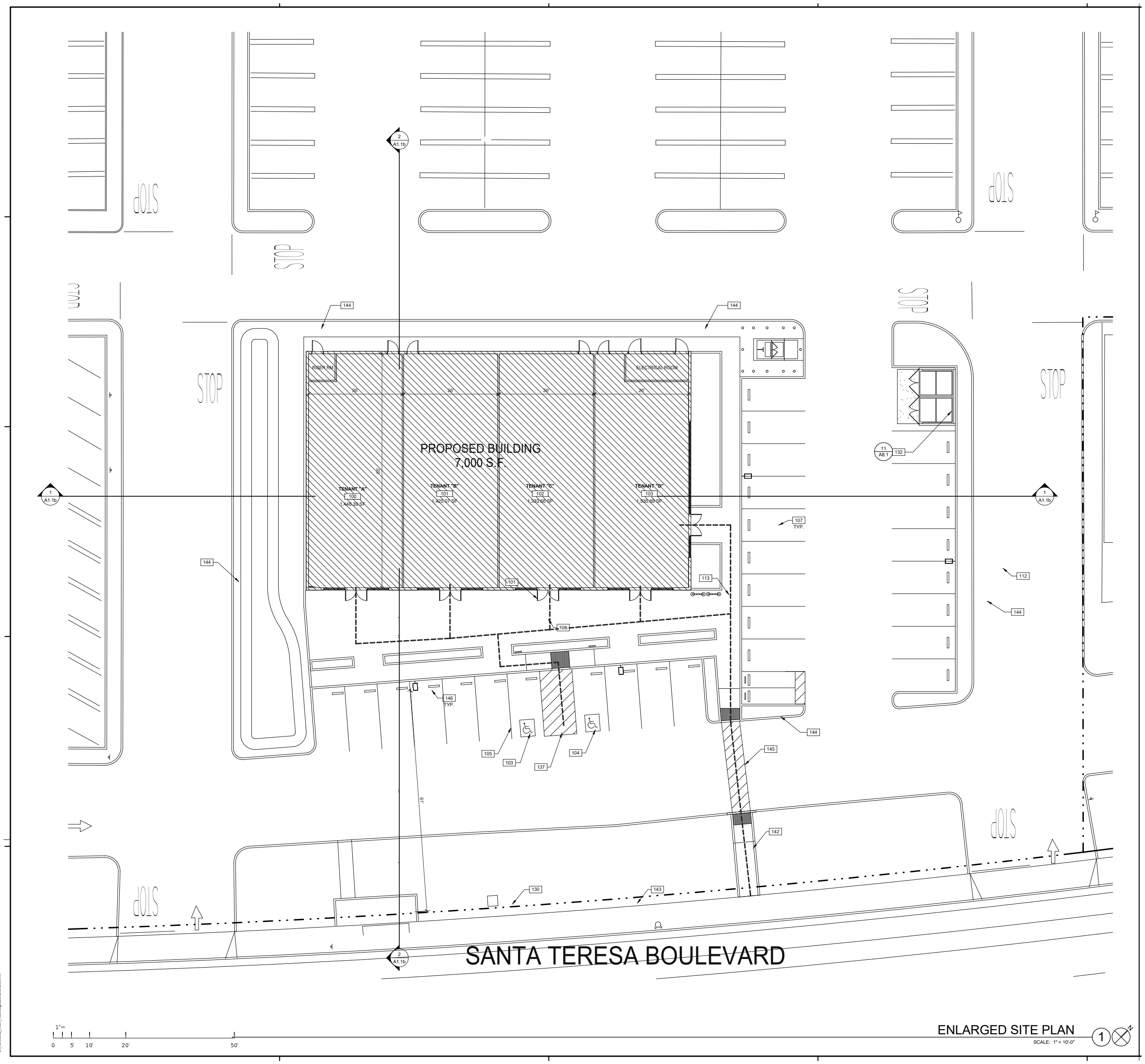


Figure 2
Proposed Site Plan

2.
Transportation Facilities and Services

Transportation facilities and services that support sustainable modes of transportation include commuter rail, buses and shuttle buses, bicycle facilities, and pedestrian facilities. This chapter describes the existing and future transit services, as well as bicycle and pedestrian facilities, in the vicinity of the project site.

Existing Bicycle and Pedestrian Facilities

All new development projects in San Jose should encourage multi-modal travel, consistent with the goals of the City's General Plan. It is the goal of the 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, including designated bike corridors. In order to further the goals of the City, pedestrian and bicycle facilities should be encouraged with new development projects.

Existing Pedestrian Facilities

Sidewalks are found along all local roadways in the study area. Crosswalks with pedestrian signal heads are located at all the signalized intersections in the study area. The existing network of sidewalks and crosswalks exhibits good connectivity and would provide new employees and restaurant patrons with safe routes to transit services and other points of interest in the area. The project is located within the Santa Teresa/Bernal Urban Village area; therefore, the project will be required to reconstruct the sidewalk along the project frontage to be 15 feet wide.

Existing Bicycle Facilities

There are existing Class II striped bicycle lanes near the project site on Santa Teresa Boulevard and Bernal Road (see Figure 3). No other bike lanes or shared bike routes are present on the neighborhood streets in the immediate vicinity of the project site. However, the surrounding neighborhood streets, such as Martinvale Lane and Chantilley Lane, carry low traffic volumes and are conducive to bicyclists. The project will provide 10 bicycle parking spaces in front of the proposed restaurant building.

Existing Transit Services

The project's close proximity to existing transit services will provide the opportunity for multi-modal travel to and from the project site. Thus, it is reasonable to assume that future employees of the project would utilize the transit services in the area.

Existing transit services near the project site are provided by the Santa Clara Valley Transportation Authority (VTA) (see Figure 4).

VTA Bus Service

The closest bus stop to the project site is located on Santa Teresa Boulevard along the project frontage, and is served by local bus route 68 and express route 182 traveling northbound. The next closest bus stop is located on Santa Teresa Boulevard north of Bernal Road, about 750 feet walking distance from the project site, and is served by local bus route 68 and express route 182 travling southbound.

Local Route 68 runs from the Gilroy Transit Center to the San Jose Diridon Transit Center between 4:00 AM and 11:30 PM, with a headway of 18-24 minutes. The route also stops at the Santa Teresa light rail station approximately 1.1 miles north of the project site.

Express Route 182 runs from Palo Alto to IBM on Bailey Avenue. It provides one southbound run arriving at IBM at 8:31 AM and one northbound run leaving IBM at 5:03 PM on weekdays. The route also stops at the Santa Teresa light rail station.

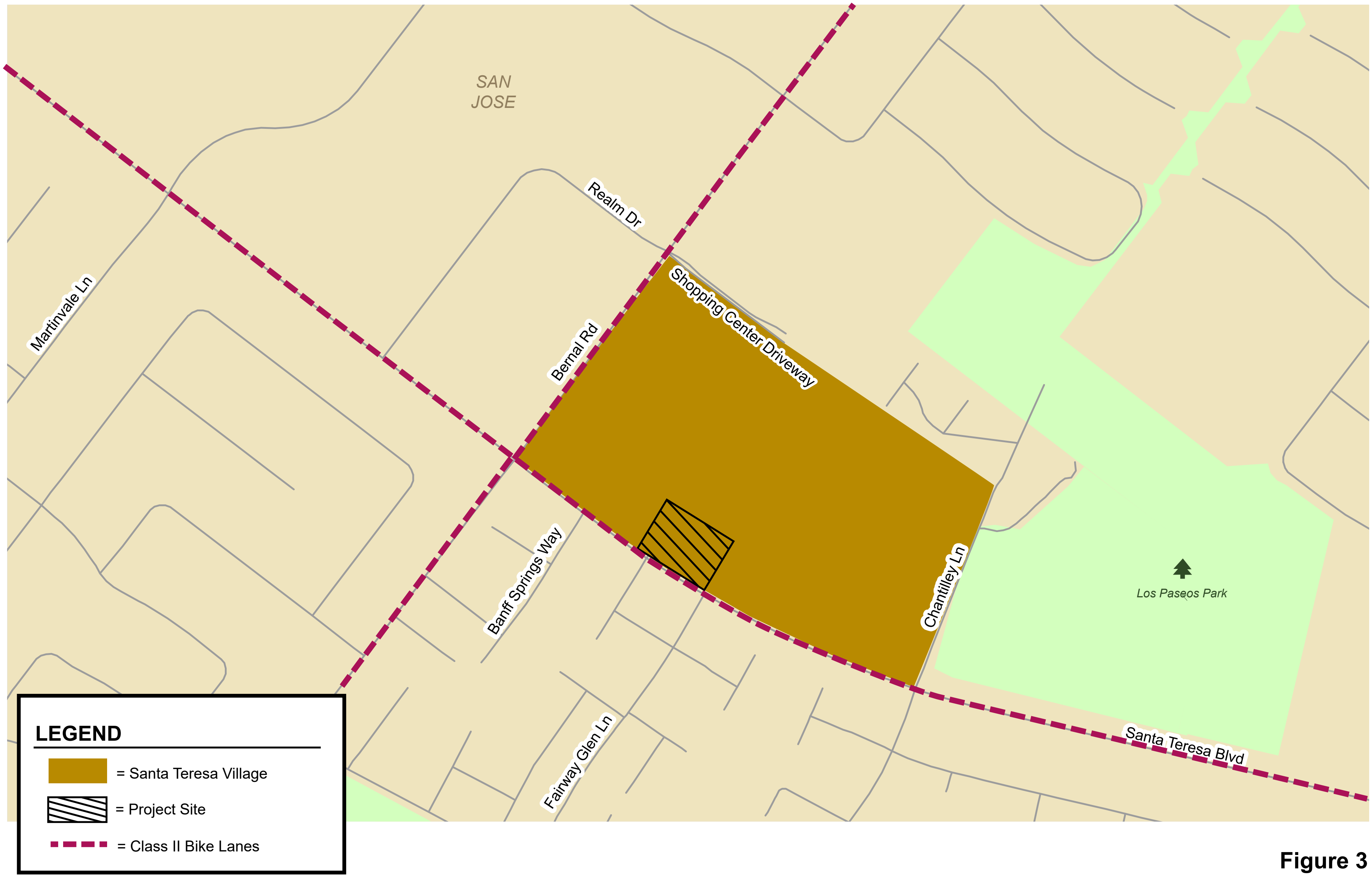


Figure 3
Existing Bicycle Facilities

HEXAGON

NORTH
Not to Scale

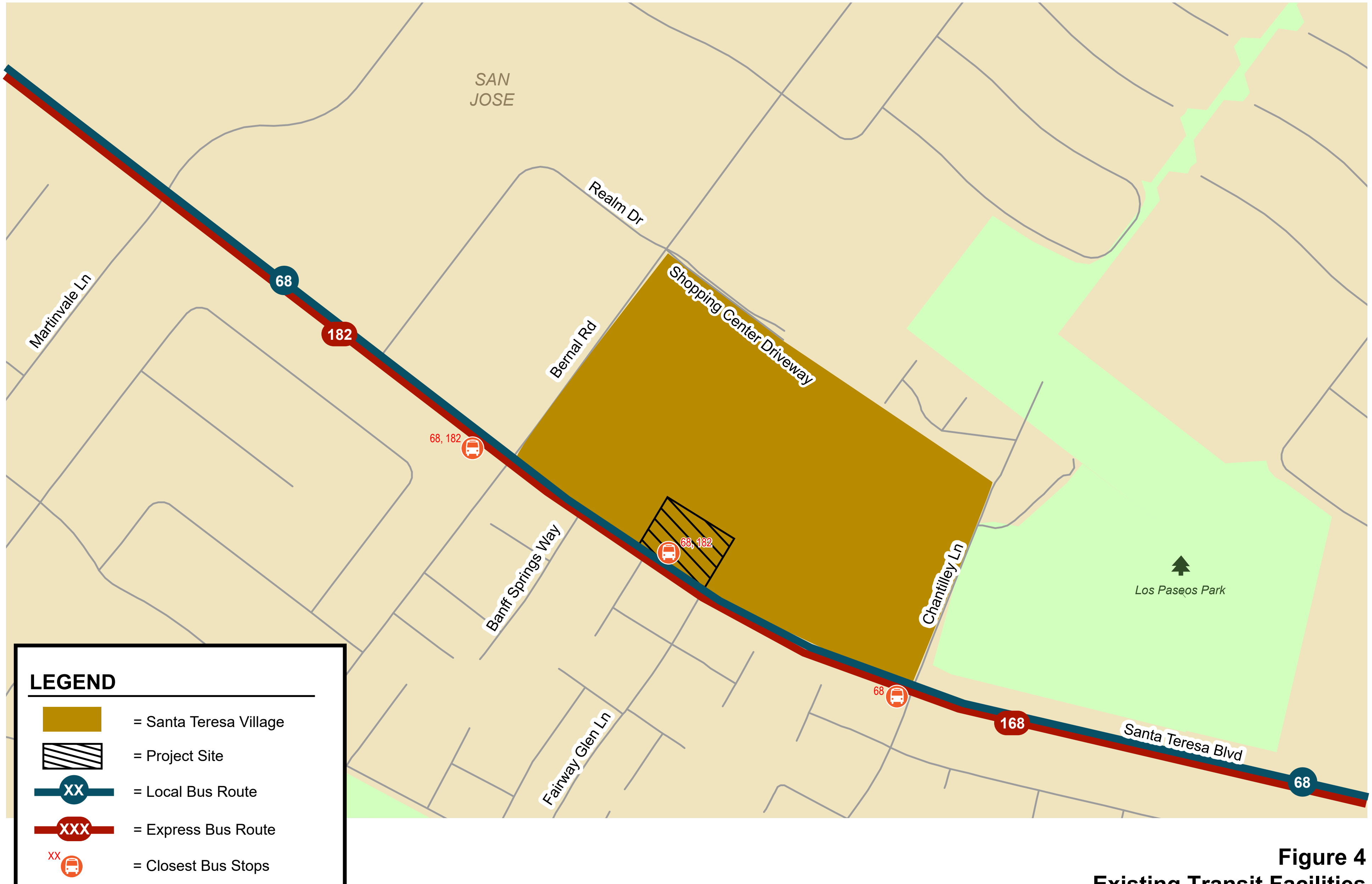


Figure 4
Existing Transit Facilities

3.
Recommended TDM Measures

This chapter describes TDM measures recommended for the Santa Teresa Village limited restaurant project to promote sustainable modes of transportation. The TDM measures for the project were developed based on the San Jose VMT Evaluation Tool.

Implementation of the recommended TDM measures would encourage future employees using alternative transportation modes (transit, bicycle, and car-share) to reduce the SOV trips and VMT generated by the project.

Bicycle Facilities

The bicycle parking requirement for the limited service restaurant is one space per 3,000 square feet. The proposed 7,116 square foot limited service restaurant would require 3 bicycle parking spaces. The project proposes 10 bicycle parking spaces immediately outside of the proposed building. This exceeds the requirement for bicycle parking supply.

The bicycle parking requirement for the medical office is one space per 4,000 square feet. The proposed 7,116 square foot medical office would require 2 bicycle parking spaces. The project proposes 10 bicycle parking spaces, exceeding the bicycle parking supply.

Commute Trip Reduction Marketing and Education

The property manager should be responsible for ensuring that tenants and their employees are aware of alternative transportation options. The property manager should provide transportation information packets to all new tenants. The packets should include information about VTA transit maps/schedules for bus routes and light-rail transit routes in the project vicinity, locations of bus stops and light-rail stations, bike maps, on-site bicycle parking, and ridesharing options. As part of the lease agreement, future tenants should be required to distribute the transportation information packet to employees and ensure employees are aware of alternative transportation options.

Rideshare Program

The property manager should provide tenants with information on 511.org's RideMatching service and other peer-to-peer rideshare programs. For example, Scoop and Waze Carpool utilize mobile apps to match commuters. As part of the lease agreement, future tenants should be required to inform employees the rideshare services, encourage employees to carpool, and make effort to arrange a similar work schedule for employees that can carpool if possible.

- **511 RideMatch.** The 511 RideMatch service provides an interactive, on-demand system that helps commuters find carpools, vanpools or bicycle partners. This free car and vanpool ridematching service helps commuters find others with similar routes and travel patterns with whom they may share a ride. Registered users are provided with a list of other commuters near their employment or residential ZIP code along with the closest cross street, email, phone number, and hours they are available to commute to and from work. Participants are then able to select and contact others with whom they wish to commute. The service also provides a list of existing carpools and vanpools in their residential area that may have vacancies.

- **Scoop.** Scoop is an app that tries to increase carpooling by connecting riders with drivers. Scoop is aimed at filling empty seats on existing commutes. The night before going to work, a user tells the app that they are looking to either drive or ride and what time they plan on leaving. They're then automatically matched with someone on a similar route. The rider pays the driver a distance-based fee for the ride through the app. In the early afternoon the process repeats for evening commutes. In order to deal with the uncertainty of rides that are only scheduled one-way, Scoop includes a featured called Guaranteed Ride Home. If a rider cannot be matched with a driver for their return trip, Scoop will reimburse them up to $50 per month to take public transportation or a taxi home.

- **Waze Carpool.** Waze is an app that allows users to drive or ride in a carpool. Users get matched with riders on their route by requesting a ride from a driver going in the same direction. Drivers and riders split the cost of gas and drivers are reimbursed for other ride-related costs. Waze carpool allows 5 people to share a ride (1 driver and 4 riders).

Summary of TDM Measures

The purpose of the proposed TDM plan for the limited service restaurant project and the alternative medical office project is to reduce the SOV trips and VMT generated by the proposed project. The TDM measures would encourage walking, biking, carpooling, and use of transit. The proposed TDM plan includes the following measures:

1. End of Trip Bicycle Facilities,
2. Commute Trip Reduction Marketing and Education, and
3. Rideshare Program

Based on the VMT reduction estimated using the San Jose VMT Evaluation Tool for the proposed restaurant, this combination of TDM measures would reduce the project VMT to baseline conditions. The VMT estimate assumes that all employees would receive the commute trip reduction information and 5% of the employees would participate in the rideshare program.

Based on the VMT reduction estimated using the VMT Evaluation Tool for the medical office, this combination of TDM measures would reduce the medical office VMT to be below the threshold of significance. The VMT estimate assumes that all employees would receive the commute trip reduction information and 25% of the employees would participate in the rideshare program.

4.
TDM Plan Implementation and Monitoring

The primary purpose of the TDM plan is to reduce the SOV trips and VMT generated by the project. The proposed TDM measures should be implemented by the property manager. Per Sections 20.70.330 and 20.90.220 of the San Jose Code of Ordinances, monitoring will be necessary to ensure that the TDM measures are effective and continue to be successfully implemented.

Implementation

The project applicant needs to submit this TDM plan to the City of San Jose and will be responsible for ensuring that the TDM measures are incorporated into the project. After the development is constructed and employees are hired, the property manager needs to notify the tenants of the TDM measures. It is assumed that the property manager for the project will be responsible for implementing the ongoing TDM measures. If the property manager changes for any reason, the City and tenants should be notified of the name and contact information of the new designated property manager.

Monitoring and Reporting

The TDM plan will have an annual monitoring and reporting requirement. It is recommended that the property manager consult with City staff to ensure the monitoring and reporting meets the City's expectations. Monitoring should include annual rideshare surveys, or similar surveys, to ensure rideshare is being utilized by employees.

Annual Rideshare Survey

The property manager is encouraged to conduct an annual rideshare or mode share survey. The annual survey will provide qualitative data regarding employee perceptions of the alternative transportation programs and perceptions of the obstacles to using an alternative mode of transportation. The annual survey also will provide quantitative data regarding the number of employees who utilize alternative modes of transportation (e.g., transit, bike-to-work, or rideshare) to commute to work, including the frequency of use. The mode share survey results will measure the effectiveness of the rideshare program and facilitate the design of possible program enhancements.

Annual Monitoring Report

The property manager should submit annual monitoring reports to the City of San Jose (Department of Building and Code Enforcement's Environmental Review) for three years, and then upon request of the Zoning Administrator for the life of the project with the following information:

- Findings of the mode share surveys.

- Effectiveness of the rideshare program.
- A description of the TDM programs and services that were offered to tenants in the preceding year, with an explanation of any changes or new programs offered or planned.

CITY OF
SAN JOSE
CAPITAL OF SILICON VALLEY

Memorandum

TO: Rhonda Buss

FROM: Alex Wong
Public Works

SUBJECT: **SEE BELOW**

DATE: 02/21/20

Approved JP

Date 2/21/20

SUBJECT: SANTA TERESA VILLAGE RETAIL
PW NO. 3-24424 (PDA78-011-01)

THIS MEMO SUPERSEDES THE MEMO DATED 02/12/2020

We have completed the review of the Transportation Analysis for the subject project. The proposed limited service restaurant is located on the southeast corner of Santa Teresa Boulevard and Bernal Road. The project proposes to construct a 7,116 square-foot building in the current Santa Teresa Village Shopping Center. The proposed development is projected to add 14 a.m. net peak-hour trips and 52 p.m. net peak-hour trips. The transportation analysis also evaluated a medical office as an alternative, which is projected to add 19 a.m. net peak-hour trips and 20 p.m. net peak-hour trips. The project is located within the designated Santa Teresa/Bernal Urban Village.

MULTI-MODAL ACCESS

Existing transit service in the study area is provided by the Santa Clara Valley Transportation Authority (VTA). One Local Bus Route (68) and one Express Route (182) serve the immediate project area. Class II bike lanes are provided on Santa Teresa Boulevard and Bernal Road. Within the ½ mile study area are sidewalks along most local and collector streets. Marked crosswalks are provided with pedestrian signal heads across most legs of the signalized intersections in the surrounding area. The overall network of sidewalks and crosswalks in the project vicinity, provides good connectivity to the nearest bus stops.

Direct vehicular access to the site will be provided via two existing driveways on Santa Teresa Boulevard. Due to the raised center median island on Santa Teresa Boulevard, the driveway is limited to right-turns only for outbound traffic with inbound left-turns provided via the existing left-turn pocket on Santa Teresa Boulevard. The Santa Teresa Village Shopping Center has multiple driveways on Santa Teresa Boulevard, Bernal Road to the north, and Chantilley Lane to the south. Regional access to the project site is provided by State Route 85 and US-101.

ANALYSIS

In alignment with State of California Senate Bill 743 (SB 743), the City of San Jose has adopted the Transportation Analysis Policy, Council Policy 5-1. The transportation policy establishes the threshold for transportation impacts under the California Environmental Quality Act (CEQA) based on Vehicle Miles Traveled (VMT), instead of Level-of-Service (LOS). This project analyzed transportation impacts using the VMT metric and conformed to Council Policy 5-1.

<u>CEQA Transportation Analysis</u>

CEQA Transportation Analysis requires evaluation of a project's potential impacts related to VMT. However, if a project passes the screening criteria listed in the City of San Jose Transportation Analysis Handbook (2018), it is expected to result in a less-than significant VMT impact based on project description, characteristics, and/or location.

<u>Limited Service Restaurant Scenario</u>
The proposed project is an addition to an existing shopping center that generates regional traffic and would potentially result in a change in travel patterns of nearby shopping centers. The total project site, including the existing and proposed site does not meet the retail screening criteria of 100,000 SF or less. Therefore, the project was required to do a VMT analysis. For retail developments, the threshold of significance is any net increase in existing regional total VMT. The project VMT was evaluated by comparing the regional VMT with and without the project. The City's Travel Demand Model was used to calculate the change in VMT resulting from the limited service restaurant. The results of the analysis indicate that the new restaurant would not cause an increase in trips, but the trips would change as people would come to the proposed restaurant rather than the existing nearby restaurants. The model results show that the work based VMT would increase to 27 more daily VMT and the social/recreational based VMT would decrease by 6 daily VMT. Thus, the project would result in a net increase of 21 VMT per day. Since the project would result in a net increase in VMT, the project would result in a significant CEQA transportation impact and mitigation measures are required to reduce the VMT to baseline conditions.

Proposed Mitigation Measures: The following mitigation measures would reduce the project VMT per worker by 1.24 and would make the project impact less than significant:

- End of Trip Bike Facilities
    a) The project is proposing 10 bicycle parking spaces (2 more than required)
- Transportation Demand Management (TDM) including:
    a) Commute Trip Reduction Marketing and Education
    b) Ride-Sharing Program
    c) Provide a TDM plan prior to issuance of building permit. Include an annual monitoring requirement establishing a trip cap of 52 PM PHT. The annual monitoring report must demonstrate the project is within 10% of the trip cap and must be prepared by a traffic engineer.
    d) If the project is not in conformance with the trip cap, the project may add additional TDM measure to meet the trip cap. A follow up report will be required within 6-months. If the project is still out of conformance, penalties will be assessed. See Council Policy 5-1.

Medical Office Scenario
Office projects of 10,000 SF or less are considered small infill projects and result in less-than significant VMT impacts according to the screening criteria. The medical office square footage can be converted to equivalent general office square footage based on the Institute of Transportation Engineer' (ITE) *Trip Generation Manual,* 10th Edition daily trip rates. The medical office would generate daily trips equivalent to 25,462 SF of a general office. Therefore, it does not meet the screening criteria and a VMT analysis was required. The project's VMT is 14.71 per employee. Therefore, the project as proposed is above the VMT threshold of 12.22 per employee and would result in a significant transportation impact on VMT and mitigation measures are required to reduce the significant VMT impact.

Proposed Mitigation Measures: The following mitigation measures would reduce the VMT generated by the project to 12.19 per employee and would make the project impact less than significant:

- End of Trip Bike Facilities
    - The project is proposing 10 bicycle parking spaces (2 more than required)
- Transportation Demand Management (TDM) Programs:
    - Commute Trip Reduction Marketing and Education
    - Rideshare Program
    - Provide a TDM plan prior to issuance of building permit. Include an annual monitoring requirement establishing a trip cap of 20 PM PHT. The annual monitoring report must demonstrate the project is within 10% of the trip cap and must be prepared by a traffic engineer.
    - If the project is not in conformance with the trip cap, the project may add additional TDM measure to meet the trip cap. A follow up report will be required within 6-months. If the project is still out of conformance, penalties will be assessed. See Council Policy 5-1.

The results of the VMT Evaluation Summary Report are in the attached Appendix C.

Local Transportation Analysis

Intersection Operations Analysis: Four (4) signalized intersections and one (1) unsignalized intersection including one (1) CMP intersection, were analyzed for the AM and PM peak hours to identify any adverse intersection operation effects using standards and methodologies outlined in the *City of San Jose Transportation Analysis Handbook.* The results of the analysis indicate that all study intersections would continue to operate acceptably under both background and background plus project conditions.

Intersection Queueing Analysis: Vehicle queuing analysis was performed at four (4) left-turn movements. The results indicate that the westbound left-turn movement from Bernal Road to Santa Teresa Boulevard would increase by one vehicle in the queue from the project trips under background conditions. Lengthening the turn pocket is not feasible due to the eastbound left-turn pocket at the Realm Drive and Bernal Road Intersection.

Vehicular Access: The project traffic would have direct access to the site via two existing driveways on Santa Teresa Boulevard. The Santa Teresa Village Shopping Center has multiple driveways on Santa Teresa Boulevard, Bernal Road to the north, and Chantilley Lane to the south. Included in the iStar development, a second southbound left-turn on Santa Teresa Boulevard will be added. On Santa Teresa Boulevard, the outbound traffic from the project driveway is restricted to right-turns only due to a raised median on the boulevard. On the boulevard, there is also a channelized southbound left-turn pocket that provides left-turn access into the site. The existing vehicle delay in the PM peak-hour for the southbound left-turn is a LOS A and will degrade to an LOS F under background conditions. However, the southbound left-turn pocket will still be adequate to accommodate the increase from the project traffic trips.

Pedestrian and Bicycle Access: The project site has adequate pedestrian accessibility with sidewalks along all public streets. Crosswalks with pedestrian signal heads and push buttons are located at all signalized intersections. The project will also add a pedestrian path that connects the sidewalks to the proposed building. The project will construct a 15-foot wide ADA compliant sidewalk along the project frontage. Class II bike lanes are provided on Santa Teresa Boulevard and Bernal Road.

Truck Access and Circulation: The site plan shows two-way drive aisles between 23 and 25-feet wide. The City recommends two-way drive aisles to measure 26-feet wide. The project does not propose any freight loading zones. Therefore, trucks will utilize the existing driveways at the shopping center and perform loading activities with the adjacent parking lot. The site plan shows a new trash enclosure on the south side of the proposed building. Garbage trucks will access the trash enclosure using the existing driveways on Santa Teresa Boulevard and circulate using the drive aisles on-site. Per the site plan, the project meets the City of San Jose Fire Code requirements.

Sight Distance Analysis: A sight distance analysis was conducted at the project driveways. The result of the analysis indicates that the project driveways are free and clear of obstructions. It can be concluded that the driveways would have adequate sight distance.

Parking: The parking requirements were evaluated based on the City of San Jose Parking Standards (San Jose Municipal Code Chapter 20.90, Table 20-190) for the proposed scenario of the limited service restaurant. The project is required to provide 27 vehicle parking spaces. The proposed project is replacing 66 existing parking spaces on site and proposes to construct 28 parking spaces, which meets the City's parking requirement.

Transportation Demand Management Plan: The project has submitted a Draft Transportation Demand Management Plan (TDM) to reduce automobile traffic and parking demand, improve traffic flow, increase the use of alternative modes of transportation, and minimize the operational issues identified in the LTA. The City will review the draft TDM and work with the applicant to approve the TDM plan prior to Public Works Clearance for Building Permits.

Project conditions:

1) Provide End of Trip Bike Facilities to include:
   a) 10 bicycle parking spaces

2) Implement a Transportation Demand Management (TDM) plan prior to Planning Permit approval for the VMT impact for the following measures:
   a) Commute Trip Reduction Marketing and Education
   b) Provide a TDM plan prior to issuance of building permit.
      i) *Limited Service Restaurant Scenario:* Include an annual monitoring requirement establishing a trip cap of 52 PM PHT. The annual monitoring report must demonstrate the project is within 10% of the trip cap and must be prepared by a traffic engineer.
      ii) *Medical Office Scenario:* Include an annual monitoring requirement establishing a trip cap of 20 PM PHT. The annual monitoring report must demonstrate the project is within 10% of the trip cap and must be prepared by a traffic engineer.
   c) If the project is not in conformance with the trip cap, the project may add additional TDM measure to meet the trip cap. A follow up report will be required within 6-months. If the project is still out of conformance, penalties will be assessed. See Council Policy 5-1.

RECOMMENDATION:

With the inclusion of the above conditions, the subject project will be in conformance with both the City of San Jose Transportation Analysis Policy (Council Policy 5-1) and the Santa Clara County Congestion Management Program. Therefore, a determination for less than significant impacts can be made with respect to transportation impacts.

Please contact me at Alex.Wong@sanjoseca.gov or (408) 793-4160 if you have any questions. You may also reach Manjit Banwait at Manjit.Banwait@sanjoseca.gov or (408) 793-5301.

Alex Wong
Project Engineer
Development Services Division

AW:MB:lt
C: Manjit Banwait, PW
Florin Lapustea, DOT
Kai-Ling Kuo, Hexagon Transportation Consultants

Appendix C

VMT Evaluation Tool Summary Report

CITY OF SAN JOSE VEHICLE MILES TRAVELED EVALUATION TOOL SUMMARY REPORT

PROJECT:

Name:	Santa Teresa Village	Tool Version:	2/29/2019
Location:	7028 Santa Teresa Blvd	Date:	1/28/2020
Parcel:	70628019	Parcel Type:	Suburb with Single-Family Homes

Proposed Parking Spaces   Vehicles: 28   Bicycles: 10

LAND USE:

Residential:		Percent of All Residential Units	
Single Family	0 DU	Extremely Low Income (≤ 30% MFI)	0 % Affordable
Multi Family	0 DU	Very Low Income (> 30% MFI, ≤ 50% MFI)	0 % Affordable
Subtotal	0 DU	Low Income (> 50% MFI, ≤ 80% MFI)	0 % Affordable
Office:	126.1 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)	6
With Project Density (DU/Residential Acres in half-mile buffer)	6

Increase Development Diversity

Existing Activity Mix Index	0.72
With Project Activity Mix Index	0.73

Integrate Affordable and Below Market Rate

Extremely Low Income BMR units	0 %
Very Low Income BMR units	0 %
Low Income BMR units	0 %

Increase Employment Density

Existing Density (Jobs/Commercial Acres in half-mile buffer)	22
With Project Density (Jobs/Commercial Acres in half-mile buffer)	26

Tier 2 - Multimodal Infrastructure

Tier 3 - Parking

End of Trip Bike Facilities

Bicycle Parking Spaces Provided by Project	10 spaces
Project Provides Additional End-of-Trip Facilities Beyond Parking?	Yes

Tier 4 - TDM Programs

Commute Trip Reduction Marketing/ Education

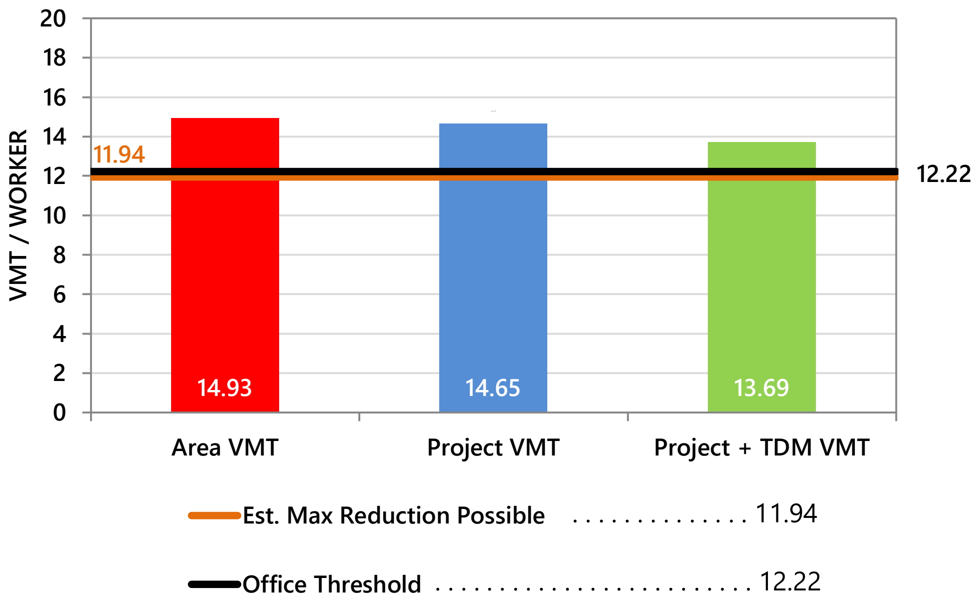
Percent of Eligible Employees	100 %

Ride-Sharing Programs

Percent of Eligible Eemployees	5 %

EMPLOYMENT ONLY

The tool estimates that the project would generate per non-industrial worker VMT above the City's threshold and per industrial worker VMT below the City's threshold.



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Proposed Parking Spaces   Vehicles: 28   Bicycles: 10

LAND USE:

Residential:		Percent of All Residential Units	
Single Family	0 DU	Extremely Low Income (≤ 30% MFI)	0 % Affordable
Multi Family	0 DU	Very Low Income (> 30% MFI, ≤ 50% MFI)	0 % Affordable
Subtotal	0 DU	Low Income (> 50% MFI, ≤ 80% MFI)	0 % Affordable
Office:	25.46 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) 6
- With Project Density (DU/Residential Acres in half-mile buffer) 6

Increase Development Diversity

- Existing Activity Mix Index 0.72
- With Project Activity Mix Index 0.73

Integrate Affordable and Below Market Rate

- Extremely Low Income BMR units . . . . 0 %
- Very Low Income BMR units . . . . 0 %
- Low Income BMR units . . . . 0 %

Increase Employment Density

- Existing Density (Jobs/Commercial Acres in half-mile buffer) 22
- With Project Density (Jobs/Commercial Acres in half-mile buffer) 23

Tier 2 - Multimodal Infrastructure

Tier 3 - Parking

End of Trip Bike Facilities

- Bicycle Parking Spaces Provided by Project . . . . 10 spaces
- Project Provides Additional End-of-Trip Facilities Beyond Parking? . . . . Yes

Tier 4 - TDM Programs

Commute Trip Reduction Marketing/ Education

- Percent of Eligible Employees . . . . 100 %

Ride-Sharing Programs

- Percent of Eligible Eemployees . . . . 25 %

EMPLOYMENT ONLY

The tool estimates that the project would generate per non-industrial worker VMT below the City's threshold.