APPENDIX H

Transportation Analysis

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HEXAGON TRANSPORTATION CONSULTANTS, INC.

1605 Industrial Avenue Warehouse Project

Transportation Analysis

Prepared for:

Dudek

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Hexagon Transportation Consultants, Inc.
Hexagon Office: 4 North Second Street, Suite 400
San Jose, CA 95113
Hexagon Job Number: 18MH08
Phone: 408.971.6100
Client Name: Dudek

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Executive Summary

This report presents the results of the transportation analysis conducted for a proposed warehouse development at 1605 Industrial Avenue in San Jose, California. This study was conducted for the purpose of identifying the potential transportation impacts related to the proposed warehouse.

The proposed project would replace the existing Specialty Truck Parts retailer with a 180,150-square foot (s.f.) high cube warehouse. Access to the site would be provided via two full-access driveways, one at the terminus of Industrial Avenue and one on Kings Row.

The potential impacts of the project were evaluated in accordance with the standards set forth by the City of San Jose. Based on the City of San Jose's Transportation Analysis Policy and *Transportation Analysis Handbook 2018*, the Transportation Analysis (TA) report for the project includes a CEQA transportation analysis (TA) and a local transportation analysis (LTA). The CEQA transportation analysis comprises an evaluation of Vehicle Miles Traveled (VMT). 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 one signalized intersection in the vicinity of the project site. The LTA also includes an analysis of site access, on-site circulation, parking, vehicle queuing, signal warrants at unsignalized study intersections, and effects to transit, bicycle, and pedestrian access.

CEQA Transportation Analysis

Project Vehicle Miles Traveled (VMT) Analysis

Based on the City of San Jose's VMT Evaluation Tool, the project as currently proposed is estimated to generate a total of 14.92 VMT per employee, which exceeds City's threshold of 14.37 VMT per employee for industrial uses. Therefore, the project would result in a significant transportation impact on VMT. The following mitigation measures are recommended to reduce the significant VMT impact:

- **Transportation Demand Management (TDM) Programs** – The project shall implement bike parking, a shower and changing room, commute trip reduction marketing and education programs, and ridesharing programs. These TDM measures are described in more detail below.
- **Bike Parking.** The project shall implement Long-term bike parking (1 space per 10 full-time employees per San Jose's Zoning Code Section 20.90.060B).
- **Showers and Changing Room**. The project shall implement one shower and changing room per San Jose Zoning Code Section 20.90.066A

- **Commute Trip Reduction Marketing and Education Programs**. The project shall implement marketing/educational campaigns that promote the use of transit, shared rides, and travel through active modes. An on-site TDM coordinator shall distribute information about alternative commute options through new employee orientations, special promotional events, and publications.
- **Ride-Sharing Programs**. An on-site TDM coordinator shall organize a program to match individuals interested in carpooling who have similar commutes. This measure, which shall apply to 100 percent of all employees, promotes the use of carpooling and reduces the number of drive-alone trips.

The above-list TDM measures would reduce the project VMT to 13.25 per employee, which would cause the project VMT to fall below the City's threshold and reduce the project impact to a less than significant level.

CEQA Cumulative Analysis

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

- The project site is near bicycle lanes on Oakland Road.
- The project would provide bicycle parking on the ground level near the project entrance and a shower to encourage employee use of alternative transportation modes.
- The project would implement a TDM plan that includes ride-sharing programs aimed at reducing VMT.
- The project promotes economic development and completion of the General Plan transportation network through the US-101/Mabury Transportation Development Policy (TDP)
- The project maintains, enhances, and develops the employment lands within an identified key employment area (the East Gish and Mabury industrial area) (FS-4.2)

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

Local Transportation Analysis

Project Trip Generation

Based on trip generation rates recommended by the Institute of Transportation Engineers, and after subtracting trips generated by the existing use on site, the proposed warehouse project is estimated to generate 123 net new daily vehicle trips, with 11 new trips occurring during the AM peak hour and 12 new trips occurring during the PM peak hour.

Intersection Traffic Operations

Based on the City of San Jose intersection operations analysis criteria, the project would not have an adverse effect on the signalized study intersection at Oakland Road and E. Gish Road.

Other Transportation Issues

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

Recommendations

- The proposed project is estimated to add one vehicle trip to the US 101/Oakland Road interchange during the PM peak hour. Therefore, the project will be required to pay the US 101/Oakland/Mabury Transportation Development Policy traffic impact fee.

- While the project would meet the City's requirements for the number of bicycle parking spaces, the site plan should be revised to provide secure long-term bicycle parking per the City's Bicycle Parking Standards

- The site plan should be revised to add motorcycle parking per the City's Motorcycle Parking Standards.

- The results of the signal warrant check indicate that the AM and PM peak-hour volumes at the I-880 Northbound Ramps/Gish Road intersection currently meet the signal warrant and would continue to do so with the project. The project applicant should coordinate with City of San Jose staff to determine if there are any plans to signalize this intersection or install a roundabout. If so, it would be appropriate for the project to make a fair share monetary contribution toward the planned intersection improvements.

- The project applicant should provide a fair share monetary contribution toward the future improvements to pursue the construction of concrete trackways and sidewalks on the north and south sides of Gish Road across the tracks. The future improvements would be coordinated between the City and Union Pacific Railroad.

1. Introduction

This report presents the results of the Transportation Analysis (TA) conducted for the proposed warehouse development at 1605 Industrial Avenue in San Jose, California. This study was conducted for the purpose of satisfying the requirements of the California Environmental Quality Act (CEQA) and the City of San Jose. The potential impacts of the project were evaluated in accordance with the standards set forth by the City of San Jose, and the Santa Clara Valley Transportation Authority (VTA). The VTA administers the Santa Clara County Congestion Management Program (CMP).

The transportation impacts of the project were evaluated following the standards and methodologies set forth in the City of San Jose's *Transportation Analysis Handbook 2018*. Based on the City of San Jose's Transportation Analysis Policy and *Transportation Analysis Handbook 2018*, the TA report for the project includes a CEQA transportation analysis and a local transportation analysis (LTA).

Project Description

The 10.96-acre project site is located at the terminus of Industrial Avenue (see Figure 1). As currently proposed, the project would involve replacing the existing Specialty Truck Parts retailer with a 180,150-square foot (s.f.) high cube warehouse (see Figure 2). Upon completion, there would be a total of 75 employees working on site. The project proposes 74 vehicle parking spaces in a surface lot on the south side of the site, and up to 77 container parking stalls and 28 loading lock spaces on the east side of the site. Access to the site would be provided via two full-access driveways, one at the terminus of Industrial Avenue and one on Kings Row. The local transportation analysis evaluates an earlier project description that contained 185,500 s.f. of warehouse space. Thus, the analysis is conservative in that it slightly overstates the number of trips that would be generated by the proposed project.

Transportation Policies

In adherence to 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 has adopted a new Transportation Analysis Policy, Council Policy 5-1. The policy replaces its predecessor (Policy 5-3) and establishes the thresholds for transportation impacts under the CEQA based on vehicle miles traveled (VMT) instead of levels 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. All new projects are required to analyze transportation impacts using the VMT metric and conform to Council Policy 5-1. The new Transportation Analysis Policy took effect on March 29, 2018.

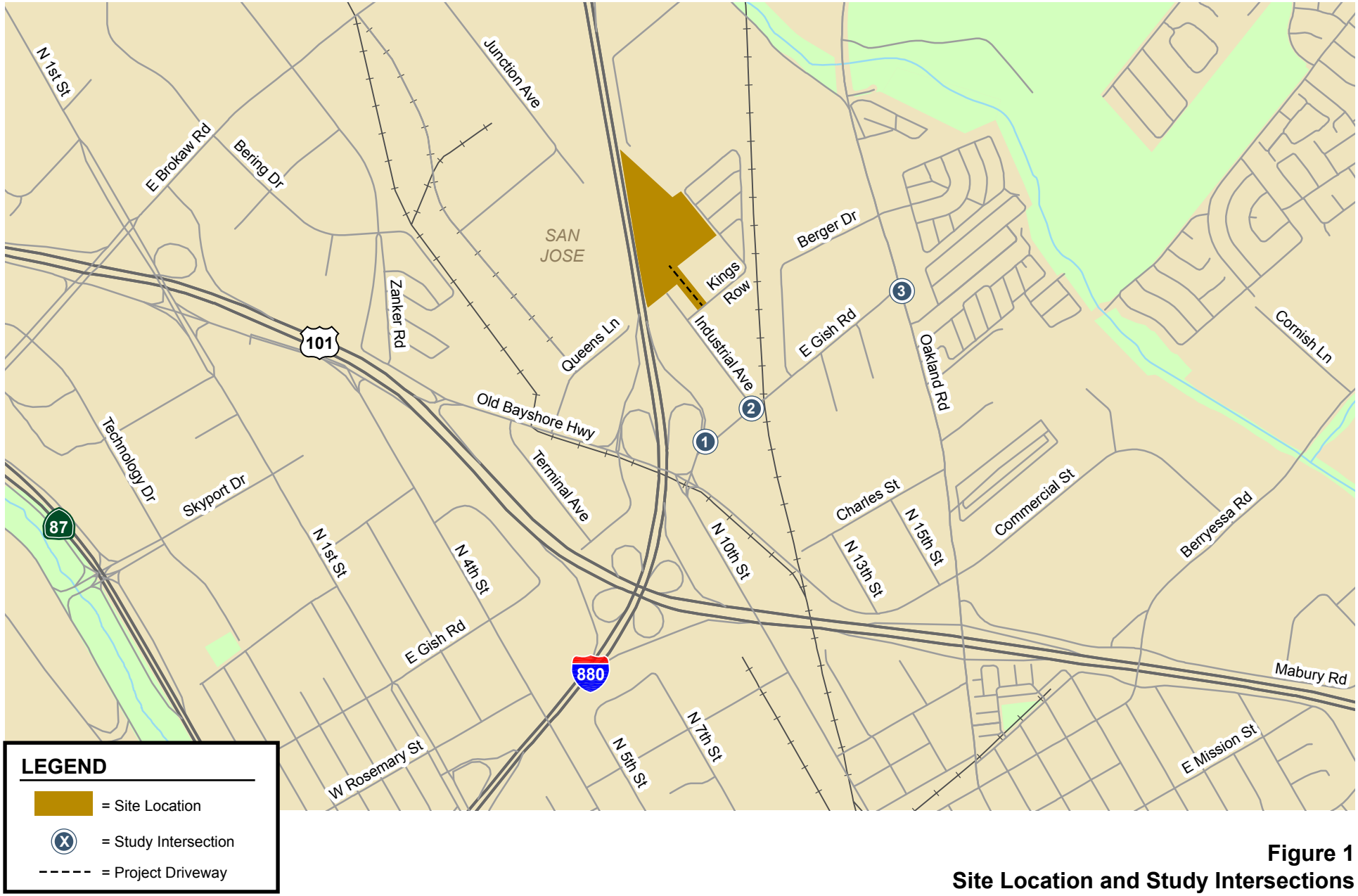

Figure 1
Site Location and Study Intersections

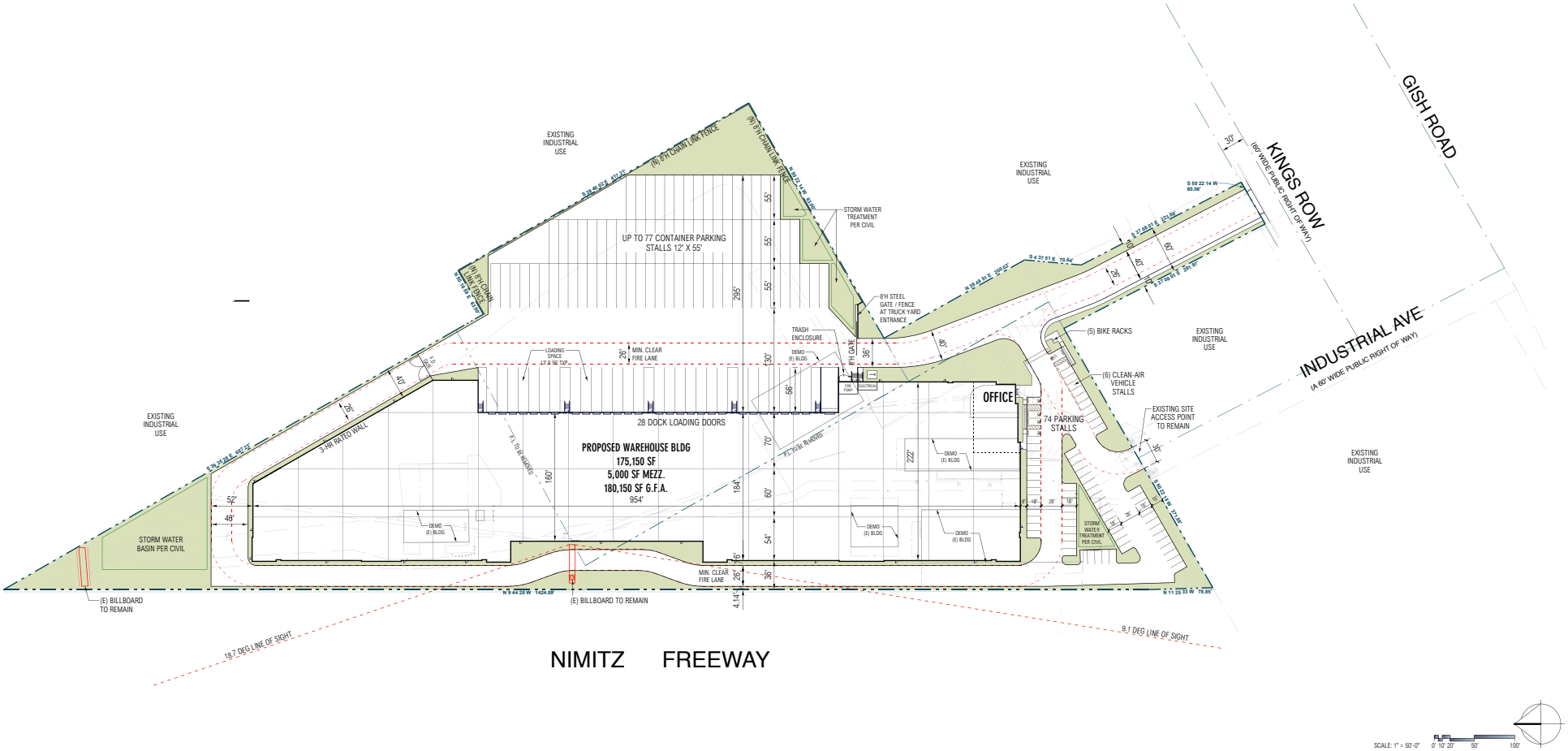

Figure 2
Site Plan

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);
- Actively coordinate with regional transportation, land use planning, and transit agencies to develop a transportation network with complementary land uses that encourage travel by bicycling, walking and transit, and ensure that regional greenhouse gas emissions standards are met (TR-1.8);
- Give priority to the funding of multimodal projects that provide the most benefit to all users. Evaluate new transportation projects to make the most efficient use of transportation resources and capacity (TR-1.9);
- Coordinate the planning and implementation of citywide bicycle and pedestrian facilities and supporting infrastructure. Give priority to bicycle and pedestrian safety and access improvements at street crossings and near areas with higher pedestrian concentrations (school, transit, shopping, hospital, and mixed-use areas) (TR-2.1);
- Provide a continuous pedestrian and bicycle system to enhance connectivity throughout the City by completing missing segments. Eliminate or minimize physical obstacles and barriers that impede pedestrian and bicycle movement on City streets. Include consideration of grade-separated crossings at railroad tracks and freeways. Provide safe bicycle and pedestrian connections to all facilities regularly accessed by the public, including the Mineta San Jose International Airport (TR-2.2);
- Integrate the financing, design and construction of pedestrian and bicycle facilities with street projects. Build pedestrian and bicycle improvements at the same time as improvements for vehicular circulation (TR-2.5);
- Require new development where feasible to provide on-site facilities such as bicycle storage and showers, provide connections to existing and planned facilities, dedicate land to expand

existing facilities or provide new facilities such as sidewalks and/or bicycle lanes/paths, or share in the cost of improvements (TR-2.8);

- Coordinate and collaborate with local School Districts to provide enhanced, safer bicycle and pedestrian connections to school facilities throughout San Jose (TR-2.10);

- As part of the development review process, require that new development along existing and planned transit facilities consist of land use and development types and intensities that contribute towards transit ridership. In addition, require that new development is designed to accommodate and to provide direct access to transit facilities (TR-3.3);

- Support the development of amenities and land use and development types and intensities that increase daily ridership on the VTA, BART, Caltrain, ACE and Amtrak California systems and provide positive fiscal, economic, and environmental benefits to the community (TR-4.1);

- Require large employers to develop and maintain TDM programs to reduce the vehicle trips generated by their employees (TR-7.1);

- Promote transit-oriented development with reduced parking requirements and promote amenities around appropriate transit hubs and stations to facilitate the use of available transit services (TR-8.1);

- Balance business viability and land resources by maintaining an adequate supply of parking to serve demand while avoiding excessive parking supply that encourages automobile use (TR-8.2);

- Support using parking supply limitations and pricing as strategies to encourage the use of non-automobile modes (TR-8.3);

- Discourage, as part of the entitlement process, the provision of parking spaces significantly above the number of spaces required by code for a given use (TR-8.4);

- Allow reduced parking requirements for mixed-use developments and for developments providing shared parking or a comprehensive transportation demand management (TDM) program, or developments located near major transit hubs or within 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

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

A project's VMT is compared to the appropriate thresholds of significance based on the project location and type of development. When assessing an office or industrial project, the project's VMT is divided by the number of employees. The project's VMT is then compared to the VMT thresholds of significance established based on the average area VMT. A project located in a downtown area is expected to have the project VMT lower than the average area VMT, while a project located in a suburban area is expected to generate the project VMT higher than the average area VMT.

The thresholds of significance for development projects, as established in the Transportation Analysis Policy, are based on the existing regional average VMT level for employment uses. Figure 3 shows the current VMT levels estimated by the City for workers based on the locations of jobs. Developments in the green-colored areas are estimated to have VMT levels that are below the thresholds of significance, while the pink-colored areas are estimated to have VMT levels that are above the thresholds of significance.

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

Screening for VMT Analysis

The *Transportation Analysis Handbook 2018* includes screening criteria for projects that are expected to result in less-than-significant VMT impacts. Projects that meet the screening criteria do not require a CEQA transportation analysis but may still be required to provide a Local Transportation Analysis (LTA).

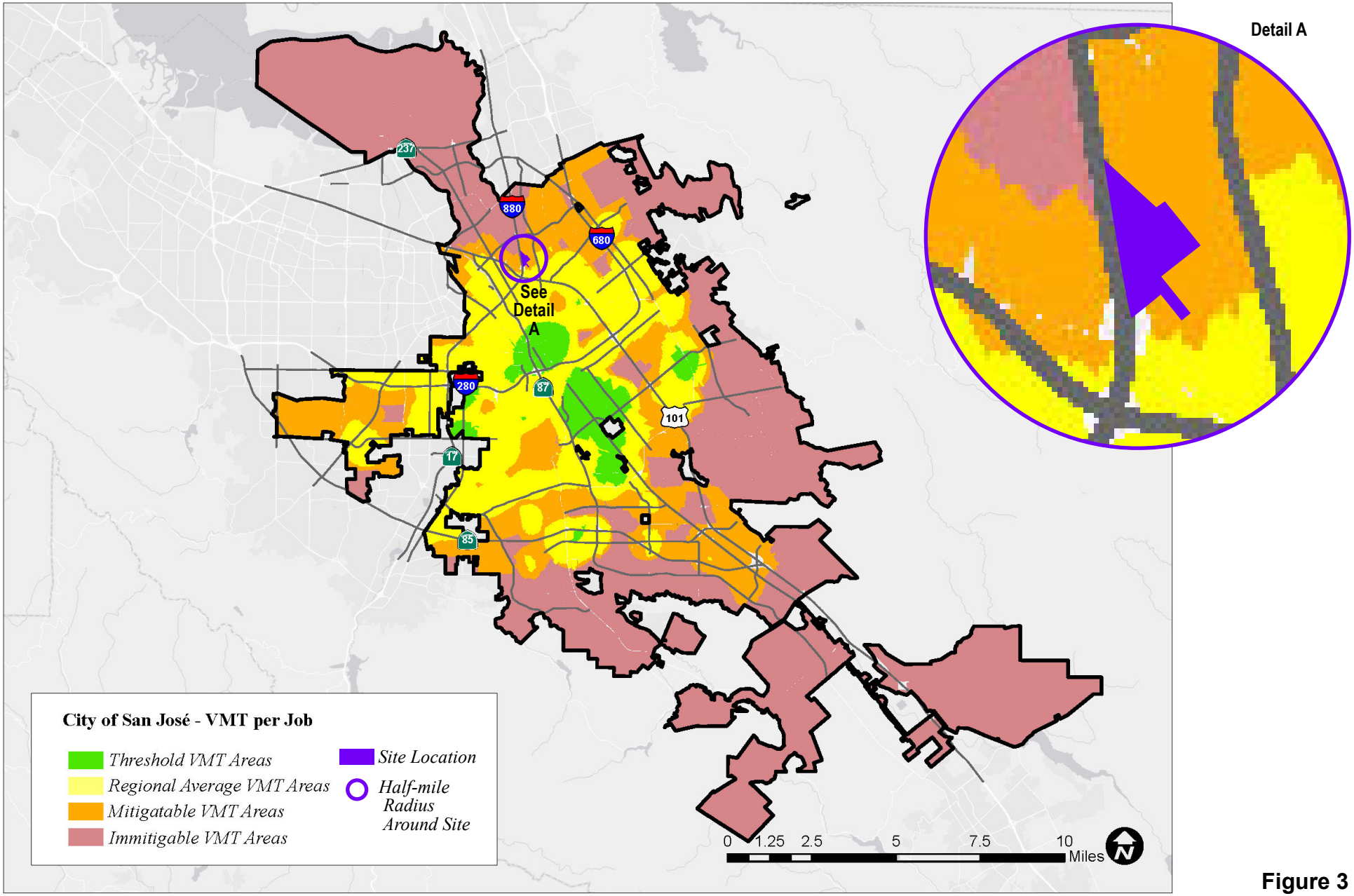

Figure 3
VMT Heat Map for Workers in San Jose

NORTH
Not to Scale

The size of the proposed warehouse use does not qualify as a small infill project. In addition, the project is located in an area in which the per-employee VMT (15.19) exceeds the threshold of significance for industrial uses (14.37). Thus, the project use does not meet the screening criteria set forth in the *Transportation Analysis Handbook 2018*, and the project requires a detailed CEQA transportation analysis.

Local Transportation Analysis Scope

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

The LTA comprises an analysis of AM and PM peak-hour traffic conditions for three intersections in the vicinity of the project site.

Study Intersections:

1. I-880 Northbound On/Off Ramps and E. Gish Road (unsignalized)
2. Industrial Avenue and E. Gish Road (unsignalized)
3. Oakland Road and E. Gish Road

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

Traffic conditions and intersection operations were evaluated for the following scenarios:

Scenario 1: *Existing Conditions.* Existing traffic volumes at the study intersections were based on traffic counts conducted in December 2018. The signalized study intersection was evaluated with a level of service analysis using TRAFFIX software in accordance with the *2000 Highway Capacity Manual* methodology.

Scenario 2: *Background Conditions.* Background traffic volumes reflect traffic added by nearby approved projects that are not yet constructed or occupied. The added traffic from approved but not yet completed developments within the City of San Jose was provided by City staff in the form of the Approved Trips Inventory (ATI).

Scenario 4: *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 traffic volumes with the project were estimated by adding to background traffic volumes the additional traffic generated by the project.

Scenario 5: *Cumulative Conditions*. Cumulative traffic volumes reflect future traffic volumes with the proposed project as well as expected traffic growth through the year 2020. Cumulative traffic volumes include the traffic associated with potential (but not yet approved) developments based on a growth rate of 1.2% per year.

The LTA also includes an analysis of site access, on-site circulation, vehicle queuing, signal warrants at unsignalized study intersections, and effects to transit, bicycle, and pedestrian access.

VMT Analysis Methodology

Methodology

To determine whether a project would result in CEQA transportation impacts related to VMT, the City has developed the San Jose VMT Evaluation Tool (sketch tool) to streamline the analysis for residential, office, and industrial projects with local traffic. For non-residential or non-office projects, very large projects, or projects that can potentially shift travel patterns, the City's Travel Demand Model can be used to determine project VMT. Because the proposed project is relatively small and would not affect existing traffic patterns, the sketch tool is used to estimate the project VMT and determine whether the project would result in a significant VMT impact.

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

The sketch 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 sketch tool:

1. Project characteristics (e.g. density, diversity of uses, design, and affordability of housing) that encourage walking, biking and transit uses.

2. Multimodal network improvements that increase accessibility for transit users, bicyclists, and pedestrians,

3. Parking measures that discourage personal motorized vehicle-trips, and

4. Transportation demand management (TDM) measures that provide incentives and services to encourage alternatives to personal motorized vehicle-trips.

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

Thresholds of Significance

Table 1 shows the VMT thresholds of significance for development projects, as established in the Transportation Analysis Policy. Projects that include industrial employment uses (warehouse) are said to create a significant adverse impact when the estimated project-generated VMT exceeds the existing regional average VMT per employee. Currently, the reported regional average and significant impact threshold is 14.37 VMT per employee.

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

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

Project Types	Significance Criteria	Current Level	Threshold
Residential Uses	Project VMT per capita exceeds existing citywide average VMT per capita minus 15 percent OR existing regional average VMT per capita minus 15 percent, whichever is lower.	11.91 VMT per capita (Citywide Average)	10.12 VMT per capita
General Employment Uses	Project VMT per employee exceeds existing regional average VMT per employee minus 15 percent.	14.37 VMT per employee (Regional Average)	12.22 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.

Intersection Operations Analysis Methodology

This section presents the methods used to evaluate traffic operations at study intersections. It includes descriptions of the data requirements, the analysis methodologies, the applicable level of service standards, and the criteria defining adverse effects on intersections operations.

The signalized study intersection is located within the City of San Jose and was evaluated based on the City of San Jose level of service standard.

Data Requirements

The data required for the analysis were obtained from new traffic counts, the City of San Jose, the VTA Congestion Management Program (CMP), and field observations. The following data were collected from these sources:

- existing traffic volumes
- existing lane configurations

- signal timing and phasing
- approved project trips
- site location type (i.e. central city urban, urban high-transit, urban low-transit, etc.)

Level of Service Standard and Analysis Methodologies

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

Signalized Intersections

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

The signalized study intersection is subject to the City of San Jose level of service standards. The City of San Jose has established LOS D as the minimum acceptable intersection operations standard for all signalized intersections unless superseded by an Area Development Policy. The LOS D standard applies to the signalized study intersection evaluated in this report.

Unsignalized Intersections

The study also evaluated two unsignalized intersections in the City of San Jose. San Jose has not established a level of service standard for unsignalized intersections, thus the unsignalized study intersections were evaluated for operational issues.

Definition of Adverse Intersection Operations Effects

According to the City of San Jose's *Transportation Analysis Handbook 2018*, an adverse effect on intersection operations occurs if for either peak hour:

1. The level of service at a signalized 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 a signalized 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 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.

Table 2
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.

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

- Reduce project vehicle-trips to eliminate the adverse effects and restore the intersection operations to background conditions.
- Construct improvements to the subject intersection or other roadway segments of the citywide transportation system to increase overall capacity;
- Implement a trip cap, the maximum number of daily vehicle-trips allowed to be generated by a Project, at a level that is attainable through proven means to reduce the adverse operations effects and restore the intersection operations to background conditions.

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 City has requested that the queuing analysis include the three study intersections listed above plus the following intersections:

- Project Driveway and Kings Row
- E. Gish Road/N. 10th Street and Old Bayshore Highway

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

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

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

Report Organization

The remainder of this report is divided into three chapters. Chapter 2 describes existing transportation conditions including VMT of the existing land uses in the proximity of the project, the existing roadway network, transit service, bicycle and pedestrian facilities. Chapter 3 presents the CEQA transportation analysis, including the project VMT impact analysis, mitigation measures to reduce the VMT impact, and cumulative transportation impact assessment. Chapter 4 presents the local transportation analysis including operations of study intersections, the methods used to estimate project-generated traffic, the project's effects on the transportation system, and an analysis of other transportation issues including site access and circulation, parking, transit services, bicycle and pedestrian facilities, and vehicle queuing. Chapter 5 presents the conclusions of the traffic study and lists all the recommendations.

2. Existing Conditions

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

VMT of Existing Land Uses

To determine whether a project would result in CEQA transportation impacts related to VMT, the City has developed the San Jose VMT Evaluation Tool (sketch tool) to streamline the analysis for residential, office, and industrial projects. Based on the sketch tool and the project's APN, the existing VMT for employment uses in the project vicinity is 15.19 per employee. The current regional average VMT for employment uses is 14.37 per employee (see Table 1). Therefore, the VMT levels of existing uses for employment in this project vicinity are greater than the average VMT levels for employment. Chapter 3 presents the sketch tool summary report for the project.

Existing Roadway Network

Regional access to the project site is provided by Interstate 880 (I-880) and US 101. Local access to the project site is provided via Oakland Road, Old Bayshore Highway, Gish Road, Industrial Avenue, and Kings Row. These facilities are described below.

I-880 is a north-south freeway that extends through the Bay Area, connecting Oakland to San Jose. Near the vicinity of the project site, I-880 is eight lanes wide with three mixed-flow lanes and one HOV lane in each direction. I-880 provides site access via a full interchange at Old Bayshore Highway.

US 101 is a ten-lane freeway (four mixed-flow lanes and one HOV lane in each direction) in the vicinity of the site. US 101 extends northward through San Francisco and southward through Gilroy. Access to and from the site is provided via full interchanges at Oakland Road and I-880.

Oakland Road is a six-lane, north-south arterial street that services the surrounding commercial and residential uses. In the immediate vicinity of the proposed project, Oakland Road contains three mixed-flow lanes in each direction with a center turn lane. Oakland Road transitions from 13th Street at Hedding Street, and extends north to Montague Expressway, where it transitions into Main Street. Oakland Road provides access to the project site via its connection to Gish Road.

Old Bayshore Highway is an east-west arterial street extending from 13th Street and Commercial Street to Zanker Road. East of 13th Street, Old Bayshore Highway transitions to Commercial Street. Old Bayshore Highway is a four-lane roadway. It provides access to the proposed project via Gish Road.

Gish Road is a two-lane roadway that extends westward from Oakland Road and then turns southward to intersect Old Bayshore Highway near I-880. Gish Road provides access to the project site via its intersection with Industrial Avenue.

Industrial Avenue is a two-lane roadway that extends northward from Gish Road to a dead-end where the existing project driveway is located.

Kings Row is a two-lane roadway that extends eastward from Industrial Avenue to an industrial park with no through access. Kings Row would provide direct access to the proposed project via a proposed new site driveway.

Existing Pedestrian and Bicycle Facilities

Pedestrian facilities consist of sidewalks, crosswalks, and pedestrian signals at signalized intersections. In the vicinity of the project site, sidewalks exist only on the west (southbound) side of Industrial Avenue from Gish Road to Kings Row, while sidewalks exist along both sides of Industrial Avenue between Kings Row and the project site. Sidewalks are also present along both sides of Gish Road for a distance of about 700 feet west of Oakland Road. Beyond that point, sidewalks continue along the north (westbound) side of Gish to I-880 with a short gap in the sidewalk between Industrial Avenue and the railroad tracks. There are no sidewalks along the segment of Gish Road between I-880 and Old Bayshore Highway or along Old Bayshore Highway in the vicinity of Gish Road. Oakland Road has sidewalks along both sides of the street in the vicinity of the project site except for a short sidewalk gap on the west (southbound) side of the street between the railroad tracks and Charles Street. Marked crosswalks with pedestrian signal heads and push buttons are provided on the south leg and west leg of the Oakland Road and Gish Road intersection.

The overall network of sidewalks and crosswalks in the study area provides limited connectivity. There are gaps in the pedestrian routes between the project site and the nearest bus route on Oakland Road. Furthermore, there are few commercial services (restaurants, banks, shops, etc), parks or trails within walking distance of the project site.

Class II bikeways are located along several streets within the study area. Class II bikeways are striped bike lanes on roadways that are marked by signage and pavement markings. Within the vicinity of the project site, striped bike lanes are present on the following roadway segments:

- Oakland Avenue, between Gish Road and Commercial Street
- Old Bayshore Highway, between 10th Street and Zanker Road
- Berger Drive, between Oakland Road and Gish Road

In addition, buffered bike lanes with a designated buffer space separating the bicycle lane from the adjacent motor vehicle travel lane are present on the following roadway segment:

- Oakland Avenue, Gish Road to Montague Expressway

Although Industrial Road does not provide bike lanes and is not designated as bike route, due to its low traffic volumes and low speed, it is conducive to bicycle usage. The existing bicycle facilities within the study area are shown on Figure 4.

Existing Transit Service

Existing transit services near the project site are provided by the Santa Clara Valley Transportation Authority (VTA) (See Figure 5). The project site is not accessible by transit since there are no transit routes within normal walking distance (one-quarter mile). The study area has one local bus route, Route 66. The nearest bus stop is located approximately 0.6 mile from the project site at the intersection of Gish Road and Oakland Road. Route 66 runs from Kaiser Permanente Medical Center in South San Jose to Milpitas from 5:14 AM to 12:08 AM with a headway of 15 to 20 minutes during peak commute hours.

Existing Intersection Lane Configurations

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

Observed Existing Traffic Conditions

Traffic conditions in the field were observed in order to identify existing operational deficiencies and to confirm the accuracy of calculated intersection levels of service. The purpose of this effort was (1) to identify any existing traffic problems that may not be directly related to vehicle-miles traveled, and (2) to identify any locations where the local transportation analysis does not accurately reflect existing traffic conditions. The local transportation analysis appears to accurately reflect actual existing traffic conditions. Field observations showed that some operational problems currently occur during the peak commute hours. These issues are described below.

I-880 Northbound On/Off Ramps and Gish Road

Gish Road experiences long vehicle queues in both the AM and PM peak hour. The I-880 Northbound off-ramp is uncontrolled, while the northbound and westbound Gish Road approaches are stop controlled. Due to the uncontrolled off-ramp, many cars have to wait for a gap in traffic to either continue travelling along Gish Road or to enter the I-880 on-ramp. In the PM peak hour, the queue on northbound Gish Road occasionally extends into the 10th Street/Old Bayshore Highway intersection, but the queue usually clears within two cycles. In the AM peak hour, the northbound queue more frequently extends into the 10th Street/Old Bayshore Highway intersection. Similarly, the right-turn queue on westbound Gish Road often extends past the Industrial /Gish intersection in the AM peak hour.

Industrial Avenue and Gish Road

In the PM peak hour, the Gish Road and Industrial Avenue intersection operates without any major delays or long queues. However, in the AM peak hour, there are often queues in both directions on Gish Road at the intersection of Industrial Avenue due to vehicles waiting to make a left turn from eastbound Gish Road onto Berger Drive and vehicles waiting to make a left turn from westbound Gish Road at the I-880 Northbound Off Ramp. This makes it difficult for vehicles to turn left onto Gish Road from Industrial Avenue. As a result, there were long queues of 7 to 10 vehicles on the southbound Industrial Avenue approach to Gish Road.

The intersection of Oakland Road and Gish Road operates without any major operational problems.

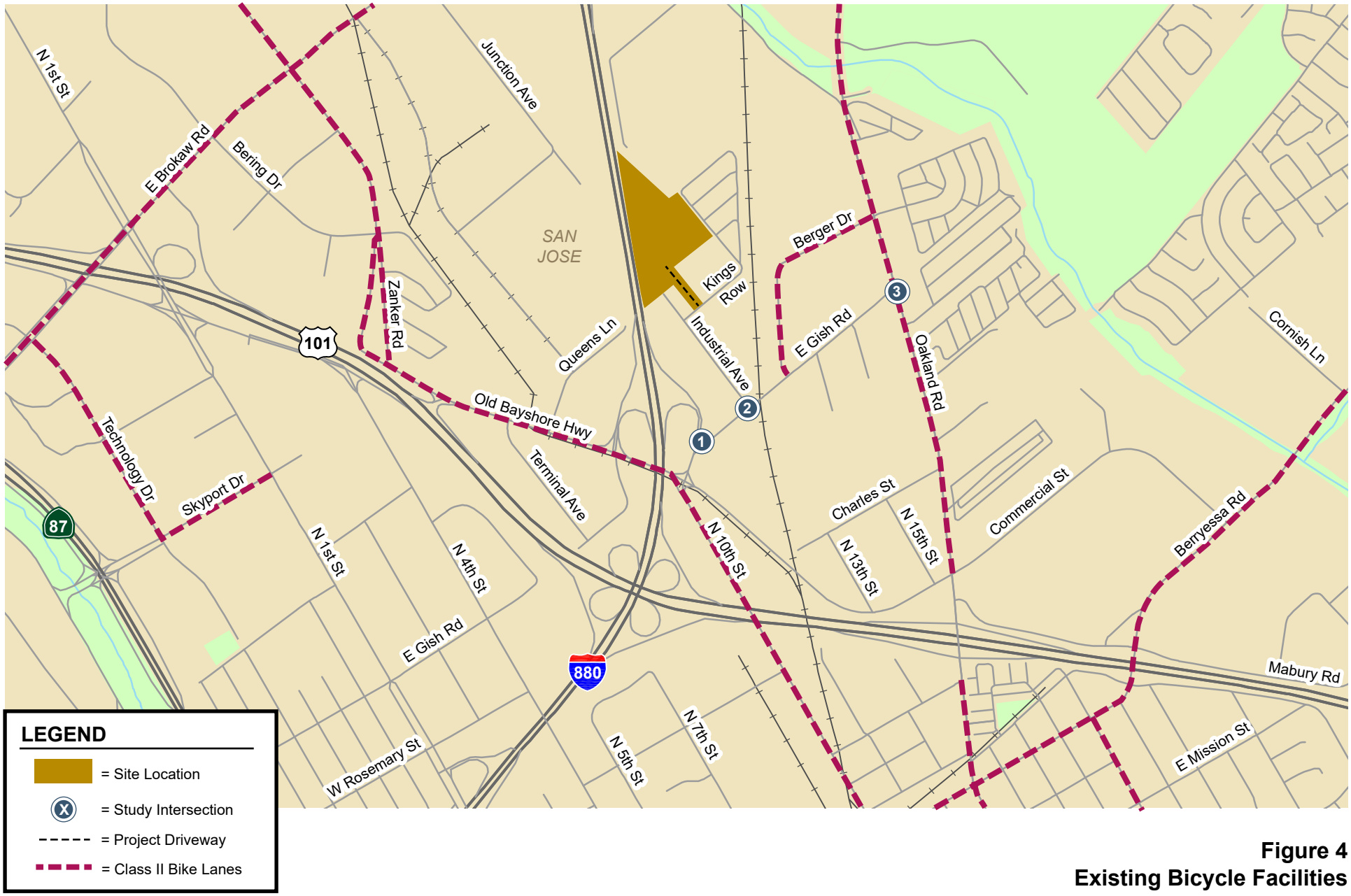

Figure 4
Existing Bicycle Facilities

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NORTH
Not to Scale

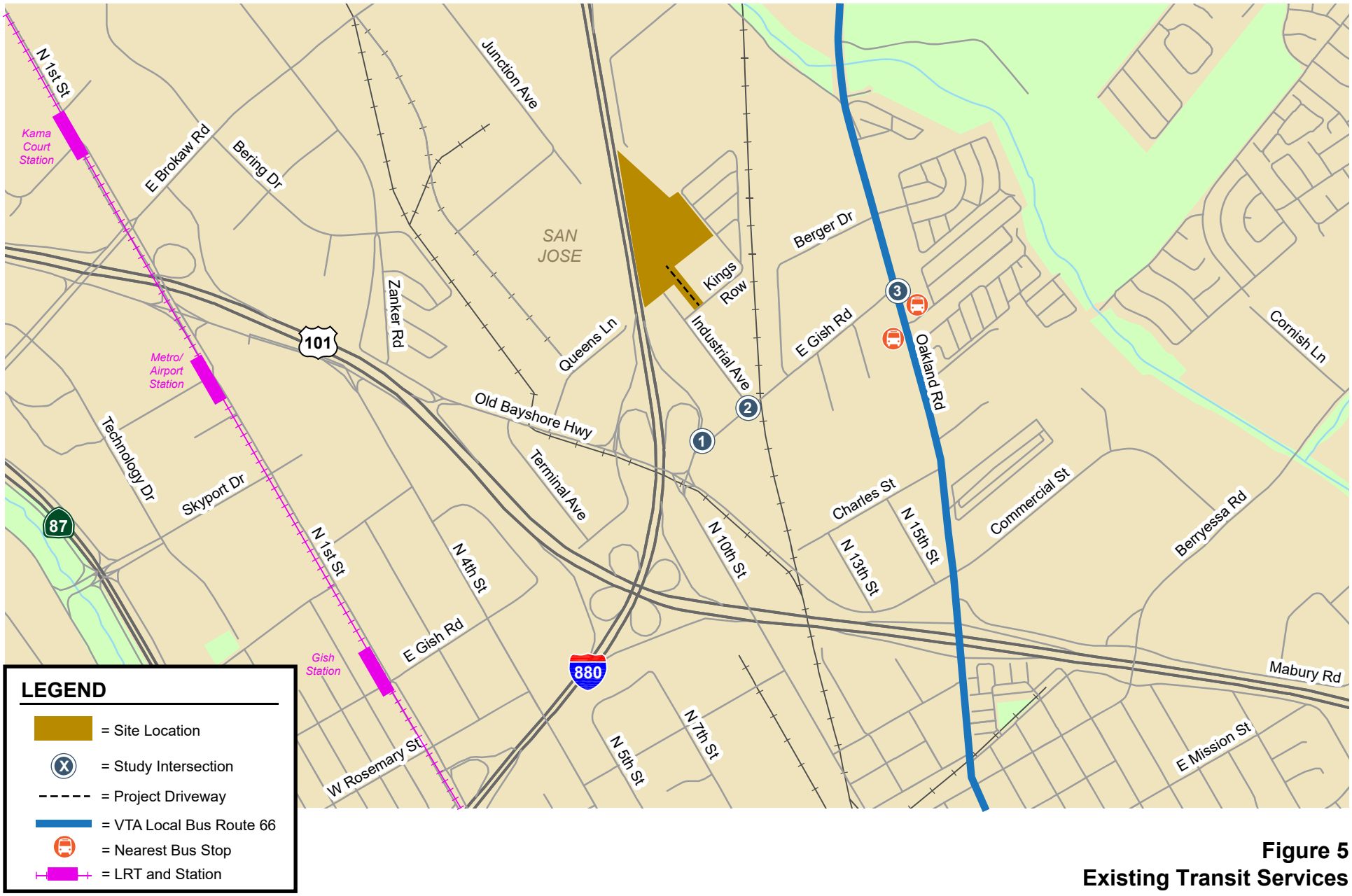

Figure 5
Existing Transit Services

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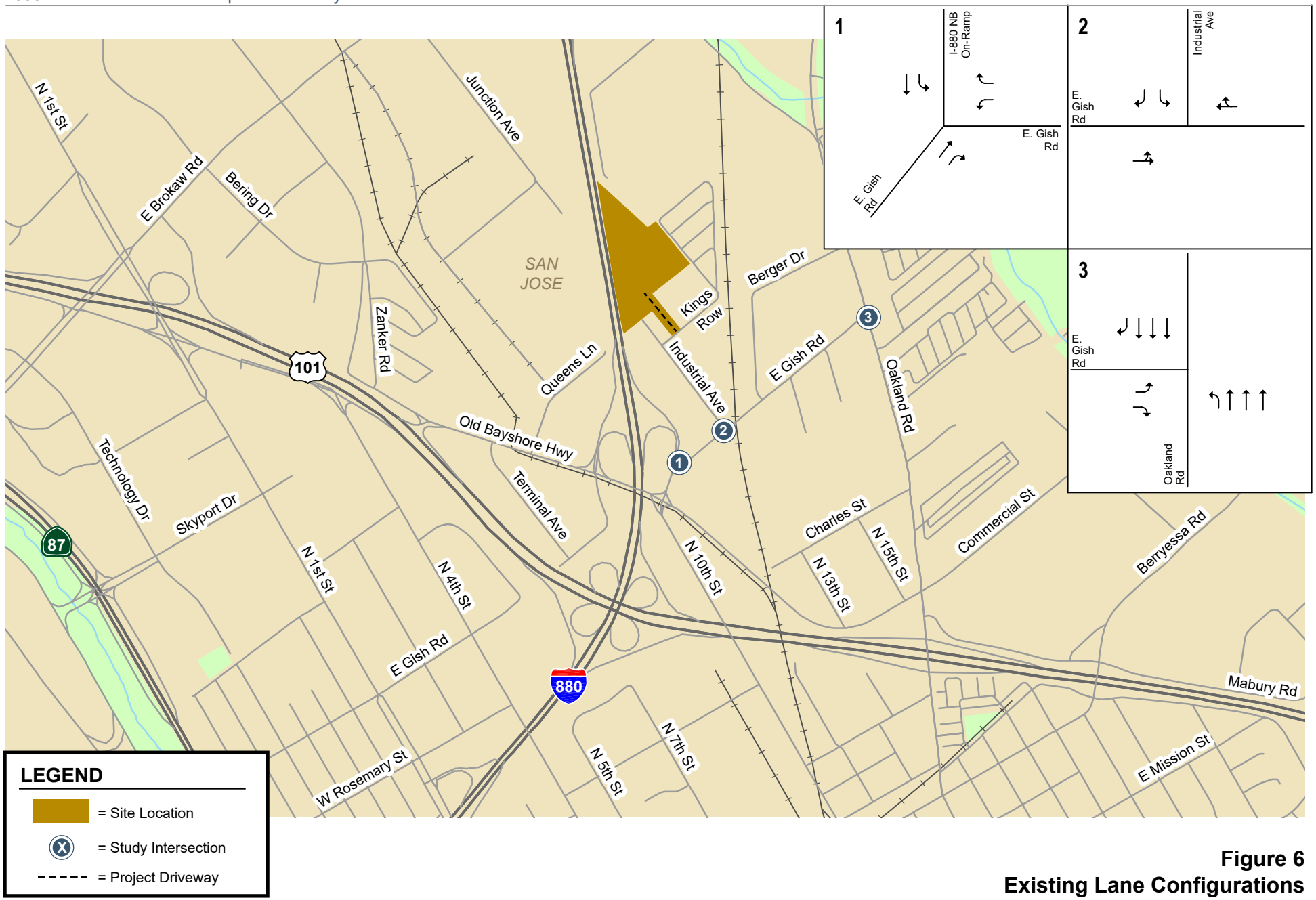

Figure 6
Existing Lane Configurations

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3. CEQA Transportation Analysis

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

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. The threshold of significance for industrial employment uses is the existing regional average VMT level of 14.37 per employee (see Table 1).

Based on the City of San Jose's VMT Evaluation Tool, the project as currently proposed is estimated to generate a total of 14.92 VMT per employee. The project-generated VMT per employee is lower than the average VMT per employee in this area (15.19) due to the end of trip bike facilities proposed by the project. The project-generated VMT per employee (14.92) is greater than the City's threshold of 14.37 VMT per employee.

Project Impacts and Mitigation Measures

Project Impact: The VMT generated by the project (14.92 VMT per employee) would exceed the threshold of 14.37 VMT per employee; therefore, the project would result in a significant transportation impact on VMT, and mitigation measures are required to reduce the VMT impact. According to the *Transportation Analysis Handbook*, projects located in areas where the existing VMT is above the established threshold (such as the project study area) are referred to as being in "high-VMT areas", and projects in high-VMT areas are required to include a set of VMT reduction measures that would reduce the project VMT to the extent possible.

Mitigation Measures: Based on the four VMT reduction strategy tiers included in the sketch tool, it is recommended the project implement the following mitigation measures to reduce the significant VMT impact:

- **Transportation Demand Management (TDM) Programs** – The project shall implement bike parking, a shower and changing room, commute trip reduction marketing and education programs, and ridesharing programs. These TDM measures are described in more detail below.

- **Bike Parking.** The project shall implement Long-term bike parking (1 space per 10 full-time employees per San Jose's Zoning Code Section 20.90.060B).
- **Showers and Changing Room**. The project shall implement one shower and changing room per San Jose Zoning Code Section 20.90.066A
- **Commute Trip Reduction Marketing and Education Programs**. The project shall implement marketing/educational campaigns that promote the use of transit, shared rides, and travel through active modes. An on-site TDM coordinator shall distribute information about alternative commute options through new employee orientations, special promotional events, and publications.
- **Ride-Sharing Programs**. An on-site TDM coordinator shall organize a program to match individuals interested in carpooling who have similar commutes. This measure, which shall apply to 100 percent of employees, promotes the use of carpooling and reduces the number of drive-alone trips.

The above-list TDM measures would reduce the project VMT to 13.25 per employee, equivalent to an 11 percent reduction in VMT, which would cause the project VMT to fall below the City's threshold and reduce the project impact to a less than significant level.

Figure 7 shows the VMT evaluation summary report generated by the City of San Jose's VMT Evaluation Tool.

Cumulative VMT Impact Analysis

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

The project site is located within the Heavy Industrial zone. Heavy Industrial developments can develop at a FAR of up to 1.5. Based on the existing lot area of 477,580 square feet, the project is allowed to develop up to 716,370 square feet (477,580 s.f. x 1.5 FAR = 716,370 s.f.).

The project as proposed would construct a light industrial, one-story building with mezzanine comprised of 185,500 gross square feet of warehouse space. This equates to a FAR of 0.39 (185,500 s.f. ÷ 477,580 s.f. = 0.39).

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

- The project site is near bicycle lanes on Oakland Road.
- The project would provide bicycle parking on the ground level near the project entrance and a shower to encourage employee use of alternative transportation modes.
- The project would implement a TDM plan that includes ride-sharing programs aimed at reducing VMT.
- The project promotes economic development and completion of the General Plan transportation network through the US-101/Mabury Transportation Development Policy (TDP)
- The project maintains, enhances, and develops the employment lands within an identified key employment area (the East Gish and Mabury industrial area) (FS-4.2)

CITY OF SAN JOSE VEHICLE MILES TRAVELED EVALUATION TOOL SUMMARY REPORT

PROJECT:

Name:	1605 Industrial Avenue Warehouse Project	Tool Version:	3/14/2018
Location:	1605 Industrial Avenue	Date:	12/13/2018
Parcel:	23730015	Parcel Type:	Suburb with Multifamily Housing

Proposed Parking: Vehicles: 85 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:	0 KSF		
Retail:	0 KSF		
Industrial:	185.5 KSF		

VMT REDUCTION STRATEGIES

Tier 1 - Project Characteristics

Increase Residential Density

Existing Density (DU/Residential Acres in half-mile buffer)	8
With Project Density (DU/Residential Acres in half-mile buffer)	8

Increase Development Diversity

Existing Activity Mix Index	0.86
With Project Activity Mix Index	0.85

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)	15
With Project Density (Jobs/Commercial Acres in half-mile buffer)	16

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

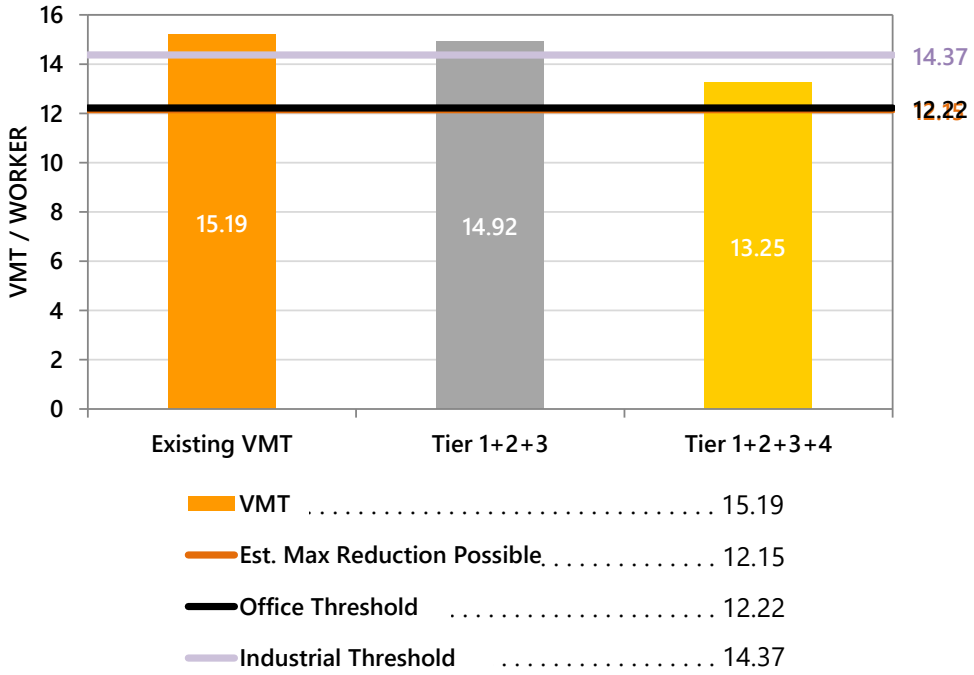
Percent of Eligible Eemployees	100 %

Ride-Sharing Programs

Percent of Eligible Eemployees	100 %

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.



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

4. Local Transportation Analysis

This chapter describes the local transportation analysis including the method by which project traffic is estimated, intersection operations analysis for background, background plus project, and cumulative scenarios, any adverse effects on study intersections caused by the project, intersection vehicle queuing analysis, freeway ramp analysis, site access and on-site circulation review, effects on bicycle, pedestrian, and transit facilities, and parking.

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. A potential adverse effect on a study intersection in San Jose is not a CEQA measure. Information required for the intersection operations analysis related to project trip generation, trip distribution, and trip assignment are presented in this section. Intersection analysis methodology, standards, and significance criteria are described in Chapter 1.

Project Trip Estimates

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

Trip Generation

Through empirical research, data have been collected that indicate the amount of traffic that can be expected to be generated by common land uses. The standard trip generation rates can be applied to help predict the future traffic increases that would result from a new development. The standard trip generation rates are published in the Institute of Transportation Engineers (ITE) *Trip Generation Manual.*

Project trip generation was estimated by applying to the size and uses of the development the appropriate trip generation rates obtained from the ITE *Trip Generation Manual, 10th Edition* (2017). The average trip generation rates for warehouse (Land Use 150) was applied to the project. Based on the ITE rates for warehouse, a project of this size is estimated to generate a total of 323 gross daily vehicle trips, with 32 trips occurring during the AM peak hour and 35 trips occurring during the PM peak hour (see Table 3).

Table 3
Project Trip Generation Estimates

Land Use	Size	Daily Rate[1]	Daily Trips	AM Peak Hour Rate[1]	AM Peak Hour Trip In	AM Peak Hour Trip Out	AM Peak Hour Trip Total	PM Peak Hour Rate[1]	PM Peak Hour Trip In	PM Peak Hour Trip Out	PM Peak Hour Trip Total
Proposed Uses											
Warehouse[2]	185,500 s.f.	1.74	323	0.17	25	7	32	0.19	9	26	35
Existing Use											
Specialty Truck Parts Retailer[3]	(37,615) s.f.	5.32	-200	0.56	-18	-3	-21	0.61	-5	-18	-23
Net Project Trips			**123**		**7**	**4**	**11**		**4**	**8**	**12**

[1]Rates per 1,000 s.f. (square feet) based on average rate for land use #150 (Warehousing) from the ITE *Trip Generation Manual, 10th Edition*. Existing use trip generation based on driveway counts.

[2]The local transportation analysis evaluates an earlier project description that was slightly larger than the currently proposed project (180,150 s.f.). Thus, the analysis is conservative since the currently proposed project would generate 10 fewer daily trips and 1 fewer trip during the AM and PM peak hours than shown above.

[3]Existing use trips based on peak-hour driveway counts conducted on 9/25/18. Daily trips estimated based on peak-hour trips and business hours.

Trip Adjustments and Reductions

The trip generation of the existing use, Specialty Truck Parts Inc., can be credited against the trips generated by the proposed warehouse development. The existing site driveway was counted during the peak commute hours on September 25, 2018 to quantify the trip generation of the existing use. The daily trips associated with the existing use were estimated based on the peak-hour trips and the business hours. The existing use is estimated to generate 200 daily vehicle trips with 21 trips occurring in the AM peak hour and 23 trips in the PM peak hour.

Note that the above project trip generation estimates do not reflect the reduction in trips expected to occur due to the implementation of the recommended TDM Programs.

Net Project Trips

After applying the existing use trip credits, the project is expected to generate 123 net new daily vehicle trips, with 11 new trips occurring during the AM peak hour and 12 new trips occurring during the PM peak hour (See Table 3).

Trip Distribution and Trip Assignment

The trip distribution pattern for the project was developed based on existing travel patterns on the surrounding roadway system and the locations of complementary land uses. The peak-hour vehicle trips generated by the project were assigned to the roadway network in accordance with the trip distribution pattern, with an emphasis on freeway access and project driveway location. Figure 8 shows the trip distribution pattern and Figure 9 shows the net trip assignment of project traffic on the local transportation network.

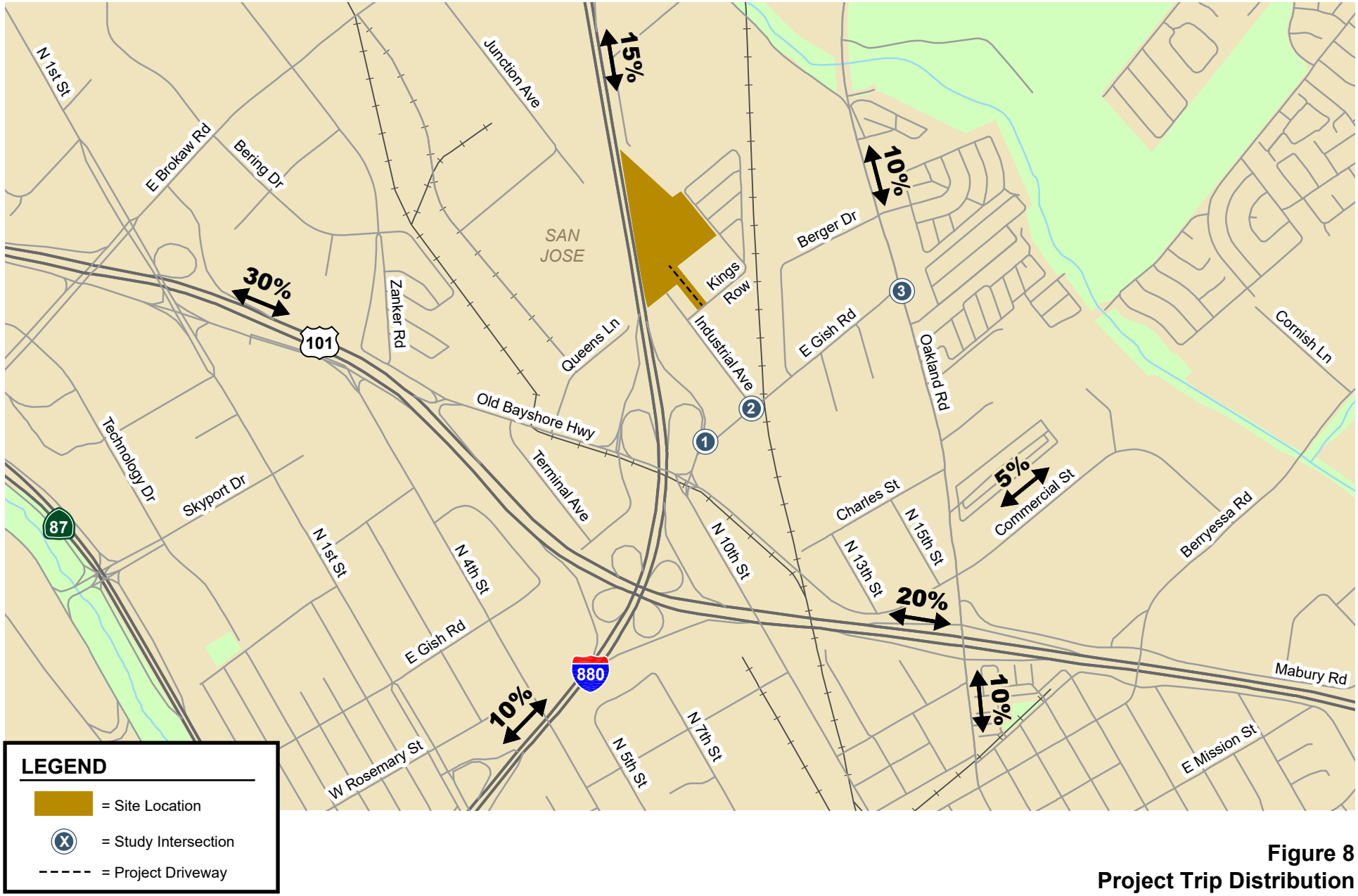
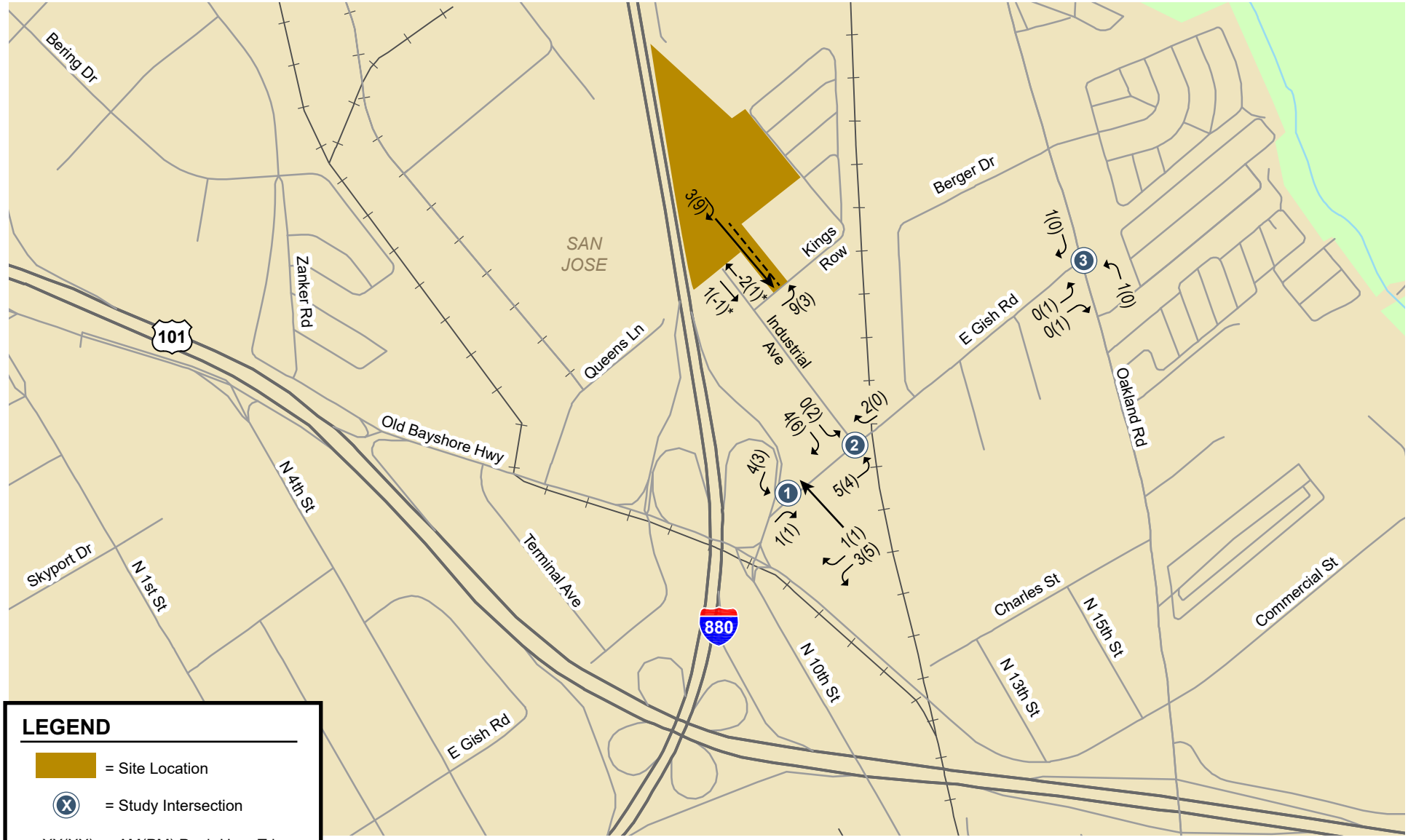


Figure 8
Project Trip Distribution



LEGEND

= Site Location

= Study Intersection

XX(XX) = AM(PM) Peak-Hour Trips

----- = Project Driveway

* Industrial Avenue driveway volumes reflect the net increase/decrease compared to existing site driveway volumes. Gross project trips at the Industrial Avenue driveway would be 16(4) inbound and 6(17) outbound.

Figure 9
Net Project Trip Assignment

NORTH
Not to Scale

Traffic Volumes Under All Scenarios

Existing Traffic Volumes

Available traffic data were obtained from the City of San Jose. New peak-hour counts were collected in December of 2018 for intersections where the available data was not available or outdated (more than two years old). The existing peak-hour intersection volumes are shown in Figure 10. Intersection turning-movement counts conducted for this analysis are presented in Appendix A.

Background Traffic Volumes

Background peak-hour traffic volumes were estimated by adding to existing traffic volumes the trips generated by nearby approved but not yet completed or occupied projects (see Figure 11). Approved project trips and approved project information was obtained from the City of San Jose (see Appendix B).

Background Plus Project Traffic Volumes

Project trips were added to background traffic volumes to obtain background plus project traffic volumes (see Figure 12).

Cumulative Traffic Volumes

Cumulative traffic volumes reflect future traffic volumes with the proposed project as well as expected traffic growth through the year 2020. Cumulative traffic volumes were estimated by adding to background plus project traffic volumes the traffic generated by potential (but not yet approved) developments. Because there are no proposed projects in the vicinity, the traffic associated with potential future developments was estimated based on a growth rate of 1.2% per year. The cumulative traffic volumes at study intersections are shown on Figure 13.

The approved trips, proposed project trips, pending project (future growth) trips, and traffic volumes for all components of traffic are tabulated in Appendix C.

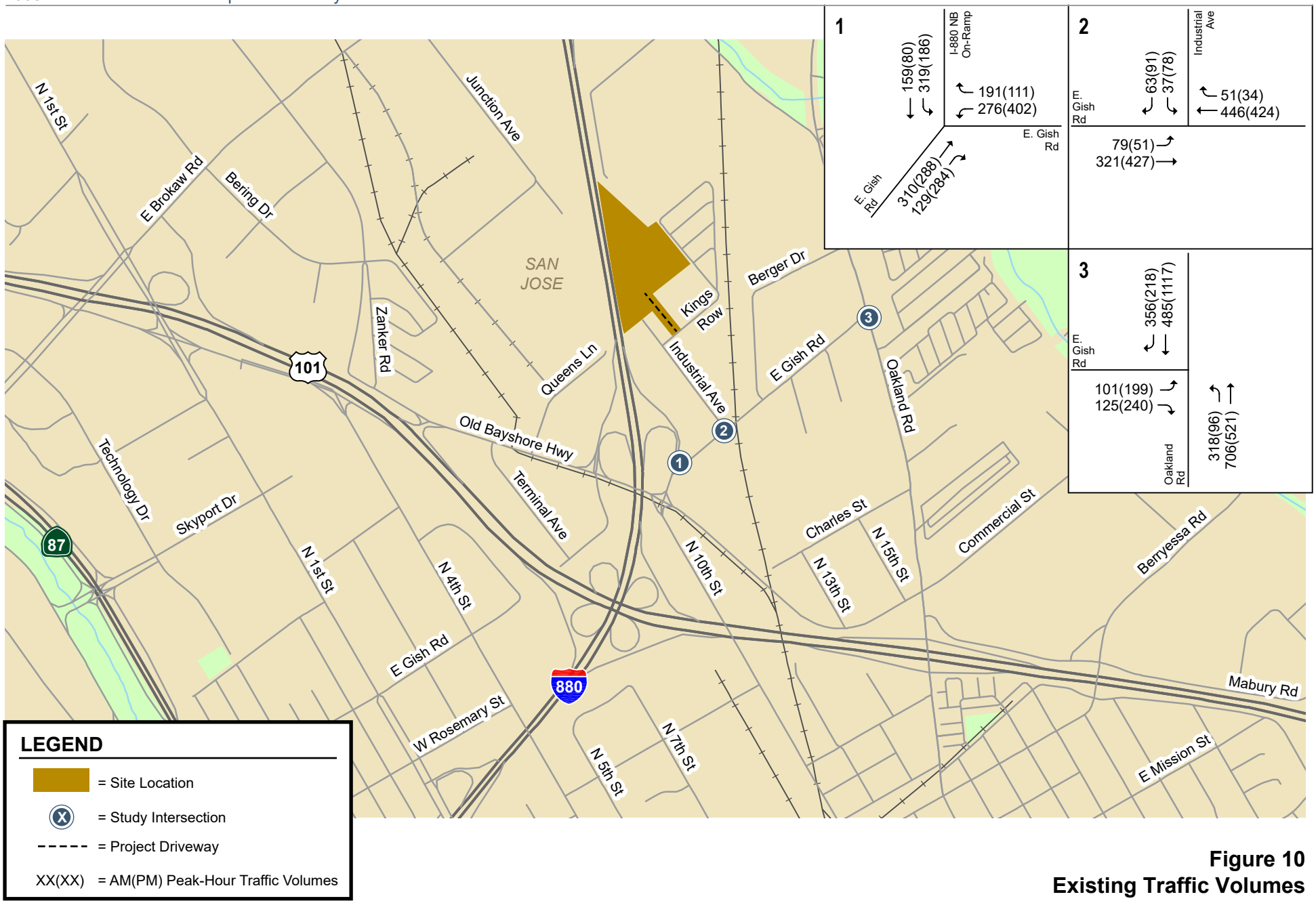


Figure 10
Existing Traffic Volumes

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Not to Scale

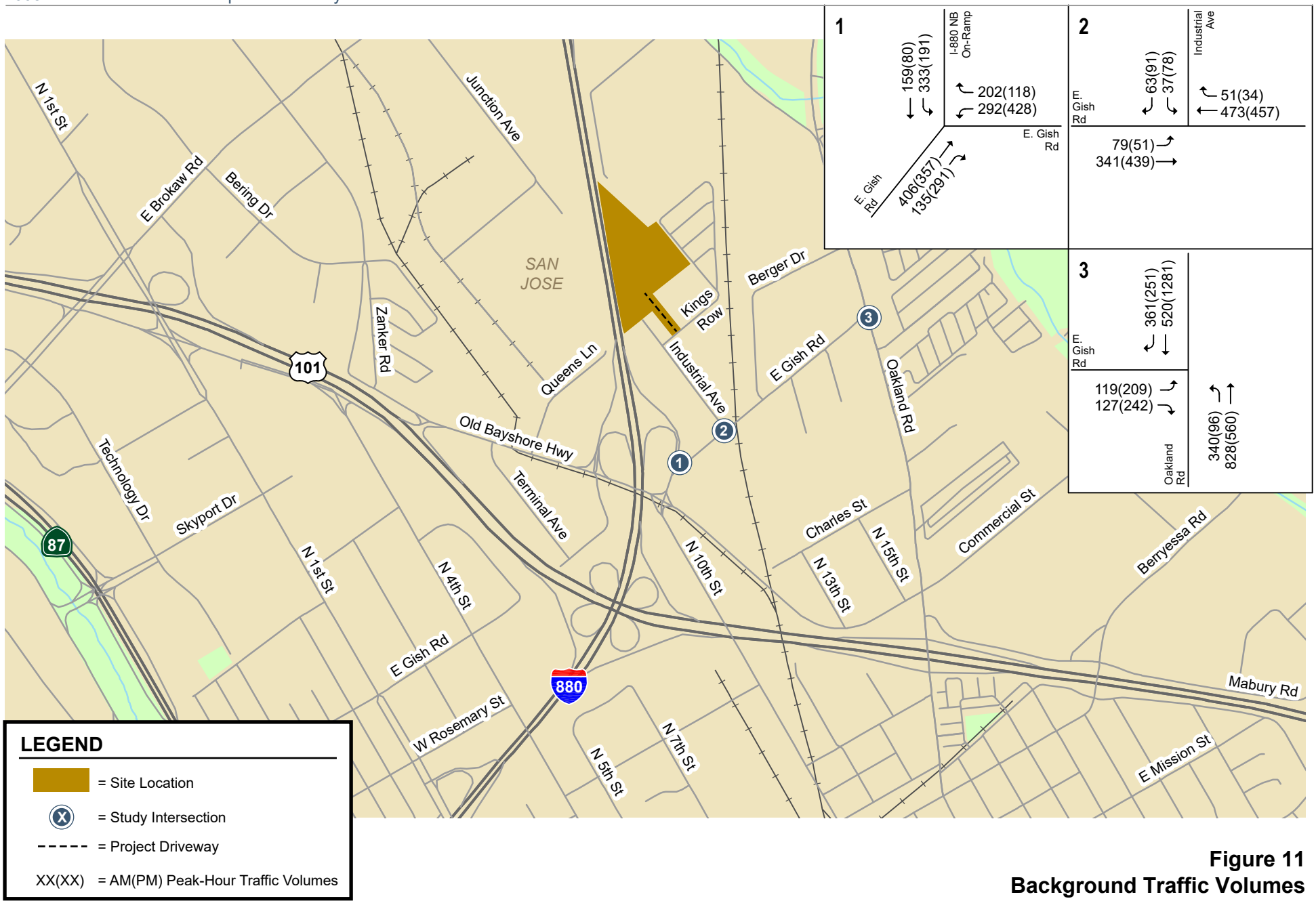

Figure 11
Background Traffic Volumes

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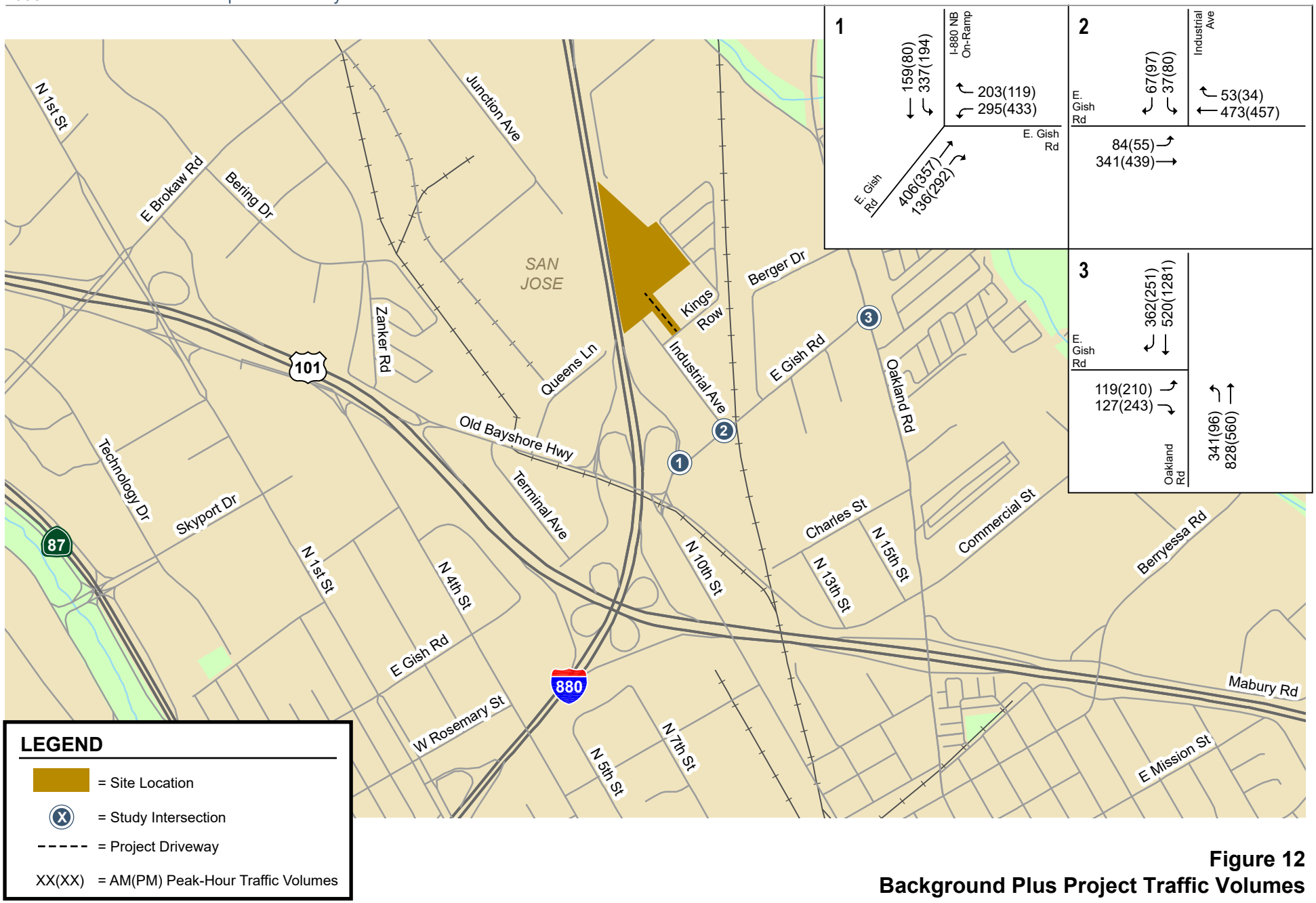

Figure 12
Background Plus Project Traffic Volumes

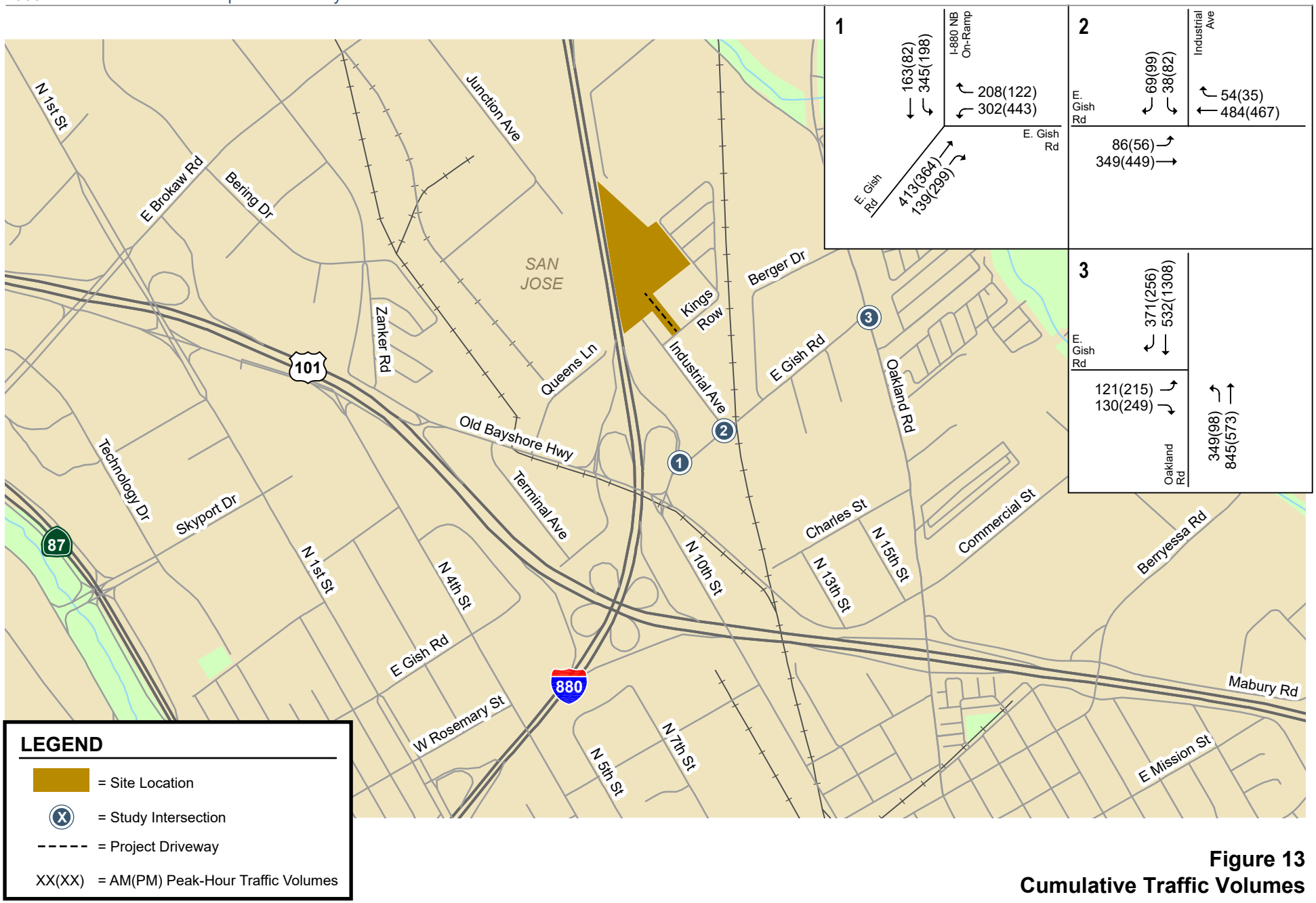

Figure 13
Cumulative Traffic Volumes

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Not to Scale

Intersection Traffic Operations

Levels of service at the signalized study intersection were evaluated against the standards of the City of San Jose. The results of the analysis show that the signalized study intersection currently operates at an acceptable level of service (LOS D or better) during the AM and PM peak hours of traffic. The addition of trips associated with approved developments included under background conditions would cause the intersection delay to decrease slightly compared to existing conditions. This occurs because the intersection delay is a weighted average of all intersection movements. When traffic is added to movements with delays lower than the average intersection delay, the average delay for the entire intersection can decrease.

The signalized study intersection would continue to operate at an acceptable level of service (LOS D or better) under all future scenarios during the AM and PM peak hours (see Table 4). Thus, the project would not have an adverse effect on traffic operations at the signalized study intersection. The intersection level of service calculation sheets are included in Appendix D.

The unsignalized study intersections are not subject to a level of service standard, and thus were evaluated only for operations.

Table 4
Intersection Level of Service Summary

			Existing		Background		Background + Project				Cumulative	
#	Intersection	Peak Hour	Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS	Incr. in Crit. Delay (sec)	Incr. in Crit. V/C	Avg. Delay (sec)	LOS
3	Gish Road and Oakland Road	AM	18.3	B	18.1	B	18.1	B	0.0	0.001	18.1	B
		PM	16.0	B	15.4	B	15.4	B	0.0	0.001	15.5	B

Notes:
Bold indicates a substandard level of service.
Bold indicates an adverse effect on intersection operations caused by the project.

US 101/Oakland/Mabury Transportation Development Policy

The City of San Jose has identified operational problems along the Oakland Road corridor at the US 101 interchange, which are due primarily to the capacity constraints of the interchange. As a result, the City has identified two key capital improvement projects: 1) modification of the US 101/Oakland Road interchange, including improvements to the Oakland Road/Commercial Street intersection, and 2) construction of a new US 101/Mabury Road interchange. To fund these interchange improvements, the City has developed the US 101/Oakland/Mabury Transportation Development Policy (TDP).

As part of the Policy, a fee to fund the planned interchange improvements has been adopted. Any project that would add traffic to the US 101/Oakland Road interchange is required to participate in the TDP program. The fee for the US 101/Oakland/Mabury TDP is based on the number of PM peak hour vehicular trips that a project would add to the US 101/Oakland Road interchange. The TDP traffic impact fee is currently $38,623 per each new PM peak hour vehicle trip that would be added to the US 101/Oakland Road interchange. The signalized intersections of Oakland Road/US 101 (South), Oakland Road/US 101 (North), and Oakland Road/Commercial Street make up the US 101/Oakland Road interchange.

Based on the net project trip assignment, it is estimated that the proposed project will add one vehicle trip to the US 101/Oakland Road interchange during the PM peak hour. Therefore, the project will be required to pay the US 101/Oakland/Mabury TDP traffic impact fee.

Site Access and On-Site Circulation

The site access and circulation evaluations for the proposed warehouse project are based on the current site plan (dated January 8, 2019) prepared by RGA, Office of Architectural Design. (see Figure 2). Site access was evaluated to determine the adequacy of the site's driveways with regard to the following: traffic volume, delays, vehicle queues, geometric design, and corner sight distance. Figure 2 also includes the surface parking lot. On-site vehicular circulation was reviewed in accordance with generally accepted traffic engineering standards and transportation planning principles.

Project Driveway Design

Vehicular access to the project site would be provided via two driveways: one on Industrial Avenue and one on Kings Row, both located near the southern edge of the project site. The driveway on Kings Row measures approximately 40 feet and will serve large vehicles, giving direct access to loading doors and container parking. The driveway on Industrial Avenue, which provides direct access to the employee and visitor parking lot, measures approximately 30 feet and will serve all other vehicles. The City requires a minimum width of 26 feet for all two-way driveways.

Nearby Driveways

The existing project driveway on Industrial Avenue is at the end of a dead-end street. Thus, vehicles entering and exiting this site driveway merely continue straight and do not interfere with turning movements at nearby driveways. The proposed new project driveway on Kings Row is located immediately adjacent to a long curb cut that extends nearly the entire frontage of the neighboring property, which is currently occupied by San Jose Diesel Electric. There are also driveways approximately 40 feet to the west and directly opposite the proposed site driveway. The existing traffic volumes on Kings Row are extremely low (less than 100 vehicles per hour in each direction), thus the proximity of the proposed project driveway to nearby driveways is not expected to negatively affect traffic operations. Therefore, the driveway locations as proposed are adequate.

Sight Distance

The project access points should be free and clear of any obstructions to provide adequate sight distance, thereby ensuring that exiting vehicles can see pedestrians on the sidewalk and other vehicles traveling on adjacent roadways. Any landscaping and signage should be located in such a way to ensure an unobstructed view for drivers exiting the site.

Adequate sight distance (sight distance triangles) should be provided at the proposed new project driveway on Kings Row in accordance with Caltrans standards. Sight distance triangles should be measured approximately 10 feet back from the traveled way. Providing the appropriate sight distance reduces the likelihood of a collision at a driveway or intersection and provides drivers with the ability to exit a driveway and locate sufficient gaps in traffic. The minimum acceptable sight distance is often considered the Caltrans stopping sight distance. Sight distance requirements vary depending on the roadway speeds. For outbound traffic onto Kings Row, which is subject to a speed limit of 25 mph, the Caltrans stopping sight distance is 150 feet (based on a design speed of 25 mph).

There are no visual obstructions on the east side of the proposed new driveway on Kings Row. To the west of the proposed new driveway there is a slatted chain-link fence that extends to within approximately six feet of the back of the sidewalk. Based on observations in the field, vehicles exiting

the project driveway on Kings Row will be able to see approaching traffic on eastbound Kings Row at least as far away as at the Industrial Ave/Kings Row intersection, which is approximately 200 feet to the west. Therefore, it can be concluded that the project driveway would meet the Caltrans minimum stopping sight distance standards.

Project Driveway Operations

Industrial Avenue is an undivided two-lane road that provides full access into the existing driveway. Cars would be able to pull straight into and out of the lot. Kings Row is also an undivided two-lane road that provides full access into and out of the lot. Inbound and outbound vehicles do not have any turn restrictions that require U-turns.

The gross project trips estimated to use the Industrial Avenue driveway are 16 inbound trips and 6 outbound trips during the AM peak hour, and 4 inbound trips and 17 outbound trips during the PM peak hour. Traffic entering and exiting the Industrial Avenue driveway would simply continue straight at the end of Industrial Avenue and thus would not result in any delays or queuing issues.

The project is estimated to generate 12 peak-hour truck trips at the proposed new site driveway on Kings Row (9 inbound and 3 outbound during the AM peak hour and 3 inbound and 9 outbound during the PM peak hour). Because the existing traffic volumes on Kings Row are extremely low, delays at this site are expected to be minimal. However, trucks attempting to turn left into the site may temporarily stop in the through lane while waiting for a gap in the opposing (westbound) traffic flow. The potential for queuing on Kings Row is presented below in the intersection queuing analysis.

On-Site Circulation

On-site vehicular circulation was reviewed in accordance with the City of San Jose Zoning Code and generally accepted traffic engineering standards. In general, the current proposed site plan would provide vehicle traffic with adequate connectivity through the parking areas. The project would provide 90-degree parking stalls throughout the surface lot. 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 current site plan, the two-way drive aisles with parking available on either side are 26 feet wide throughout the parking areas. Therefore, the current site plan adheres to the City's standards.

Parking Stall Dimensions

The City's off-street parking design standard for 90-degree uniform parking stalls is 8.5 feet wide by 17 feet long. The site plan shows that all parking stalls will be 9 feet wide by 18 feet long. In addition, all accessible stalls include access aisles of 5 feet or more for van accessibility.

Bike and Pedestrian On-Site Circulation

The project would not include any walkways between the existing sidewalks along Industrial Avenue and the new warehouse building. However, the current site plan shows a walkway would be constructed adjacent to the west side of the proposed Kings Row driveway that would connect to bike racks and the building entrance where the office would be located. In addition, a walkway is shown adjacent to the accessible parking spaces leading to two building entrances.

Bicycle parking would be located where the Kings Row driveway connects to the employee parking lot on the southside of the building, near the main entrance (see Figure 2). This would allow bicyclists to enter/leave the project site using the project driveway. Providing convenient bike parking would help create a pedestrian- and bicycle-friendly environment and encourage bicycling by employees.

Truck Access and Circulation

Number of Loading Spaces and Truck Access

According to the City of San Jose Zoning Regulations, the project as proposed is required to provide ten off-street freight loading spaces. Below are the City's requirements.

- Buildings intended for use by a manufacturing plant, storage facility, warehouse facility, goods display facility, retail store, wholesale store, market, hotel, hospital, mortuary, laundry, dry cleaning establishment, or other use or uses similarly requiring the receipt or distribution by vehicles or trucks of material or merchandise with at least a 10,000 s.f. of total GFA shall provide a minimum of one off-street loading space, plus one additional loading space every 20,000 s.f. of total GFA.

The project is proposing to provide 28 off-street loading dock spaces, located on the east side of the new warehouse building (see Figure 2). Therefore, the proposed project would conform to the City's zoning requirements. Access to the off-street loading spaces would be provided via the project driveway on Kings Row.

The current project site plan was reviewed for truck access to and from the loading docks using truck turning-movement templates for a WB-65 truck type, which represent interstate semitrailers. The current site plan shows an adequate driveway width and turning radius based on the turning templates for a WB-65 truck.

Loading Space Dimensions

Chapters 20.70.460 and 20.90.420 of the City's Zoning Regulations designates that each off-street loading space shall be no less than 10 feet wide by 30 feet long by 15 feet high, exclusive of driveways for ingress and egress and maneuvering areas. As previously mentioned, off-street loading dock spaces are shown along the eastern side of the proposed warehouse building.

The dimensions of the commercial off-street loading space measures 13 feet wide by 56 feet long, with no height restriction and therefore, the project site plan meets the City's minimum loading space dimensions. Figure 14 shows the turning paths created using vehicle turning movement templates for a typical WB-65 truck.

Garbage Collection

The current site plan shows the trash enclosure to be located near the southeast corner of the project site. Garbage trucks will be able to enter from the Kings Row driveway and can either travel around the building or make a U-turn behind the loading dock spaces to exit from the Kings Row driveway.

Emergency Vehicle Access

Emergency vehicles access (EVA) would be provided via the project driveways on Kings Row and Industrial Avenue. The City of San Jose Fire Code requires driveways to provide at least 20 feet for fire access. The project driveway would measure approximately 26 feet wide, and therefore would comply with the City's fire code.

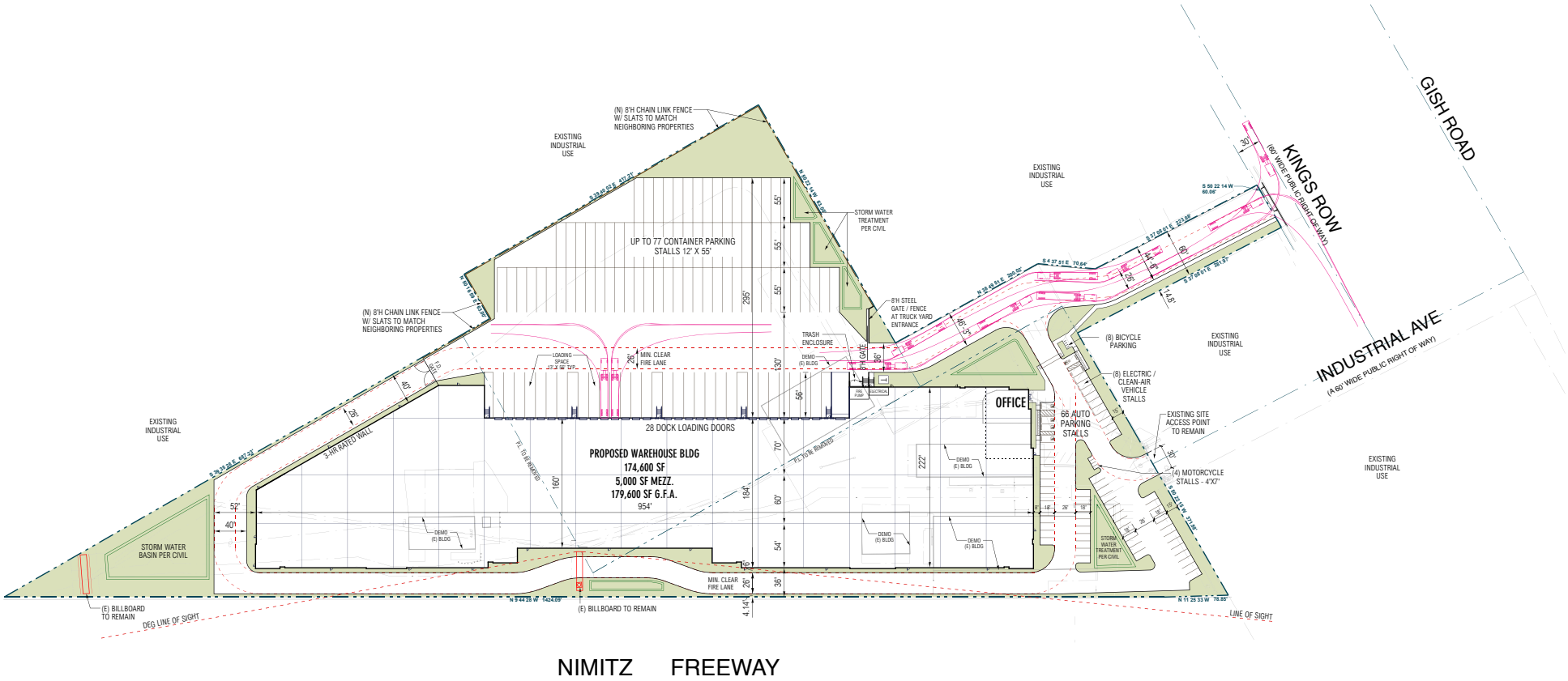

Figure 14
Turning Path for a Typical WB-65 Truck

NORTH
Not to Scale

Construction Activities

Typical activities related to the construction of any development could include lane narrowing and/or lane closures, sidewalk and pedestrian crosswalk closures, and bike lane closures. Because the proposed new warehouse building would be approximately 150 feet from the nearest public right of way, the project is not expected to require any lane closures or sidewalk closures. In the event of any type of closure, clear signage (e.g., closure and detour signs) must be provided to ensure vehicles, pedestrians and bicyclists are able to adequately reach their intended destinations safely. The project would be required to submit a construction management plan for City approval that addresses schedule, closures/detours, staging, parking, and truck routes.

Pedestrian volumes along Industrial Avenue and Kings Row are quite low. Therefore, any necessary sidewalk closures/pedestrian detours would have very little effect on the overall pedestrian circulation in the area. Similarly, bicycle volumes along Industrial Avenue and Kings Row are quite low, therefore effects on bicycle facilities during construction are expected to minimal.

Parking Supply

The City of San Jose Zoning Code (Section 20.90.060) states that warehouse uses are required to provide 1.0 parking space per 5,000 square feet of gross floor area or a fraction thereof. As currently proposed, the project would construct 180,150 gross square feet of warehouse space. Based on the City's parking requirements and the current project description, the project would be required to provide 37 parking spaces for the warehouse. The proposed parking supply of 74 spaces meets the City of San Jose's parking requirement.

Per the 2016 California Building Code (CBC) Table 11B-208.2, 4 ADA accessible spaces are required for projects with 51 to 75 parking spaces. Of the required accessible parking spaces, one van accessible space is required (Section 11B-208.2.4). The plans show a total of five accessible spaces, all located in the surface parking lot, adjacent to the southern building entrance. Of the provided ADA accessible spaces, two spaces qualify as van accessible.

Electric Vehicle Charging Stations

According to the 2016 California Building Code (CBC) Table 11B-228.3.2.1, facilities with one to four electric vehicle charging stations (EVCS) are required to provide at least one van accessible EVCS. The project meets the accessible EVCS requirement as it would provide two EVCS including one van accessible EVCS.

Clean Air Vehicles

According to the City's Clean Air Vehicle Standards (Chapter 20.90, Table 20-215), non-residential uses with 51 to 75 parking spaces must provide 6 clean air vehicle parking spaces. The project would provide six clean air vehicle spaces meeting the City's requirement.

Bicycle Parking

According to the City's Bicycle Parking Standards (Chapter 20.90, Table 20-210), the project is required to provide bicycle parking for the new building at a rate of 1 bicycle parking space per 10 full-time employees. The proposed project would provide five bike racks, which would accommodate 10 bicycles. While the number of full-time employees is unknown, it is anticipated that the site would have fewer than 100 full-time employees. Thus, the number of bike parking spaces would meet the City's requirement. However, the City's Zoning Code requires that when bike parking is calculated per employee, all bike parking spaces must be provided in long-term bicycle spaces.

City of San Jose Long-Term and Short-Term Bicycle Parking

Long-term bicycle parking facilities are secure bicycle storage facilities for tenants of a building that fully enclose and protect bicycles and may include:

- A covered, access-controlled enclosure such as a fenced and gated area with short-term bicycle parking facilities,
- An access-controlled room with short-term bicycle parking facilities, and
- Individual bicycle lockers that securely enclose one bicycle per locker.

Short-term bicycle parking facilities are accessible and usable by visitors, guests, or business patrons and may include:

- Permanently anchored bicycle racks,
- Covered, lockable enclosures with permanently anchored racks for bicycles,
- Lockable bicycle rooms with permanently anchored racks, and
- Lockable, permanently anchored bicycle lockers.

The proposed bicycle racks are considered short-term bicycle parking spaces. The requirement for long-term bicycle parking spaces would not be met. Thus, the project site plan should be revised to ensure the project plans comply with the City's Bicycle Parking Standards.

Motorcycle Parking

According to the City's Motorcycle Parking Standards (Chapter 20.90, Table 20-250), the project is required to provide 1 motorcycle parking space per 10 code-required vehicle spaces. Based the current project description for the warehouse, the project is required to provide four motorcycle parking spaces.

No motorcycle parking is shown on the current site plan dated January 8, 2019. Therefore, the site plan should be revised to meet the City's Motorcycle Parking Standards.

Intersection Queuing Analysis

The operations analysis is based on vehicle queuing for high-demand movements at intersections (see Table 5). The following left-turn movements and shared-lane approaches were examined as part of the queuing analysis for this project:

- Eastbound approach at Kings Row and the proposed project driveway
- Northbound left turn on Oakland Road and Gish Road
- Eastbound approach at Gish Road and Industrial Avenue
- Eastbound left turn at Gish Road/10th Street and Old Bayshore Highway
- Southbound left turn at I-880 NB on/off ramp and Gish Road

The estimated queue lengths based on the Poisson numerical calculations show queuing deficiencies for three of the five studied turning movements. The analysis results are discussed below.

Gish Road/10th Street and Old Bayshore Highway

At the intersection of 10th Street and Old Bayshore Highway, the eastbound left-turn movement has one left-turn lane with approximately 115 feet of queue storage, which can accommodate about 4 vehicles seeking to turn left from Old Bayshore Highway onto northbound Gish Road. Under existing conditions, there is insufficient storage in the left-turn pocket during the PM peak hour. The 95th percentile queue

length exceeds the storage length by 110 feet, or approximately 5 vehicles. The project is expected to add only one additional trip to the eastbound left-turn movement during the PM peak hour, which would not affect the projected queue length. The width of Old Bayshore Highway under I-880 overcrossing is insufficient to allow for the extension of the eastbound left-turn pocket at Gish Road.

Table 5
Queuing Analysis Summary

	Gish Rd/10th St & Old Bayshore Hwy		Project Dwy & Kings Row		I-880 NB Ramps & Gish Rd		Industrial Avenue and Gish Road		Gish Road and Oakland Road	
	EBL		EBLT/TH		SBL		EBLT/TH		NBL	
Measurement	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**
Existing										
Cycle/Delay [1] (sec)	130	100	0	0	8	7	9	6	100	90
Volume (vphpl)	41	171	90	102	319	186	400	478	318	96
Total 95th %. Queue (veh.)	4	9	0	0	2	2	3	2	14	5
Total 95th %. Queue (ft.) [2]	100	225	0	0	50	50	75	50	350	125
Total Storage	115	115	150	150	160	160	550	550	200	200
Adequate (Y/N)	Y	**N**	Y	Y	Y	Y	Y	Y	**N**	Y
Background										
Cycle/Delay [1] (sec)	130	100	0	0	8	7	9	7	100	90
Volume (vphpl)	41	171	90	102	333	191	420	490	340	96
Total 95th %. Queue (veh.)	4	9	0	0	2	2	3	3	15	5
Total 95th %. Queue (ft.) [2]	100	225	0	0	50	50	75	75	375	125
Total Storage	115	115	150	150	160	160	550	550	200	200
Adequate (Y/N)	Y	**N**	Y	Y	Y	Y	Y	Y	**N**	Y
Background Plus Project										
Cycle/Delay [1] (sec)	130	100	7	7	8	7	9	7	100	90
Volume (vphpl)	42	172	99	105	337	194	425	494	341	96
Total 95th %. Queue (veh.)	4	9	1	1	2	2	3	3	15	5
Total 95th %. Queue (ft.) [2]	100	225	25	25	50	50	75	75	375	125
Total Storage	115	115	150	150	160	160	550	550	200	200
Adequate (Y/N)	Y	**N**	Y	Y	Y	Y	Y	Y	**N**	Y
Cumulative										
Cycle/Delay [1] (sec)	130	100	7	7	8	7	9	7	100	90
Volume (vphpl)	43	176	101	107	345	198	435	505	349	98
95th %. Queue (veh/ln.)	4	9	1	1	2	2	3	3	15	5
95th %. Queue (ft./ln)	100	225	25	25	50	50	75	75	375	125
Storage (ft./ ln.)	115	115	150	150	160	160	550	550	200	200
Adequate (Y/N)	Y	**N**	Y	Y	Y	Y	Y	Y	**N**	Y

Notes:
WBL = westbound left movement; NBL = northbound left movement; SBL = southbound left movement; EBL = eastbound left movement; EBLT/TH = eastbound shared left-turn and through movement
[1] Vehicle queue calculations based on cycle length for signalized intersections and delay for unsignalized intersections.
[2] Assumes 25 Feet Per Vehicle Queued.

Project Driveway and Kings Row

At the intersection of the proposed new project driveway and Kings Row, the eastbound approach has one shared left-turn/through lane. The distance between the project driveway on Kings Row and Industrial Road is approximately 150 feet, which can accommodate a queue of about 6 vehicles on Kings Row without affecting the upstream intersection at Industrial Avenue and Kings Row. The project would add 9 trips during the AM peak hour and 3 trips during the PM peak hour to the eastbound left-

turn movement. The queuing analysis shows that the addition of left turns into the project driveway on Kings Row would result in a queue of no more than one vehicle. Therefore, the project is expected to have a minimal effect on traffic operations on King Row.

I-880 Northbound On/Off Ramps and Gish Road

At the intersection of the I-880 northbound on/off ramps and Gish Road, the southbound left-turn movement has a one lane with approximately 160 feet of queue storage, which can accommodate about 6 vehicles seeking to turn left from the I-880 off ramp onto eastbound Gish Road. This left-turn movement is uncontrolled while traffic on the south and east approaches is under stop control. Thus, the delay for traffic turning left from the freeway off-ramp onto Gish Road is quite low. As a result, the 95th percentile queue length is estimated to be only two vehicles during the AM and PM peak hours under both existing and background conditions. The project would add four trips during the AM peak hour and three trips during the PM peak hour to the southbound left-turn movement, which would have a negligible effect on delay and queue length on the freeway off ramp.

As discussed in Chapter 2, the westbound and northbound Gish Road approaches to the intersection of the I-880 freeway ramp experience long vehicle queues in both the AM and PM peak hours. The queue lengths cannot be analyzed using the Poisson methodology because the traffic volumes exceed the movement capacity. The project is expected to add only one vehicle trip to the northbound Gish Road approach during both the AM and PM peak hours. Thus, the project would have a negligible effect on the queue length on this approach. On the westbound Gish Road approach, the project is expected to add four vehicles during the AM peak hour and six vehicles during the PM peak hour. This would exacerbate the westbound queue length, which often extends past the Industrial Avenue/Gish Road intersection. A signal warrant analysis is presented below to determine if the peak-hour traffic volumes warrant signalization, which may alleviate the queuing issues at this intersection.

Gish Road and Industrial Road

At the intersection of Gish Road and Industrial Road, the eastbound Gish Road approach has one lane which is shared by left-turn and through traffic. The approach storage length of 550 feet is the distance to the upstream intersection at the I-880 Northbound On/Off Ramps and Gish Road. The queuing analysis shows that even with the additional left-turn movements added by the project, queues on eastbound Gish Road are expected to be no longer than three vehicles (about 75 feet). However, it should be noted that during the AM peak hour, the Gish/Industrial intersection is affected by queues that spillback from the adjacent intersections at the I-880 Ramps and at Berger Drive.

Gish Road and Oakland Road

At the intersection of Gish Road and Oakland Road, the northbound left-turn movement has a one lane of approximately 200 feet of queue storage, which can accommodate about eight vehicles seeking to turn left from Oakland Road onto westbound Gish Road. During the AM peak hour, the 95th percentile queue extends beyond the available storage by about six vehicles (150 feet) under existing conditions. The additional trips generated by approved developments in the area would increase the vehicle queue from 350 feet to 375 feet, which reflects an increase of one queued vehicle. The available left-turn storage could be increased by restriping a portion of the two-way left-turn lane as a dedicated northbound left-turn pocket. The project is expected to add one trip during the AM peak hour, which would not affect the 95th percentile queue length. During the PM peak hour, the existing left-turn storage is expected to be adequate under all scenarios.

Peak-Hour Signal Warrant

Unsignalized intersections are typically evaluated on the basis of the Peak-Hour Volume Signal Warrant, (Warrant #3 – Part B) described in the California *Manual on Uniform Traffic Control Devices* (MUTCD), 2014 Edition. This method makes no evaluation of intersection level of service, but simply provides an indication whether peak-hour traffic volumes are, or would be, sufficient to justify installation of a traffic signal. Intersections that meet the peak-hour warrant are subject to further analysis before determining that a traffic signal is necessary. Additional analysis may include unsignalized intersection level of service analysis and/or operational analysis such as evaluating vehicle queuing and delay. Other options such as traffic control devices, signage, or geometric changes may be preferable at unsignalized intersections based on existing field conditions.

The study evaluated the two unsignalized study intersections. The results of the signal warrant check indicate that the AM and PM peak-hour volumes at the I-880 Northbound Ramps/Gish Road intersection currently meet the signal warrant and would continue to do so under background and background plus project conditions. The project applicant should coordinate with City of San Jose staff to determine if there are any plans to signalize this intersection or install a roundabout. If so, it would be appropriate for the project to make a fair share monetary contribution toward the planned intersection improvements.

The intersection of Industrial Road and Gish Road is not expected to meet the peak-hour volume signal warrant under any study scenario. The signal warrant sheets are contained in Appendix E.

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.

The City's General Plan identifies both walk and bicycle commute mode split targets as 15 percent or more for the year 2040. This level of pedestrian and bicycle mode share may not be achievable by this project given the industrial nature of the project, the limited pedestrian, bicycle, and transit facilities in the project vicinity, and the lack of complementary land uses within a reasonable walking or biking distance. Nevertheless, the project should seek to encourage employees to use active modes of transportation to the extent possible.

Pedestrian Facilities

The overall network of sidewalks and crosswalks in the study area provides limited connectivity. There are gaps in the pedestrian routes between the project site and the nearest bus route on Oakland Road. The project applicant should provide a fair share monetary contribution toward the future improvements to pursue the construction of concrete trackways and sidewalks on the north and south sides of Gish Road from Industrial Avenue across the tracks. The future improvements would be coordinated between the City and Union Pacific Railroad. These improvements would facilitate pedestrian travel between the project site and the nearest bus route on Oakland Road.

Bicycle Facilities

There are several bike facilities in the immediate vicinity of the project site (see Chapter 2 for details). The City of San Jose 2020 Bike Plan has identified objectives for the expansion of bicycle facilities in the vicinity of the project site including the planned addition of Class II bike lanes along Gish Road between Old Bayshore Highway and Oakland Road. The planned bike lanes on Gish Road would connect to existing bikeways on Oakland Road, Old Bayshore Highway, and 10th Street enhancing the bicycle network and encouraging employees of the proposed project to bike to and from work.

Transit Services

The project site is not accessible by transit since there are no transit routes within normal walking distance (one-quarter mile). The study area has one local VTA bus route, Route 66, which runs from South San Jose to Milpitas. The nearest bus stop is located approximately 0.6 mile from the project site at the intersection of Gish Road and Oakland Road. Phase I of VTA's BART Silicon Valley Extension is expected to begin passenger service in 2019. In order to connect with BART at the new Milpitas and Berryessa Stations, VTA is completely redesigning it transit network to increase overall ridership and improve cost-effectiveness as specified in VTA's FY 18-19 Transit Service Plan (Next Network). Route 66 will be rerouted to serve the Milpitas BART Station instead of the Great Mall Transit Center. In addition, the service frequency would be upgraded to 15-minutes during both commute periods and the midday hours. Thus, the planned transit service will provide improved transit options for employees at the project site including a new connection to BART. The new transit trips generated by the project are not expected to create demand in excess of the transit service that is currently planned.

An evaluation of the effects of project traffic on transit vehicle delay for Route 66, which is the only route that travels through the study intersections, also was completed. The analysis utilizes information produced by the intersection level of service analysis. The analysis shows that the project would cause a negligible increase in delay (less than one second) to busses on Route 66. (see Table 6). The VTA has not established policies or significance criteria related to transit vehicle delay. Thus, this data is presented for informational purposes only.

Table 6
Transit Delay Analysis

Bus Route	Approx. Travel Time[1] min	Approx. Travel Time[1] sec	Background Delay at Study Intersection[2] (sec)	Background Plus Project Delay at Study Intersection[2] (sec)	Background Plus Project Change in Delay (sec)	Background Plus Project % Change
Route 66						
Northbound AM	16	960	4.1	4.2	0.1	0.0%
Northbound PM	16	960	7.9	8.0	0.1	0.0%
Southbound AM	15	900	27.9	28.0	0.1	0.0%
Southbound PM	14	840	15.6	15.6	0.0	0.0%

Notes:
1. Travel time between the Civic Center Light Rail Station and the Oakland/Brokaw intersection is based on VTA's bus schedule.
2. Represents the delay for northbound and southbound through traffic at the Oakland/Gish intersection.

5. Conclusions

The purpose of the traffic study was to evaluate the potential impacts of the project in accordance with the standards set forth by the City of San Jose. Based on the City of San Jose's Transportation Analysis Policy and *Transportation Analysis Handbook 2018*, the Transportation Analysis (TA) report for the project includes a CEQA transportation analysis (TA) and a local transportation analysis (LTA). The CEQA transportation analysis comprises an evaluation of Vehicle Miles Traveled (VMT). 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 one signalized intersection in the vicinity of the project site. The LTA also includes an analysis of site access, on-site circulation, parking, vehicle queuing, signal warrants at unsignalized study intersections, and effects to transit, bicycle, and pedestrian access.

CEQA Transportation Analysis

Project Vehicle Miles Traveled (VMT) Analysis

Based on the City of San Jose's VMT Evaluation Tool, the project as currently proposed is estimated to generate a total of 14.92 VMT per employee, which exceeds City's threshold of 14.37 VMT per employee for industrial uses. Therefore, the project would result in a significant transportation impact on VMT. The following mitigation measures are recommended to reduce the significant VMT impact:

- **Transportation Demand Management (TDM) Programs** – The project shall implement bike parking, a shower and changing room, commute trip reduction marketing and education programs, and ridesharing programs. These TDM measures are described in more detail below.
- **Bike Parking.** The project shall implement Long-term bike parking (1 space per 10 full-time employees per San Jose's Zoning Code Section 20.90.060B).
- **Showers and Changing Room**. The project shall implement one shower and changing room per San Jose Zoning Code Section 20.90.066A
- **Commute Trip Reduction Marketing and Education Programs**. The project shall implement marketing/educational campaigns that promote the use of transit, shared rides, and travel through active modes. An on-site TDM coordinator shall distribute information about alternative commute options through new employee orientations, special promotional events, and publications.
- **Ride-Sharing Programs**. An on-site TDM coordinator shall organize a program to match individuals interested in carpooling who have similar commutes. This measure, which shall

apply to 100 percent of all employees, promotes the use of carpooling and reduces the number of drive-alone trips.

The above-list TDM measures would reduce the project VMT to 13.25 per employee, which would cause the project VMT to fall below the City's threshold and reduce the project impact to a less than significant level.

CEQA Cumulative Analysis

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

- The project site is near bicycle lanes on Oakland Road.
- The project would provide bicycle parking on the ground level near the project entrance and a shower to encourage employee use of alternative transportation modes.
- The project would implement a TDM plan that includes ride-sharing programs aimed at reducing VMT.
- The project promotes economic development and completion of the General Plan transportation network through the US-101/Mabury Transportation Development Policy (TDP)
- The project maintains, enhances, and develops the employment lands within an identified key employment area (the East Gish and Mabury industrial area) (FS-4.2)

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

Local Transportation Analysis

Project Trip Generation

Based on trip generation rates recommended by the Institute of Transportation Engineers, and after subtracting trips generated by the existing use on site, the proposed warehouse project is estimated to generate 123 net new daily vehicle trips, with 11 new trips occurring during the AM peak hour and 12 new trips occurring during the PM peak hour.

Intersection Traffic Operations

Based on the City of San Jose intersection operations analysis criteria, the project would not have an adverse effect on the signalized study intersection at Oakland Road and E. Gish Road.

Other Transportation Issues

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

Recommendations

- The proposed project is estimated to add one vehicle trip to the US 101/Oakland Road interchange during the PM peak hour. Therefore, the project will be required to pay the US 101/Oakland/Mabury Transportation Development Policy traffic impact fee.

- While the project would meet the City's requirements for the number of bicycle parking spaces, the site plan should be revised to provide secure long-term bicycle parking per the City's Bicycle Parking Standards

- The site plan should be revised to add motorcycle parking per the City's Motorcycle Parking Standards.

- The results of the signal warrant check indicate that the AM and PM peak-hour volumes at the I-880 Northbound Ramps/Gish Road intersection currently meet the signal warrant and would continue to do so with the project. The project applicant should coordinate with City of San Jose staff to determine if there are any plans to signalize this intersection or install a roundabout. If so, it would be appropriate for the project to make a fair share monetary contribution toward the planned intersection improvements.

- The project applicant should provide a fair share monetary contribution toward the future improvements to pursue the construction of concrete trackways and sidewalks on the north and south sides of Gish Road across the tracks. The future improvements would be coordinated between the City and Union Pacific Railroad.

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1605 Industrial Avenue
Warehouse Project Transportation Analysis
Technical Appendices

January 15, 2019

Appendix A
New Traffic Counts

Appendix B
Lists of Approved Projects

Appendix C
Volume Summary

Appendix D
Intersection Level of Service Calculations

Appendix E
Signal Warrant Sheets

1605 Industrial Avenue
Warehouse Project Transportation Analysis
Technical Appendices

January 15, 2019

Appendix A
New Traffic Counts

AM Peak-Hour Volume Count Worksheet

AUTO-CENSUS
Traffic Monitoring and Analysis
870 Castlewood Dr. #1
Los Gatos, CA 95032
Phone 408-826-9673 Fax 408-877-1625

Date: 9/25/2018
Counter: Kilbee
Intersection Name: 1605 Inudstrial
Weather: Clear, San Jose

	1605 Industrial								
Start Time	IN	OUT	IN	OUT	IN	OUT	IN	OUT	
4:00	0	0	0	0	0	0	0	0	
4:15	3	4	0	0	0	0	0	0	
4:30	3	5	0	0	0	0	0	0	
4:45	3	6	0	0	0	0	0	0	
5:00	5	18	0	0	0	0	0	0	
5:15	5	25	0	0	0	0	0	0	
5:30	5	26	0	0	0	0	0	0	
5:45	5	27	0	0	0	0	0	0	
6:00	5	27	0	0	0	0	0	0	
Peak Hour									Hourly Totals
4:00 - 5:00	5	18	0	0	0	0	0	0	23
4:15 - 5:15	2	21	0	0	0	0	0	0	23
4:30 - 5:30	2	21	0	0	0	0	0	0	23
4:45 - 5:45	2	21	0	0	0	0	0	0	23
5:00 - 6:00	0	9	0	0	0	0	0	0	9
Peak Volumes:	**5**	**18**	**0**	**0**	**0**	**0**	**0**	**0**	**23**

AM Peak-Hour Volume Count Worksheet

AUTO-CENSUS
Traffic Monitoring and Analysis
870 Castlewood Dr. #1
Los Gatos, CA 95032
Phone 408-826-9673 Fax 408-877-1625

Date: 9/25/2018
Counter: Patti
Intersection Name: 1605 Inudstrial
Weather: Clear, San Jose

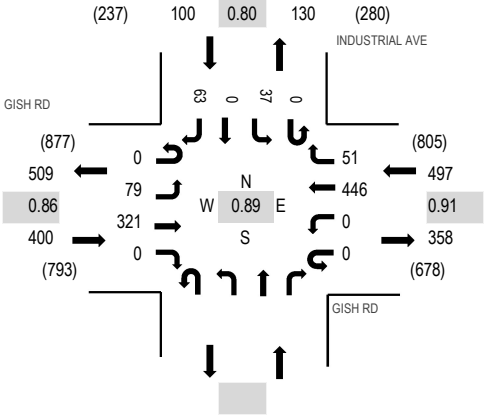
	1605 Industrial								
Start Time	IN	OUT	IN	OUT	IN	OUT	IN	OUT	
7:00	0	0	0	0	0	0	0	0	
7:15	2	0	0	0	0	0	0	0	
7:30	3	0	0	0	0	0	0	0	
7:45	6	0	0	0	0	0	0	0	
8:00	10	0	0	0	0	0	0	0	
8:15	18	1	0	0	0	0	0	0	
8:30	21	3	0	0	0	0	0	0	
8:45	21	3	0	0	0	0	0	0	
9:00	21	3	0	0	0	0	0	0	
Peak Hour									Hourly Totals
7:00 - 8:00	10	0	0	0	0	0	0	0	10
7:15 - 8:15	16	1	0	0	0	0	0	0	17
7:30 - 8:30	18	3	0	0	0	0	0	0	21
7:45 - 8:45	15	3	0	0	0	0	0	0	18
8:00 - 9:00	11	3	0	0	0	0	0	0	14
Peak Volumes:	**18**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**21**

All Traffic Data Services Inc.

(303) 216-2439
www.alltrafficdata.net

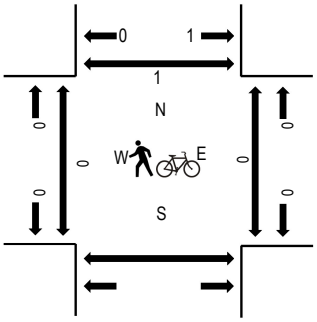
Location: 1 INDUSTRIAL AVE & GISH RD AM
Date: Wednesday, December 5, 2018
Peak Hour: 07:45 AM - 08:45 AM
Peak 15-Minutes: 08:00 AM - 08:15 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	GISH RD Eastbound				GISH RD Westbound				Northbound				INDUSTRIAL AVE Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	31	89	0	0	0	56	16					0	7	0	28	227	912	5	4		0
7:15 AM	2	25	71	0	0	0	46	10					0	9	0	33	196	964	7	0		0
7:30 AM	0	14	81	0	0	0	61	12					0	6	0	41	215	994	3	0		0
7:45 AM	0	18	110	0	0	0	105	14					0	10	0	17	274	997	0	0		0
8:00 AM	0	23	93	0	0	0	125	12					0	13	0	13	279	923	0	0		0
8:15 AM	0	15	60	0	0	0	110	16					0	6	0	19	226		0	0		0
8:30 AM	0	23	58	0	0	0	106	9					0	8	0	14	218		0	0		1
8:45 AM	1	25	54	0	0	0	90	17					0	3	0	10	200		0	0		1

Peak Rolling Hour Flow Rates

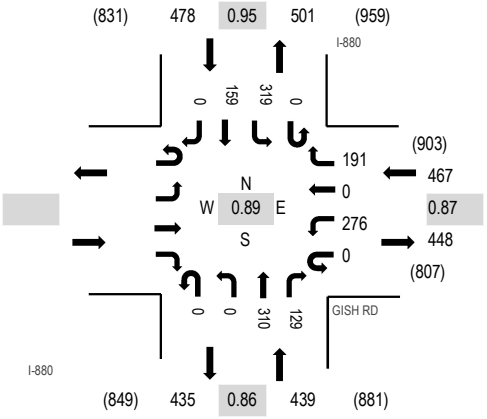
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	1	0	0	0	3	1					0	1	0	0	6
Lights	0	70	310	0	0	0	428	49					0	32	0	54	943
Mediums	0	9	10	0	0	0	15	1					0	4	0	9	48
Total	0	79	321	0	0	0	446	51					0	37	0	63	997

All Traffic Data Services Inc.

(303) 216-2439
www.alltrafficdata.net

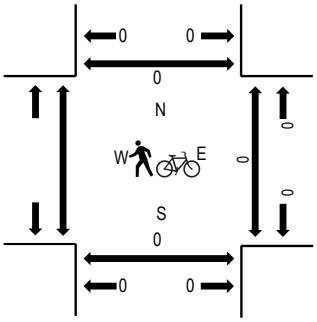
Location: 3 I-880 & GISH RD AM
Date: Wednesday, December 5, 2018
Peak Hour: 07:15 AM - 08:15 AM
Peak 15-Minutes: 08:00 AM - 08:15 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	Eastbound U-Turn	Eastbound Left	Eastbound Thru	Eastbound Right	GISH RD Westbound U-Turn	GISH RD Westbound Left	GISH RD Westbound Thru	GISH RD Westbound Right	I-880 Northbound U-Turn	I-880 Northbound Left	I-880 Northbound Thru	I-880 Northbound Right	I-880 Southbound U-Turn	I-880 Southbound Left	I-880 Southbound Thru	I-880 Southbound Right	Total	Rolling Hour	Pedestrian Crossings West	Pedestrian Crossings East	Pedestrian Crossings South	Pedestrian Crossings North
7:00 AM					0	63	0	22	0	0	70	38	0	79	52	0	324	1,318		0	0	0
7:15 AM					0	62	0	26	0	0	71	33	0	66	61	0	319	1,384		0	0	0
7:30 AM					0	73	0	31	0	0	77	25	0	72	37	0	315	1,377		0	0	0
7:45 AM					0	66	0	59	0	0	78	27	0	103	27	0	360	1,354		0	0	0
8:00 AM					0	75	0	75	0	0	84	44	0	78	34	0	390	1,297		0	0	0
8:15 AM					0	64	0	56	0	0	77	30	0	51	34	0	312			0	0	0
8:30 AM					0	82	0	42	0	0	64	28	0	51	25	0	292			0	0	0
8:45 AM					0	73	0	34	0	0	93	42	0	40	21	0	303			0	0	0

Peak Rolling Hour Flow Rates

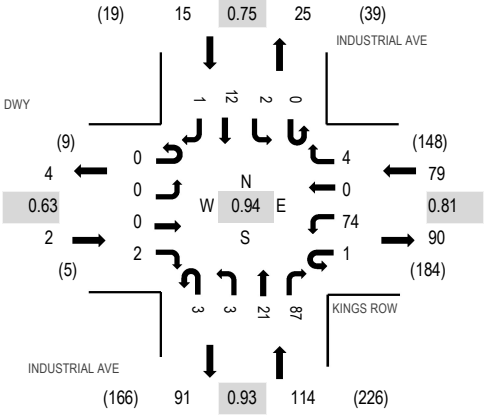
Vehicle Type	Eastbound U-Turn	Eastbound Left	Eastbound Thru	Eastbound Right	Westbound U-Turn	Westbound Left	Westbound Thru	Westbound Right	Northbound U-Turn	Northbound Left	Northbound Thru	Northbound Right	Southbound U-Turn	Southbound Left	Southbound Thru	Southbound Right	Total
Articulated Trucks					0	15	0	1	0	0	5	2	0	0	10	0	33
Lights					0	230	0	171	0	0	262	117	0	314	129	0	1,223
Mediums					0	31	0	19	0	0	43	10	0	5	20	0	128
Total					0	276	0	191	0	0	310	129	0	319	159	0	1,384

All Traffic Data Services Inc.

(303) 216-2439
www.alltrafficdata.net

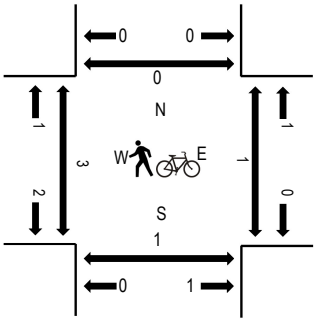
Location: 1 INDUSTRIAL AVE & KINGS ROW AM
Date: Thursday, December 13, 2018
Peak Hour: 07:15 AM - 08:15 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	DWY Eastbound				KINGS ROW Westbound				INDUSTRIAL AVE Northbound				INDUSTRIAL AVE Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	0	0	0	0	10	0	0	2	1	5	24	0	0	0	0	42	204	2	0	0	0
7:15 AM	0	0	0	0	1	23	0	2	1	2	6	17	0	1	2	0	55	210	0	1	0	0
7:30 AM	0	0	0	0	0	14	0	1	1	0	4	27	0	0	4	0	51	210	1	0	1	0
7:45 AM	0	0	0	0	0	23	0	1	0	1	3	25	0	0	2	1	56	210	2	0	0	0
8:00 AM	0	0	0	2	0	14	0	0	1	0	8	18	0	1	4	0	48	194	0	0	0	0
8:15 AM	0	0	0	0	0	24	0	1	0	0	5	23	0	0	2	0	55		0	0	1	0
8:30 AM	0	0	0	1	1	17	0	0	0	1	3	26	0	0	2	0	51		1	0	0	0
8:45 AM	1	0	0	1	0	16	0	0	0	2	0	20	0	0	0	0	40		0	0	0	0

Peak Rolling Hour Flow Rates

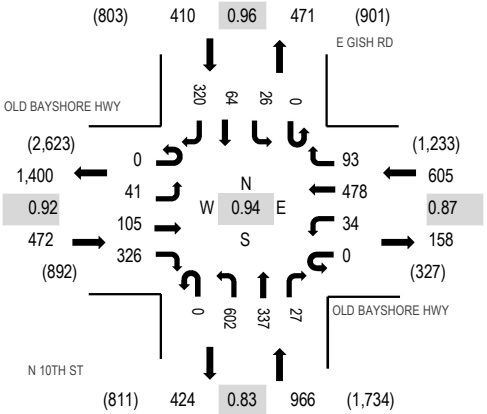
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	4	0	0	0	0	2	2	0	0	0	0	8
Lights	0	0	0	1	0	62	0	3	2	3	17	76	0	2	5	1	172
Mediums	0	0	0	1	1	8	0	1	1	0	2	9	0	0	7	0	30
Total	0	0	0	2	1	74	0	4	3	3	21	87	0	2	12	1	210

All Traffic Data Services Inc.

(303) 216-2439
www.alltrafficdata.net

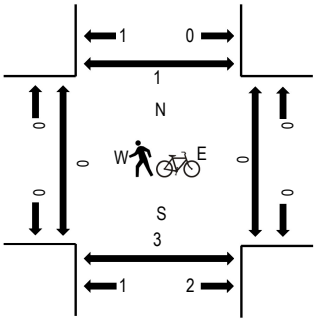
Location: 2 N 10TH ST & OLD BAYSHORE HWY AM
Date: Thursday, December 13, 2018
Peak Hour: 07:30 AM - 08:30 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	OLD BAYSHORE HWY Eastbound				OLD BAYSHORE HWY Westbound				N 10TH ST Northbound				E GISH RD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	9	22	85	0	3	113	17	0	133	76	7	0	14	19	69	567	2,383	0	0	0	1
7:15 AM	0	13	25	67	0	11	144	30	0	125	66	1	0	9	21	68	580	2,403	0	0	0	1
7:30 AM	0	11	23	84	0	9	120	27	0	141	76	2	0	6	18	69	586	2,453	0	0	3	0
7:45 AM	0	9	25	78	0	7	114	20	0	182	103	7	0	11	15	79	650	2,411	0	0	0	0
8:00 AM	0	12	23	79	0	7	123	29	0	135	67	9	0	4	16	83	587	2,279	0	0	0	1
8:15 AM	0	9	34	85	0	11	121	17	0	144	91	9	0	5	15	89	630		0	0	0	0
8:30 AM	0	14	20	61	0	13	104	28	0	116	76	10	0	16	19	67	544		0	0	0	0
8:45 AM	0	13	26	65	0	6	128	31	0	90	57	11	0	8	17	66	518		0	0	0	0

Peak Rolling Hour Flow Rates

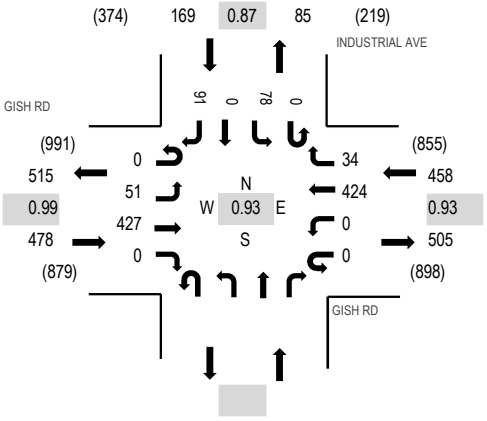
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	4	4	5	0	0	8	5	0	5	1	1	0	0	3	9	45
Lights	0	30	84	301	0	28	427	74	0	561	322	25	0	23	56	292	2,223
Mediums	0	7	17	20	0	6	43	14	0	36	14	1	0	3	5	19	185
Total	0	41	105	326	0	34	478	93	0	602	337	27	0	26	64	320	2,453

All Traffic Data Services Inc.

(303) 216-2439
www.alltrafficdata.net

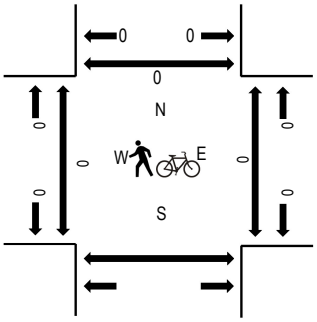
Location: 1 INDUSTRIAL AVE & GISH RD PM
Date: Tuesday, December 4, 2018
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	GISH RD Eastbound				GISH RD Westbound				Northbound				INDUSTRIAL AVE Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	35	63	0	0	0	103	12					0	15	0	35	263	1,003	0	0		0
4:15 PM	0	20	68	0	0	0	71	9					0	24	0	25	217	1,038	1	0		0
4:30 PM	0	30	68	0	0	0	105	7					0	26	0	26	262	1,087	0	0		1
4:45 PM	0	12	105	0	0	0	81	9					0	24	0	30	261	1,085	0	0		0
5:00 PM	0	16	105	0	0	0	107	7					0	29	0	34	298	1,105	0	0		0
5:15 PM	0	7	111	0	0	0	99	10					0	23	0	16	266		0	0		0
5:30 PM	0	15	103	0	0	0	103	9					0	10	0	20	260		0	0		0
5:45 PM	0	13	108	0	0	0	115	8					0	16	0	21	281		0	0		0

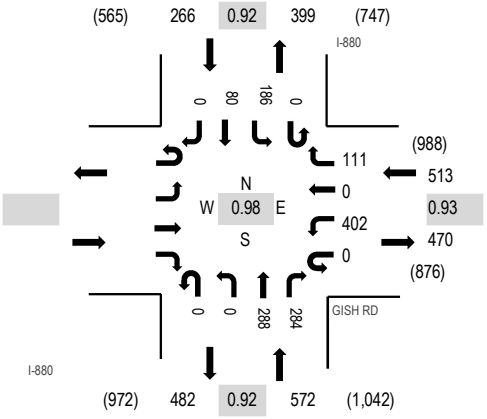
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0					0	0	0	0	0
Lights	0	44	413	0	0	0	420	31					0	77	0	86	1,071
Mediums	0	7	14	0	0	0	4	3					0	1	0	5	34
Total	0	51	427	0	0	0	424	34					0	78	0	91	1,105

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

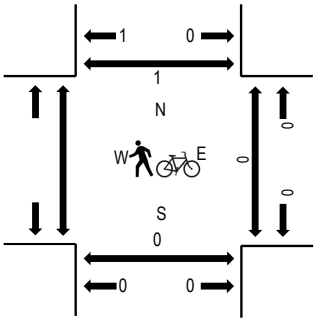
Location: 3 I-880 & GISH RD PM
Date: Tuesday, December 4, 2018
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	Eastbound U-Turn	Eastbound Left	Eastbound Thru	Eastbound Right	GISH RD Westbound U-Turn	GISH RD Westbound Left	GISH RD Westbound Thru	GISH RD Westbound Right	I-880 Northbound U-Turn	I-880 Northbound Left	I-880 Northbound Thru	I-880 Northbound Right	I-880 Southbound U-Turn	I-880 Southbound Left	I-880 Southbound Thru	I-880 Southbound Right	Total	Rolling Hour	Pedestrian Crossings West	Pedestrian Crossings East	Pedestrian Crossings South	Pedestrian Crossings North
4:00 PM					0	105	0	25	0	0	52	49	0	47	35	0	313	1,265		0	0	0
4:15 PM					0	86	0	20	0	0	70	42	0	42	32	0	292	1,298		0	0	0
4:30 PM					0	94	0	23	0	0	73	51	0	46	30	0	317	1,338		0	0	0
4:45 PM					0	100	0	32	0	0	72	69	0	41	29	0	343	1,351		0	0	0
5:00 PM					0	106	0	21	0	0	78	78	0	45	18	0	346	1,330		0	0	0
5:15 PM					0	95	0	21	0	0	80	68	0	52	16	0	332			0	0	0
5:30 PM					0	101	0	37	0	0	58	69	0	48	17	0	330			0	0	0
5:45 PM					0	95	0	27	0	0	58	75	0	54	13	0	322			0	0	0

Peak Rolling Hour Flow Rates

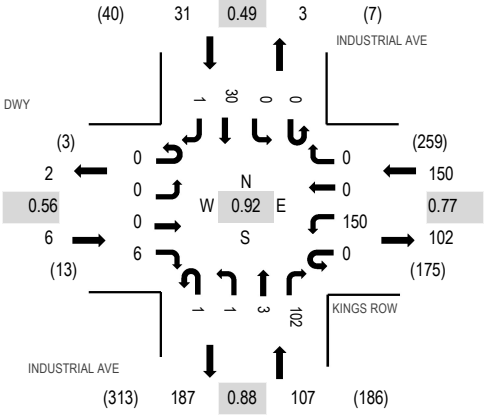
Vehicle Type	Eastbound U-Turn	Eastbound Left	Eastbound Thru	Eastbound Right	Westbound U-Turn	Westbound Left	Westbound Thru	Westbound Right	Northbound U-Turn	Northbound Left	Northbound Thru	Northbound Right	Southbound U-Turn	Southbound Left	Southbound Thru	Southbound Right	Total
Articulated Trucks					0	0	0	0	0	0	6	0	0	2	3	0	11
Lights					0	395	0	108	0	0	280	269	0	173	66	0	1,291
Mediums					0	7	0	3	0	0	2	15	0	11	11	0	49
Total					0	402	0	111	0	0	288	284	0	186	80	0	1,351

All Traffic Data Services Inc.

(303) 216-2439
www.alltrafficdata.net

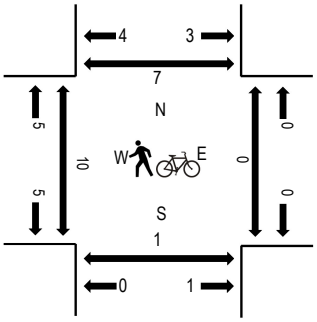
Location: 1 INDUSTRIAL AVE & KINGS ROW PM
Date: Wednesday, December 12, 2018
Peak Hour: 04:15 PM - 05:15 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	DWY Eastbound				KINGS ROW Westbound				INDUSTRIAL AVE Northbound				INDUSTRIAL AVE Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	0	0	0	0	43	0	0	0	0	4	21	0	0	3	0	71	285	1	0	0	0
4:15 PM	0	0	0	1	0	36	0	0	0	0	1	31	0	0	4	0	73	294	0	0	0	0
4:30 PM	0	0	0	2	0	36	0	0	0	1	2	23	0	0	0	0	64	280	1	0	0	1
4:45 PM	0	0	0	2	0	29	0	0	1	0	0	28	0	0	17	0	77	259	3	0	0	2
5:00 PM	0	0	0	1	0	49	0	0	0	0	0	20	0	0	9	1	80	213	6	0	1	4
5:15 PM	0	0	0	2	0	36	0	0	1	0	0	16	0	0	4	0	59		3	0	0	2
5:30 PM	0	0	0	4	0	17	0	0	0	0	0	20	0	0	2	0	43		0	0	0	0
5:45 PM	0	0	0	1	0	13	0	0	0	1	0	16	0	0	0	0	31		0	0	0	0

Peak Rolling Hour Flow Rates

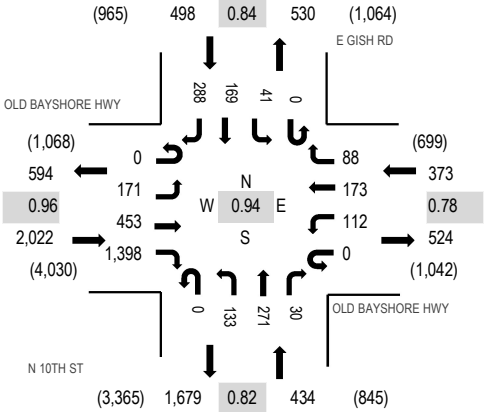
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Lights	0	0	0	5	0	146	0	0	0	1	2	98	0	0	29	1	282
Mediums	0	0	0	0	0	4	0	0	1	0	1	4	0	0	1	0	11
Total	0	0	0	6	0	150	0	0	1	1	3	102	0	0	30	1	294

All Traffic Data Services Inc.

(303) 216-2439
www.alltrafficdata.net

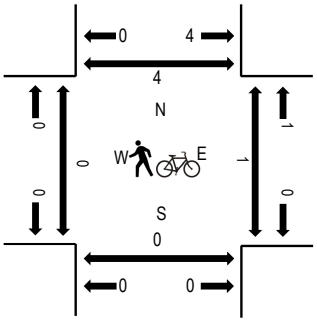
Location: 2 N 10TH ST & OLD BAYSHORE HWY PM
Date: Wednesday, December 12, 2018
Peak Hour: 04:15 PM - 05:15 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	OLD BAYSHORE HWY Eastbound				OLD BAYSHORE HWY Westbound				N 10TH ST Northbound				E GISH RD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	40	101	368	0	32	64	34	0	32	66	10	0	13	45	63	868	3,309	0	0	0	2
4:15 PM	0	39	102	346	0	25	40	27	0	35	57	8	0	16	44	88	827	3,327	0	0	0	0
4:30 PM	0	36	123	367	0	25	46	22	0	33	52	4	0	9	50	59	826	3,311	0	1	0	0
4:45 PM	0	44	101	347	0	29	42	20	0	21	71	8	0	7	25	73	788	3,292	0	0	0	0
5:00 PM	0	52	127	338	0	33	45	19	0	44	91	10	0	9	50	68	886	3,230	0	0	0	4
5:15 PM	0	44	114	326	0	30	38	14	0	28	84	9	0	13	46	65	811		0	0	0	1
5:30 PM	0	63	113	346	0	26	29	13	0	20	78	10	0	5	52	52	807		0	0	0	0
5:45 PM	0	45	112	336	0	23	16	7	0	19	46	9	0	9	56	48	726		0	0	0	0

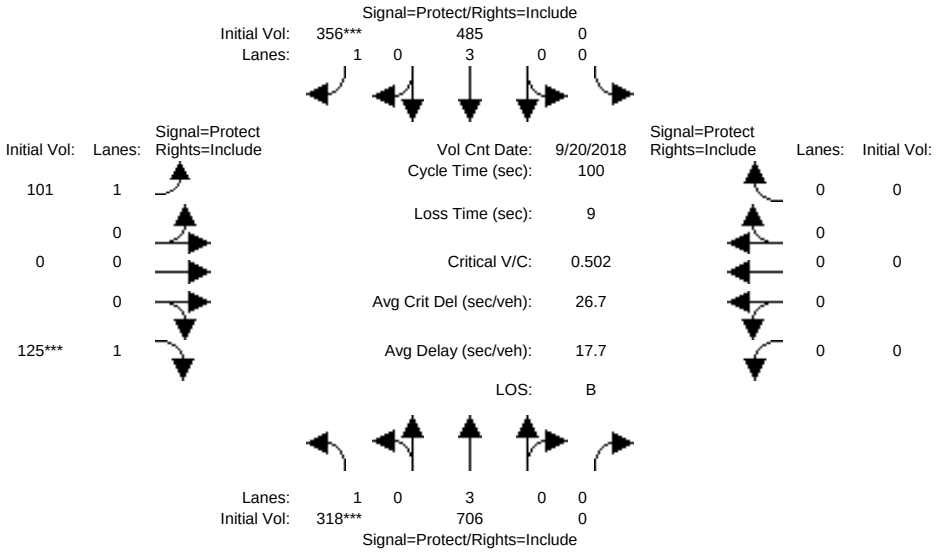
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	3	1	8	0	0	0	1	0	1	1	0	0	0	0	3	18
Lights	0	163	441	1,364	0	107	161	77	0	128	266	26	0	33	164	271	3,201
Mediums	0	5	11	26	0	5	12	10	0	4	4	4	0	8	5	14	108
Total	0	171	453	1,398	0	112	173	88	0	133	271	30	0	41	169	288	3,327

City of San Jose
Citywide Traffix Database
(updated December 1, 2016)

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

Intersection #3554: GISH/OAKLAND



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	0	0		10	10	10		0	10	0		0	0
Y+R:	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0
Volume Module: >> Count Date: 20 Sep 2018 << 7:35-8:35																
Base Vol:	318		706	0	0		485	356	101		0	125	0		0	0
Growth Adj:	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00
Initial Bse:	318		706	0	0		485	356	101		0	125	0		0	0
User Adj:	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00
PHF Adj:	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00
PHF Volume:	318		706	0	0		485	356	101		0	125	0		0	0
Reduct Vol:	0		0	0	0		0	0	0		0	0	0		0	0
Reduced Vol:	318		706	0	0		485	356	101		0	125	0		0	0
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:	318		706	0	0		485	356	101		0	125	0		0	0
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	0.00	0.00		3.00	1.00	1.00		0.00	1.00	0.00		0.00	0.00
Final Sat.:	1750		5700	0	0		5700	1750	1750		0	1750	0		0	0
Capacity Analysis Module:																
Vol/Sat:	0.18		0.12	0.00	0.00		0.09	0.20	0.06		0.00	0.07	0.00		0.00	0.00
Crit Moves:	****							****				****				
Green Time:	36.2		76.8	0.0	0.0		40.5	40.5	14.2		0.0	14.2	0.0		0.0	0.0
Volume/Cap:	0.50		0.16	0.00	0.00		0.21	0.50	0.41		0.00	0.50	0.00		0.00	0.00
Delay/Veh:	25.5		3.1	0.0	0.0		19.4	22.8	40.1		0.0	41.2	0.0		0.0	0.0
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:	25.5		3.1	0.0	0.0		19.4	22.8	40.1		0.0	41.2	0.0		0.0	0.0
LOS by Move:	C		A	A	A		B-	C+	D		A	D	A		A	A
HCM2k95thQ:	16		4	0	0		6	17	7		0	9	0		0	0

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

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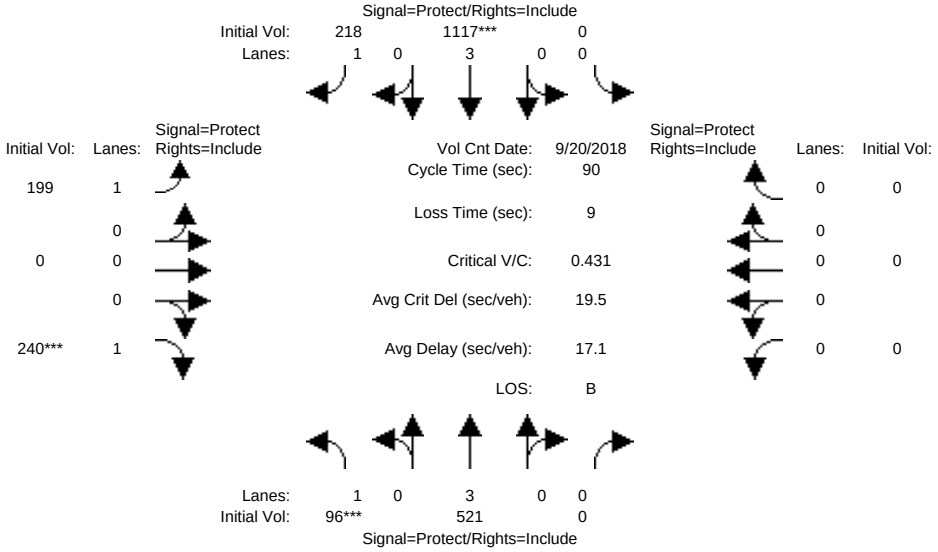
City of San Jose
Citywide Traffix Database
(updated December 1, 2016)

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

Intersection #3554: GISH/OAKLAND



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		0	0	10		10	10		0	10	0		0	0
Y+R:	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0
Volume Module: >> Count Date: 20 Sep 2018 << 4:30-5:30																
Base Vol:	96	521		0	0	1117		218	199		0	240	0		0	0
Growth Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Initial Bse:	96	521		0	0	1117		218	199		0	240	0		0	0
User Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
PHF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
PHF Volume:	96	521		0	0	1117		218	199		0	240	0		0	0
Reduct Vol:	0	0		0	0	0		0	0		0	0	0		0	0
Reduced Vol:	96	521		0	0	1117		218	199		0	240	0		0	0
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:	96	521		0	0	1117		218	199		0	240	0		0	0
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		0.00	0.00	3.00		1.00	1.00	0.00		1.00	0.00	0.00		0.00
Final Sat.:	1750	5700		0	0	5700		1750	1750		0	1750	0		0	0
Capacity Analysis Module:																
Vol/Sat:	0.05	0.09		0.00	0.00	0.20		0.12	0.11	0.00		0.14	0.00	0.00		0.00
Crit Moves:	****					****						****				
Green Time:	11.5	52.4		0.0	0.0	40.9		40.9	28.6		0.0	28.6	0.0		0.0	0.0
Volume/Cap:	0.43	0.16		0.00	0.00	0.43		0.27	0.36	0.00		0.43	0.00	0.00		0.00
Delay/Veh:	37.6	8.7		0.0	0.0	16.8		15.5	24.0		0.0	24.8	0.0		0.0	0.0
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:	37.6	8.7		0.0	0.0	16.8		15.5	24.0		0.0	24.8	0.0		0.0	0.0
LOS by Move:	D+	A		A	A	B		B	C		A	C	A		A	A
HCM2k95thQ:	6	4		0	0	13		8	9		0	11	0		0	0

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

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Appendix B
Lists of Approved Projects

AM APPROVED TRIPS

12/07/2018

Intersection of: GISH/OAKLAND

Traffix Node Number: 3554

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
CP99-057 NELLA OIL COMMERCIAL ST & OLD OAKLAND RD (SE/C)	0	5	0	0	5	0	0	0	0	0	0	0
H08-044 ASKARI SELF-STORAGE EAST SIDE OF OAKLAND ROAD, 350 FEET SOUTHERLY OF	0	1	0	0	1	0	0	0	0	0	0	0
H14-020 SUPERMICRO 750 RIDDER PARK DRIVE	0	9	0	0	3	3	6	0	0	0	0	0
NSJ NORTH SAN JOSE	22	75	0	0	4	2	12	0	2	0	0	0
PDC03-108 OFF BERRYESSA FLEA MKT (OFFICE) BOTH SIDES OF BERRYESSA RD WEST OF UNION PACIFIC	0	1	0	0	6	0	0	0	0	0	0	0
PDC03-108 RES BERRYESSA FLEA MKT (RESIDENTIAL) BOTH SIDES OF BERRYESSA, WEST OF UNION PACIFIC RR	0	31	0	0	16	0	0	0	0	0	0	0
PDC03-108 RET BERRYESSA FLEA MKT (RETAIL) BOTH SIDES OF BERRYESSA, WEST OF UNION PACIFIC RR	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL:	**22**	**122**	**0**	**0**	**35**	**5**	**18**	**0**	**2**	**0**	**0**	**0**

	LEFT	THRU	RIGHT
NORTH	0	35	5
EAST	0	0	0
SOUTH	22	122	0
WEST	18	0	2

Intersection of: GISH/OAKLAND

Traffix Node Number: 3554

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
CP99-057 NELLA OIL COMMERCIAL ST & OLD OAKLAND RD (SE/C)	0	5	0	0	5	0	0	0	0	0	0	0
H08-044 ASKARI SELF-STORAGE EAST SIDE OF OAKLAND ROAD, 350 FEET SOUTHERLY OF	0	2	0	0	2	0	0	0	1	0	0	0
H14-020 SUPERMICRO 750 RIDDER PARK DRIVE	0	5	0	0	7	6	3	0	0	0	0	0
NSJ NORTH SAN JOSE	0	6	0	0	120	27	7	0	1	0	0	0
PDC03-108 OFF BERRYESSA FLEA MKT (OFFICE) BOTH SIDES OF BERRYESSA RD WEST OF UNION PACIFIC	0	5	0	0	1	0	0	0	0	0	0	0
PDC03-108 RES BERRYESSA FLEA MKT (RESIDENTIAL) BOTH SIDES OF BERRYESSA, WEST OF UNION PACIFIC RR	0	16	0	0	29	0	0	0	0	0	0	0
PDC03-108 RET BERRYESSA FLEA MKT (RETAIL) BOTH SIDES OF BERRYESSA, WEST OF UNION PACIFIC RR	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL:	**0**	**39**	**0**	**0**	**164**	**33**	**10**	**0**	**2**	**0**	**0**	**0**

	LEFT	THRU	RIGHT
NORTH	0	164	33
EAST	0	0	0
SOUTH	0	39	0
WEST	10	0	2

AM APPROVED TRIPS

12/19/2018

Intersection of: BAYSHORE/TENTH

Traffix Node Number: 3289

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
H14-020 SUPERMICRO 750 RIDDER PARK DRIVE	0	0	0	0	0	3	0	0	0	0	0	0
NSJ NORTH SAN JOSE	161	53	2	0	0	0	0	0	0	0	0	0
PDC03-108 OFF BERRYESSA FLEA MKT (OFFICE) BOTH SIDES OF BERRYESSA RD WEST OF UNION PACIFIC	0	0	0	0	0	0	0	4	2	0	1	1
PDC03-108 RES BERRYESSA FLEA MKT (RESIDENTIAL) BOTH SIDES OF BERRYESSA, WEST OF UNION PACIFIC RR	2	9	0	0	0	0	0	13	5	0	25	19
PDC03-108 RET BERRYESSA FLEA MKT (RETAIL) BOTH SIDES OF BERRYESSA, WEST OF UNION PACIFIC RR	0	0	0	0	0	0	0	0	0	0	0	0
PDC08-036LW CANNARY PARK NW CORNER E. TENTH ST.	0	0	0	0	0	0	0	0	0	0	0	0
PDC08-036RES CANNERY PARK NW CORNER E. TENTH	12	14	0	0	3	0	0	0	8	0	0	0
PDC08-036REST CANNERY PARK NW CORNER OF E. TENTH	0	0	0	0	0	0	0	0	0	0	0	0
PDC08-036SEN CANNERY PARK NW CORNER E. 10TH ST.	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL:	**175**	**76**	**2**	**0**	**3**	**3**	**0**	**17**	**15**	**0**	**26**	**20**

	LEFT	THRU	RIGHT
NORTH	0	3	3
EAST	0	26	20
SOUTH	175	76	2
WEST	0	17	15

Intersection of: BAYSHORE/TENTH

Traffix Node Number: 3289

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
H14-020 SUPERMICRO 750 RIDDER PARK DRIVE	0	0	0	0	0	6	0	0	0	0	0	0
NSJ NORTH SAN JOSE	51	43	11	0	0	0	0	0	0	0	0	0
PDC03-108 OFF BERRYESSA FLEA MKT (OFFICE) BOTH SIDES OF BERRYESSA RD WEST OF UNION PACIFIC	1	2	0	0	0	0	0	1	0	0	5	3
PDC03-108 RES BERRYESSA FLEA MKT (RESIDENTIAL) BOTH SIDES OF BERRYESSA, WEST OF UNION PACIFIC RR	1	5	0	0	0	0	0	23	11	0	13	9
PDC03-108 RET BERRYESSA FLEA MKT (RETAIL) BOTH SIDES OF BERRYESSA, WEST OF UNION PACIFIC RR	0	0	0	0	0	0	0	0	0	0	0	0
PDC08-036LW CANNARY PARK NW CORNER E. TENTH ST.	0	0	0	0	0	0	0	0	0	0	0	0
PDC08-036RES CANNERY PARK NW CORNER E. TENTH	6	7	0	0	6	0	0	0	8	0	0	0
PDC08-036REST CANNERY PARK NW CORNER OF E. TENTH	0	0	0	0	0	0	0	0	0	0	0	0
PDC08-036SEN CANNERY PARK NW CORNER E. 10TH ST.	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL:	**59**	**57**	**11**	**0**	**6**	**6**	**0**	**24**	**19**	**0**	**18**	**12**

	LEFT	THRU	RIGHT
NORTH	0	6	6
EAST	0	18	12
SOUTH	59	57	11
WEST	0	24	19

Appendix C
Volume Summary

Intersection Number: 1
Traffix Node Number: 1
Intersection Name: I-880 and Gish Rd
Peak Hour: AM
Count Date: 12/5/18

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	**0**	**159**	**319**	**191**	**0**	**276**	**0**	**0**	**0**	**129**	**310**	**0**	**1384**
ATI	0	0	14	11	0	16	0	0	0	6	96	0	143
Background Conditions	**0**	**159**	**333**	**202**	**0**	**292**	**0**	**0**	**0**	**135**	**406**	**0**	**1527**
Project Trips	0	0	4	1	0	3	0	0	0	1	0	0	9
Background Plus Project Conditions	**0**	**159**	**337**	**203**	**0**	**295**	**0**	**0**	**0**	**136**	**406**	**0**	**1536**
Cumulative Plus Project Conditions	**0**	**163**	**345**	**208**	**0**	**302**	**0**	**0**	**0**	**139**	**413**	**0**	**1569**

Intersection Number: 2
Traffix Node Number: 2
Intersection Name: Industrial Ave and Gish Rd
Peak Hour: AM
Count Date: 12/5/18

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	**63**	**0**	**37**	**51**	**446**	**0**	**0**	**0**	**0**	**0**	**321**	**79**	**997**
ATI	0	0	0	0	27	0	0	0	0	0	20	0	47
Background Conditions	**63**	**0**	**37**	**51**	**473**	**0**	**0**	**0**	**0**	**0**	**341**	**79**	**1044**
Project Trips	4	0	0	2	0	0	0	0	0	0	0	5	11
Background Plus Project Conditions	**67**	**0**	**37**	**53**	**473**	**0**	**0**	**0**	**0**	**0**	**341**	**84**	**1055**
Cumulative Plus Project Conditions	**69**	**0**	**38**	**54**	**484**	**0**	**0**	**0**	**0**	**0**	**349**	**86**	**1079**

Intersection Number: 3
Traffix Node Number: 3554
Intersection Name: Oakland Rd and Gish Rd
Peak Hour: AM
Count Date: 9/20/18

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	**356**	**485**	**0**	**0**	**0**	**0**	**0**	**706**	**318**	**125**	**0**	**101**	**2091**
ATI	5	35	0	0	0	0	0	122	22	2	0	18	204
Background Conditions	**361**	**520**	**0**	**0**	**0**	**0**	**0**	**828**	**340**	**127**	**0**	**119**	**2295**
Project Trips	1	0	0	0	0	0	0	0	1	0	0	0	2
Background Plus Project Conditions	**362**	**520**	**0**	**0**	**0**	**0**	**0**	**828**	**341**	**127**	**0**	**119**	**2297**
Cumulative Plus Project Conditions	**371**	**532**	**0**	**0**	**0**	**0**	**0**	**845**	**349**	**130**	**0**	**121**	**2347**

Intersection Number: 4
Traffix Node Number: 3289
Intersection Name: N 10th St and Old Bayshore Hwy
Peak Hour: AM
Count Date: 12/12/18

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	**320**	**64**	**26**	**93**	**478**	**34**	**27**	**337**	**602**	**326**	**105**	**41**	**2453**
ATI	3	3	0	20	26	0	2	76	175	15	17	0	337
Background Conditions	**323**	**67**	**26**	**113**	**504**	**34**	**29**	**413**	**777**	**341**	**122**	**41**	**2790**
Project Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
Background Plus Project Conditions	**323**	**67**	**26**	**113**	**504**	**34**	**29**	**413**	**777**	**341**	**122**	**41**	**2790**
Cumulative Plus Project Conditions	**331**	**69**	**27**	**115**	**515**	**35**	**30**	**421**	**791**	**349**	**125**	**42**	**2849**

Intersection Number: 5
Traffix Node Number: 5
Intersection Name: Industrial Ave and Kings Row
Peak Hour: AM
Count Date: 12/12/18

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	**1**	**12**	**2**	**4**	**0**	**75**	**87**	**21**	**6**	**2**	**0**	**0**	**210**
ATI	0	0	0	0	0	0	0	0	0	0	0	0	0
Background Conditions	**1**	**12**	**2**	**4**	**0**	**75**	**87**	**21**	**6**	**2**	**0**	**0**	**210**
Project Trips	0	1	0	0	0	3	9	-2	0	0	0	0	11
Background Plus Project Conditions	**1**	**13**	**2**	**4**	**0**	**78**	**96**	**19**	**6**	**2**	**0**	**0**	**221**
Cumulative Plus Project Conditions	**1**	**13**	**2**	**4**	**0**	**80**	**98**	**20**	**6**	**2**	**0**	**0**	**226**

Intersection Number: 1
Traffix Node Number: 1
Intersection Name: I-880 and Gish Rd
Peak Hour: PM
Count Date: 12/4/18

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	**0**	**80**	**186**	**111**	**0**	**402**	**0**	**0**	**0**	**284**	**288**	**0**	**1351**
ATI	0	0	5	7	0	26	0	0	0	7	69	0	114
Background Conditions	**0**	**80**	**191**	**118**	**0**	**428**	**0**	**0**	**0**	**291**	**357**	**0**	**1465**
Project Trips	0	0	3	1	0	5	0	0	0	1	0	0	10
Background Plus Project Conditions	**0**	**80**	**194**	**119**	**0**	**433**	**0**	**0**	**0**	**292**	**357**	**0**	**1475**
Cumulative Plus Project Conditions	**0**	**82**	**198**	**122**	**0**	**443**	**0**	**0**	**0**	**299**	**364**	**0**	**1508**

Intersection Number: 2
Traffix Node Number: 2
Intersection Name: Industrial Ave and Gish Rd
Peak Hour: PM
Count Date: 12/4/18

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	**91**	**0**	**78**	**34**	**424**	**0**	**0**	**0**	**0**	**0**	**427**	**51**	**1105**
ATI	0	0	0	0	33	0	0	0	0	0	12	0	45
Background Conditions	**91**	**0**	**78**	**34**	**457**	**0**	**0**	**0**	**0**	**0**	**439**	**51**	**1150**
Project Trips	6	0	2	0	0	0	0	0	0	0	0	4	12
Background Plus Project Conditions	**97**	**0**	**80**	**34**	**457**	**0**	**0**	**0**	**0**	**0**	**439**	**55**	**1162**
Cumulative Plus Project Conditions	**99**	**0**	**82**	**35**	**467**	**0**	**0**	**0**	**0**	**0**	**449**	**56**	**1189**

Intersection Number: 3
Traffix Node Number: 3554
Intersection Name: Oakland Rd and Gish Rd
Peak Hour: PM
Count Date: 9/20/18

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	**218**	**1117**	**0**	**0**	**0**	**0**	**0**	**521**	**96**	**240**	**0**	**199**	**2391**
ATI	33	164	0	0	0	0	0	39	0	2	0	10	248
Background Conditions	**251**	**1281**	**0**	**0**	**0**	**0**	**0**	**560**	**96**	**242**	**0**	**209**	**2639**
Project Trips	0	0	0	0	0	0	0	0	0	1	0	1	2
Background Plus Project Conditions	**251**	**1281**	**0**	**0**	**0**	**0**	**0**	**560**	**96**	**243**	**0**	**210**	**2641**
Cumulative Plus Project Conditions	**256**	**1308**	**0**	**0**	**0**	**0**	**0**	**573**	**98**	**249**	**0**	**215**	**2699**

Intersection Number: 4
Traffix Node Number: 3289
Intersection Name: N 10th St and Old Bayshore Hwy
Peak Hour: PM
Count Date: 12/12/18

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	**288**	**169**	**41**	**88**	**173**	**112**	**30**	**271**	**133**	**1398**	**453**	**171**	**3327**
ATI	6	6	0	12	18	0	11	57	59	19	24	0	212
Background Conditions	**294**	**175**	**41**	**100**	**191**	**112**	**41**	**328**	**192**	**1417**	**477**	**171**	**3539**
Project Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
Background Plus Project Conditions	**294**	**175**	**41**	**100**	**191**	**112**	**41**	**328**	**192**	**1417**	**477**	**171**	**3539**
Cumulative Plus Project Conditions	**301**	**179**	**42**	**102**	**195**	**115**	**42**	**335**	**195**	**1451**	**488**	**175**	**3619**

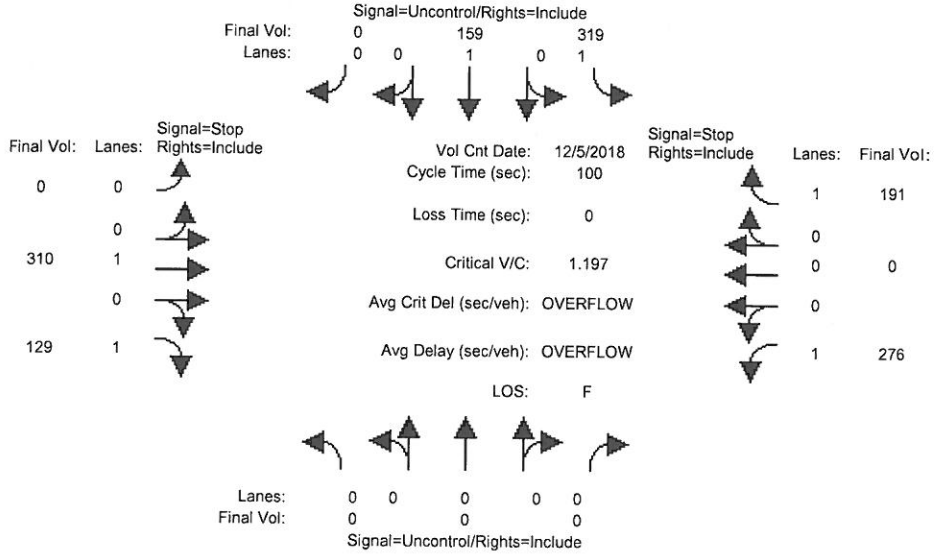
Intersection Number: 5
Traffix Node Number: 5
Intersection Name: Industrial Ave and Kings Row
Peak Hour: PM
Count Date: 12/12/18

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	**1**	**30**	**0**	**0**	**0**	**150**	**102**	**3**	**2**	**6**	**0**	**0**	**294**
ATI	0	0	0	0	0	0	0	0	0	0	0	0	0
Background Conditions	**1**	**30**	**0**	**0**	**0**	**150**	**102**	**3**	**2**	**6**	**0**	**0**	**294**
Project Trips	0	-1	0	0	0	9	3	1	0	0	0	0	12
Background Plus Project Conditions	**1**	**29**	**0**	**0**	**0**	**159**	**105**	**4**	**2**	**6**	**0**	**0**	**306**
Cumulative Plus Project Conditions	**1**	**30**	**0**	**0**	**0**	**163**	**107**	**4**	**2**	**6**	**0**	**0**	**313**

Appendix D
Intersection Level of Service Calculations

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

Intersection #1: I-880 & GISH RD



Street Name:	I-880						GISH					
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: 5 Dec 2018 << 7:15 - 8:15 AM												
Base Vol:	0	0	0	319	159	0	0	310	129	276	0	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:	0	0	0	319	159	0	0	310	129	276	0	191
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	319	159	0	0	310	129	276	0	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:	0	0	0	319	159	0	0	310	129	276	0	191
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	319	159	0	0	310	129	276	0	191
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	6.5	6.2	7.1	xxxx	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	4.0	3.3	3.5	xxxx	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	0	xxxx	xxxxx	xxxx	797	159	1017	xxxx	0
Potent Cap.:	xxxx	xxxx	xxxxx	1636	xxxx	xxxxx	xxxx	322	892	218	xxxx	1091
Move Cap.:	xxxx	xxxx	xxxxx	1636	xxxx	xxxxx	xxxx	259	892	0	xxxx	1091
Volume/Cap:	xxxx	xxxx	xxxx	0.19	xxxx	xxxx	xxxx	1.20	0.14	xxxx	xxxx	0.18
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.7	xxxx	xxxxx	xxxx	14.4	0.5	xxxx	xxxx	0.6
Control Del:	xxxxx	xxxx	xxxxx	7.7	xxxx	xxxxx	xxxxx	160	9.7	xxxxx	xxxx	9.0
LOS by Move:	*	*	*	A	*	*	*	F	A	*	*	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			116.1			+Inf		
ApproachLOS:	*			*			F			F		

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

Peak Hour Delay Signal Warrant Report

****

Intersection #1 I-880 & GISH RD

****

Future Volume Alternative: Peak Hour Warrant Met

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```
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Lanes:        0  0  0  0  0    1  0  1  0  0    0  0  1  0  1    1  0  0  0  1
Initial Vol:    0    0    0   319  159    0     0  310  129    276    0  191
ApproachDel:    xxxxxx           xxxxxx            116.1            +Inf
------------|---------------||---------------||---------------||---------------|
Approach[eastbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=14.2]
   SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=439]
   SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1384]
   SUCCEED - Total volume greater than or equal to 650 for intersection
             with less than four approaches.
--------------------------------------------------------------------------------
Approach[westbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=OVERFLOW]
   SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=467]
   SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1384]
   SUCCEED - Total volume greater than or equal to 650 for intersection
             with less than four approaches.
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                 Peak Hour Volume Signal Warrant Report [Urban]
********************************************************************************
Intersection #1 I-880 & GISH RD
********************************************************************************
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  0  0  0    1  0  1  0  0    0  0  1  0  1    1  0  0  0  1
Initial Vol:    0    0    0   319  159    0     0  310  129    276    0  191
------------|---------------||---------------||---------------||---------------|
Major Street Volume:              478
Minor Approach Volume:            467
Minor Approach Volume Threshold:  692
--------------------------------------------------------------------------------
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.
```


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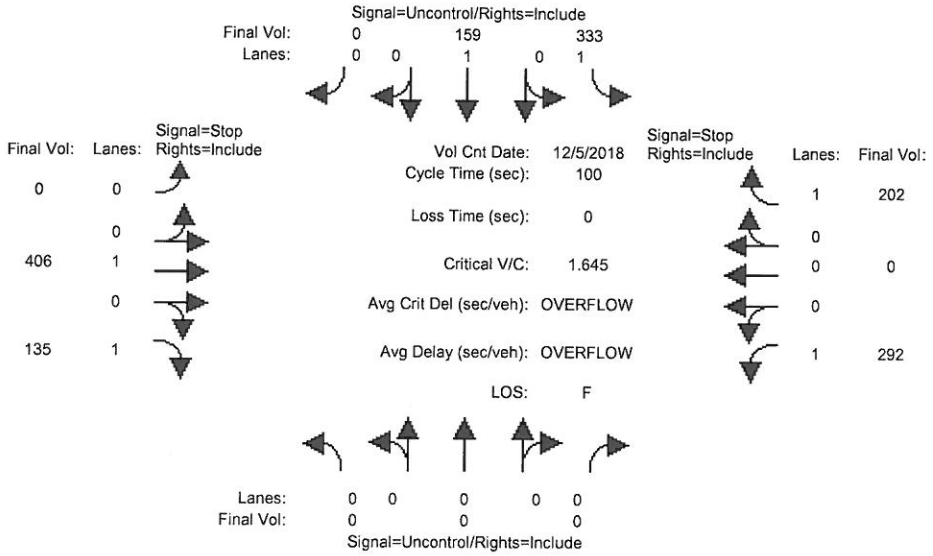
Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Background AM

Intersection #1: I-880 & GISH RD



Street Name:	I-880						GISH					
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: 5 Dec 2018 << 7:15 - 8:15 AM												
Base Vol:	0	0	0	319	159	0	0	310	129	276	0	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:	0	0	0	319	159	0	0	310	129	276	0	191
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI AM:	0	0	0	14	0	0	0	96	6	16	0	11
Initial Fut:	0	0	0	333	159	0	0	406	135	292	0	202
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	333	159	0	0	406	135	292	0	202
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	333	159	0	0	406	135	292	0	202
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	6.5	6.2	7.1	xxxx	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	4.0	3.3	3.5	xxxx	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	0	xxxx	xxxxx	xxxx	825	159	1096	xxxx	0
Potent Cap.:	xxxx	xxxx	xxxxx	1636	xxxx	xxxxx	xxxx	310	892	193	xxxx	1091
Move Cap.:	xxxx	xxxx	xxxxx	1636	xxxx	xxxxx	xxxx	247	892	0	xxxx	1091
Volume/Cap:	xxxx	xxxx	xxxx	0.20	xxxx	xxxx	xxxx	1.64	0.15	xxxx	xxxx	0.19
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.8	xxxx	xxxxx	xxxx	25.8	0.5	xxxx	xxxx	0.7
Control Del:	xxxxx	xxxx	xxxxx	7.8	xxxx	xxxxx	xxxxx	343	9.8	xxxxx	xxxx	9.0
LOS by Move:	*	*	*	A	*	*	*	F	A	*	*	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			259.9			+Inf		
ApproachLOS:	*			*			F			F		

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

Peak Hour Delay Signal Warrant Report

****

Intersection #1 I-880 & GISH RD

****

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```
Future Volume Alternative: Peak Hour Warrant Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Lanes:        0  0  0  0  0    1  0  1  0  0    0  0  1  0  1    1  0  0  0  1
Initial Vol:    0    0     0   333  159     0    0  406   135   292    0   202
ApproachDel:    xxxxxx           xxxxxx            259.9             +Inf
------------|---------------||---------------||---------------||---------------|
Approach[eastbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=39.1]
   SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=541]
   SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1527]
   SUCCEED - Total volume greater than or equal to 650 for intersection
             with less than four approaches.
--------------------------------------------------------------------------------
Approach[westbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=OVERFLOW]
   SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=494]
   SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1527]
   SUCCEED - Total volume greater than or equal to 650 for intersection
             with less than four approaches.
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                 Peak Hour Volume Signal Warrant Report [Urban]
********************************************************************************
Intersection #1 I-880 & GISH RD
********************************************************************************
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  0  0  0    1  0  1  0  0    0  0  1  0  1    1  0  0  0  1
Initial Vol:    0    0     0   333  159     0    0  406   135   292    0   202
------------|---------------||---------------||---------------||---------------|
Major Street Volume:              492
Minor Approach Volume:            541
Minor Approach Volume Threshold: 679
--------------------------------------------------------------------------------
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.
```


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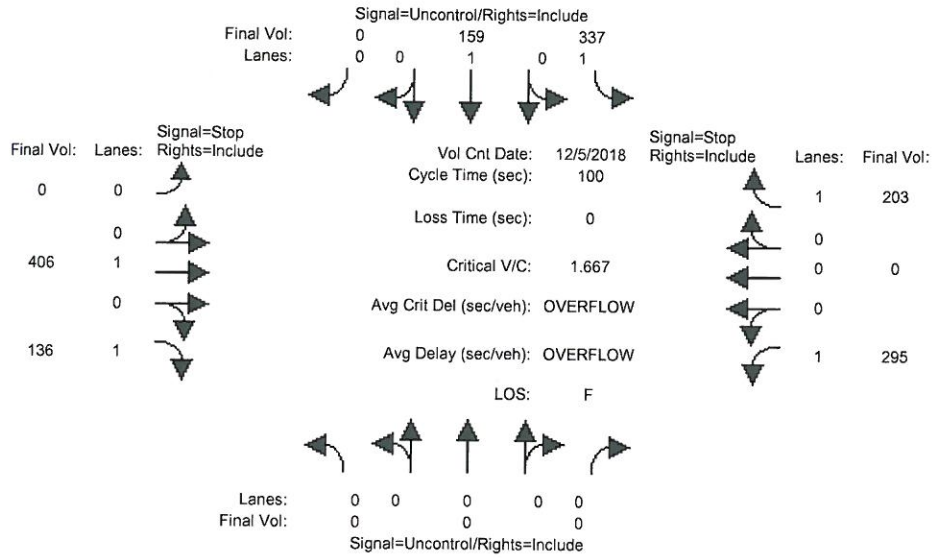
Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Background + Project AM

Intersection #1: I-880 & GISH RD



Street Name:	I-880						GISH					
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: 5 Dec 2018 << 7:15 - 8:15 AM												
Base Vol:	0	0	0	333	159	0	0	406	135	292	0	202
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	333	159	0	0	406	135	292	0	202
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Project Tri:	0	0	0	4	0	0	0	0	1	3	0	1
Initial Fut:	0	0	0	337	159	0	0	406	136	295	0	203
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	337	159	0	0	406	136	295	0	203
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	337	159	0	0	406	136	295	0	203
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	6.5	6.2	7.1	xxxx	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	4.0	3.3	3.5	xxxx	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	0	xxxx	xxxxx	xxxx	833	159	1104	xxxx	0
Potent Cap.:	xxxx	xxxx	xxxxx	1636	xxxx	xxxxx	xxxx	307	892	190	xxxx	1091
Move Cap.:	xxxx	xxxx	xxxxx	1636	xxxx	xxxxx	xxxx	243	892	0	xxxx	1091
Volume/Cap:	xxxx	xxxx	xxxx	0.21	xxxx	xxxx	xxxx	1.67	0.15	xxxx	xxxx	0.19
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.8	xxxx	xxxxx	xxxx	26.1	0.5	xxxx	xxxx	0.7
Control Del:	xxxxx	xxxx	xxxxx	7.8	xxxx	xxxxx	xxxxx	353	9.8	xxxxx	xxxx	9.1
LOS by Move:	*	*	*	A	*	*	*	F	A	*	*	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			267.1			+Inf		
ApproachLOS:	*			*			F			F		

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

Peak Hour Delay Signal Warrant Report

****

Intersection #1 I-880 & GISH RD

****

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```
Future Volume Alternative: Peak Hour Warrant Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Lanes:        0  0  0  0  0    1  0  1  0  0    0  0  1  0  1    1  0  0  0  1
Initial Vol:    0    0    0   337  159    0     0  406  136    295    0  203
ApproachDel:    xxxxxx           xxxxxx            267.1            +Inf
------------|---------------||---------------||---------------||---------------|
Approach[eastbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=40.2]
   SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=542]
   SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1536]
   SUCCEED - Total volume greater than or equal to 650 for intersection
             with less than four approaches.
-------------------------------------------------------------------------------
Approach[westbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=OVERFLOW]
   SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=498]
   SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1536]
   SUCCEED - Total volume greater than or equal to 650 for intersection
             with less than four approaches.
-------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                 Peak Hour Volume Signal Warrant Report [Urban]
*******************************************************************************
Intersection #1 I-880 & GISH RD
*******************************************************************************
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  0  0  0    1  0  1  0  0    0  0  1  0  1    1  0  0  0  1
Initial Vol:    0    0    0   337  159    0     0  406  136    295    0  203
------------|---------------||---------------||---------------||---------------|
Major Street Volume:              496
Minor Approach Volume:            542
Minor Approach Volume Threshold:  676
-------------------------------------------------------------------------------
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.
```


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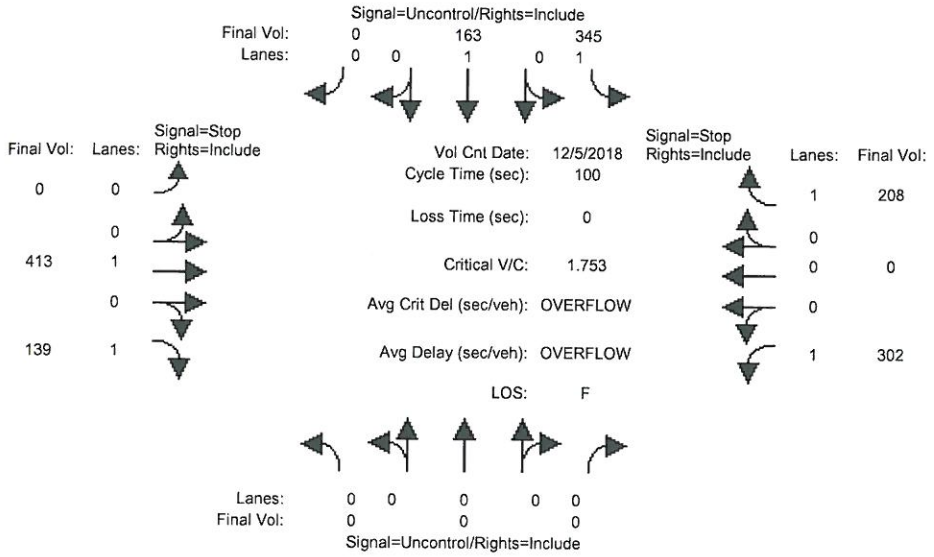
Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Cumulative + Prj AM

Intersection #1: I-880 & GISH RD




```
Street Name:              I-880                                   GISH
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: 5 Dec 2018 << 7:15 - 8:15 AM
Base Vol:       0    0    0   341  163    0    0  413  138  299    0  207
Growth Adj:  1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse:    0    0    0   341  163    0    0  413  138  299    0  207
Added Vol:      0    0    0     0    0    0    0    0    0    0    0    0
Prj AM:         0    0    0     4    0    0    0    0    1    3    0    1
Initial Fut:    0    0    0   345  163    0    0  413  139  302    0  208
User Adj:    1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:     1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume:     0    0    0   345  163    0    0  413  139  302    0  208
Reduct Vol:     0    0    0     0    0    0    0    0    0    0    0    0
FinalVolume:    0    0    0   345  163    0    0  413  139  302    0  208
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx  6.5  6.2  7.1 xxxx  6.2
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx  4.0  3.3  3.5 xxxx  3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx     0 xxxx xxxxx  xxxx  853  163 1129 xxxx    0
Potent Cap.: xxxx xxxx xxxxx  1636 xxxx xxxxx  xxxx  299  887  183 xxxx 1091
Move Cap.:   xxxx xxxx xxxxx  1636 xxxx xxxxx  xxxx  236  887    0 xxxx 1091
Volume/Cap:  xxxx xxxx  xxxx  0.21 xxxx  xxxx  xxxx 1.75 0.16 xxxx xxxx 0.19
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   0.8 xxxx xxxxx  xxxx 27.8  0.6 xxxx xxxx  0.7
Control Del:xxxxx xxxx xxxxx   7.8 xxxx xxxxx xxxxx  392  9.8 xxxxx xxxx  9.1
LOS by Move:    *    *     *     A    *     *     *    F    A    *    *    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          295.4          +Inf
ApproachLOS:         *               *              F             F
Note: Queue reported is the number of cars per lane.
                    Peak Hour Delay Signal Warrant Report
*******************************************************************************
Intersection #1 I-880 & GISH RD
*******************************************************************************
```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```
Future Volume Alternative: Peak Hour Warrant Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Lanes:        0  0  0  0  0    1  0  1  0  0    0  0  1  0  1    1  0  0  0  1
Initial Vol:    0    0    0   345  163    0     0  413  139   302    0  208
ApproachDel:    xxxxxx           xxxxxx            295.4            +Inf
------------|---------------||---------------||---------------||---------------|
Approach[eastbound] [lanes=2] [control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=45.3]
   SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=552]
   SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3] [total volume=1570]
   SUCCEED - Total volume greater than or equal to 650 for intersection
             with less than four approaches.
--------------------------------------------------------------------------------
Approach[westbound] [lanes=2] [control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=OVERFLOW]
   SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=510]
   SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3] [total volume=1570]
   SUCCEED - Total volume greater than or equal to 650 for intersection
             with less than four approaches.
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                 Peak Hour Volume Signal Warrant Report [Urban]
********************************************************************************
Intersection #1 I-880 & GISH RD
********************************************************************************
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  0  0  0    1  0  1  0  0    0  0  1  0  1    1  0  0  0  1
Initial Vol:    0    0    0   345  163    0     0  413  139   302    0  208
------------|---------------||---------------||---------------||---------------|
Major Street Volume:              508
Minor Approach Volume:            552
Minor Approach Volume Threshold: 665
--------------------------------------------------------------------------------
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.
```


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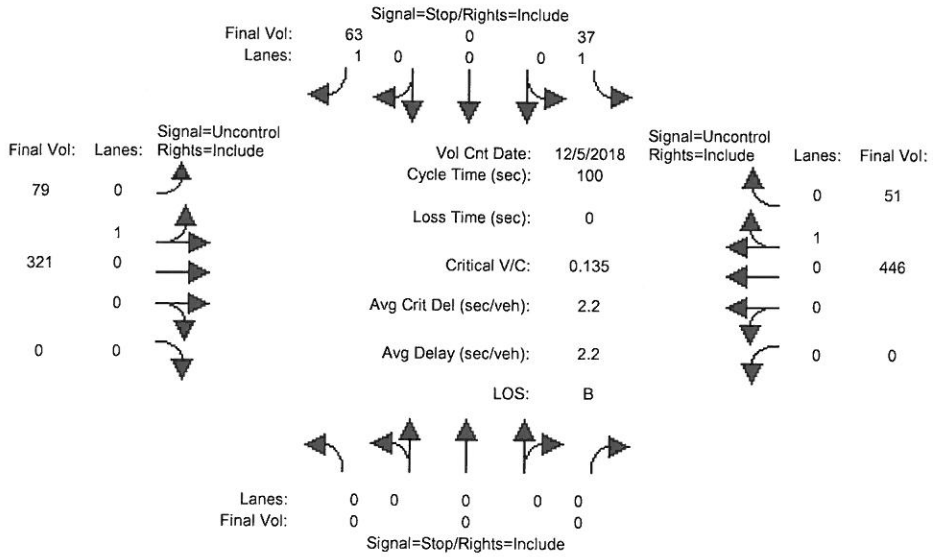
Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing AM

Intersection #2: INDUSTRIAL AVE & GISH RD




```
Street Name:          Industrial Ave                          Gish Rd
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: 5 Dec 2018 << 7:45-8:45 AM
Base Vol:       0     0     0    37     0    63    79   321     0     0   446    51
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:    0     0     0    37     0    63    79   321     0     0   446    51
Added Vol:      0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:    0     0     0    37     0    63    79   321     0     0   446    51
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:     0     0     0    37     0    63    79   321     0     0   446    51
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
FinalVolume:    0     0     0    37     0    63    79   321     0     0   446    51
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.4 xxxx   6.2   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5 xxxx   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   951 xxxx   472   497 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx   291 xxxx   596  1077 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx   274 xxxx   596  1077 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  0.14 xxxx  0.11  0.07 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   0.5 xxxx   0.4   0.2 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx  20.2 xxxx  11.7   8.6 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *     *     *     C     *     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   0.2 xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx   8.6 xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *     *     *     *     *     *     A     *     *     *     *     *
ApproachDel:    xxxxxx             14.9            xxxxxx            xxxxxx
ApproachLOS:         *                B                 *                 *
Note: Queue reported is the number of cars per lane.
                    Peak Hour Delay Signal Warrant Report
*******************************************************************************
Intersection #2 INDUSTRIAL AVE & GISH RD
*******************************************************************************
```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```
Future Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign      Uncontrolled     Uncontrolled
Lanes:        0  0  0  0  0    1  0  0  0  1    0  1  0  0  0    0  0  0  1  0
Initial Vol:    0     0     0    37     0    63    79  321     0     0  446    51
ApproachDel:    xxxxxx              14.9           xxxxxx           xxxxxx
------------|---------------||---------------||---------------||---------------|
Approach[southbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.4]
   FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=100]
   FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=997]
   SUCCEED - Total volume greater than or equal to 650 for intersection
             with less than four approaches.
-------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                Peak Hour Volume Signal Warrant Report [Urban]
*******************************************************************************
Intersection #2 INDUSTRIAL AVE & GISH RD
*******************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign      Uncontrolled     Uncontrolled
Lanes:        0  0  0  0  0    1  0  0  0  1    0  1  0  0  0    0  0  0  1  0
Initial Vol:    0     0     0    37     0    63    79  321     0     0  446    51
------------|---------------||---------------||---------------||---------------|
Major Street Volume:              897
Minor Approach Volume:            100
Minor Approach Volume Threshold: 327
-------------------------------------------------------------------------------
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.
```


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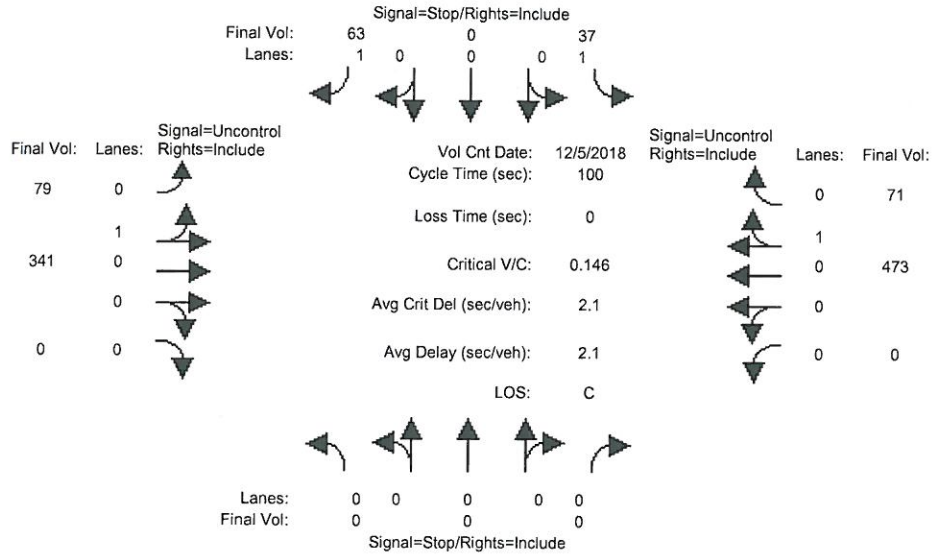
Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Background AM

Intersection #2: INDUSTRIAL AVE & GISH RD




```
Street Name:          Industrial Ave                          Gish Rd
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: 5 Dec 2018 << 7:45-8:45 AM
Base Vol:       0     0     0    37     0    63    79   321     0     0   446    51
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:    0     0     0    37     0    63    79   321     0     0   446    51
Added Vol:      0     0     0     0     0     0     0     0     0     0     0     0
ATI AM:         0     0     0     0     0     0     0    20     0     0    27    20
Initial Fut:    0     0     0    37     0    63    79   341     0     0   473    71
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:     0     0     0    37     0    63    79   341     0     0   473    71
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
FinalVolume:    0     0     0    37     0    63    79   341     0     0   473    71
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.4 xxxx   6.2   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5 xxxx   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  1008 xxxx   509   544 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx   269 xxxx   569  1035 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx   253 xxxx   569  1035 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  0.15 xxxx  0.11  0.08 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   0.5 xxxx   0.4   0.2 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx  21.7 xxxx  12.1   8.8 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *     *     *     C     *     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   0.2 xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx   8.8 xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *     *     *     *     *     *     A     *     *     *     *     *
ApproachDel:    xxxxxx            15.7            xxxxxx            xxxxxx
ApproachLOS:          *               C               *               *
Note: Queue reported is the number of cars per lane.
                    Peak Hour Delay Signal Warrant Report
*******************************************************************************
Intersection #2 INDUSTRIAL AVE & GISH RD
*******************************************************************************
```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```
Future Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign      Uncontrolled     Uncontrolled
Lanes:        0  0  0  0  0    1  0  0  0  1    0  1  0  0  0    0  0  0  1  0
Initial Vol:    0     0     0    37     0    63    79  341     0     0  473    71
ApproachDel:    xxxxxx              15.7           xxxxxx           xxxxxx
------------|---------------||---------------||---------------||---------------|
Approach[southbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.4]
   FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=100]
   FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1064]
   SUCCEED - Total volume greater than or equal to 650 for intersection
             with less than four approaches.
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                Peak Hour Volume Signal Warrant Report [Urban]
********************************************************************************
Intersection #2 INDUSTRIAL AVE & GISH RD
********************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign      Uncontrolled     Uncontrolled
Lanes:        0  0  0  0  0    1  0  0  0  1    0  1  0  0  0    0  0  0  1  0
Initial Vol:    0     0     0    37     0    63    79  341     0     0  473    71
------------|---------------||---------------||---------------||---------------|
Major Street Volume:                964
Minor Approach Volume:              100
Minor Approach Volume Threshold:    304
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

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```


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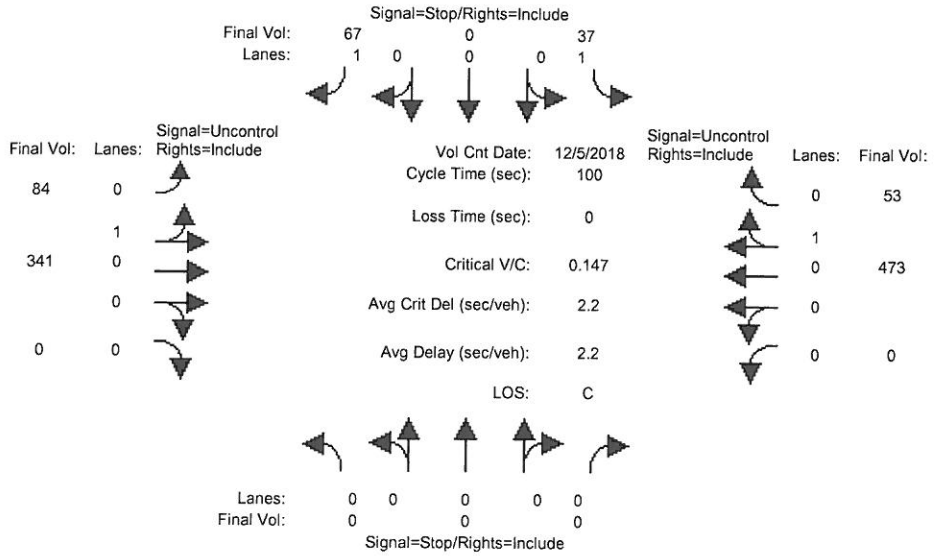
Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Background + Project AM

Intersection #2: INDUSTRIAL AVE & GISH RD




```
Street Name:          Industrial Ave                    Gish Rd
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: 5 Dec 2018 << 7:45-8:45 AM
Base Vol:       0    0    0   37    0   63   79  341    0    0  473   51
Growth Adj:  1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse:    0    0    0   37    0   63   79  341    0    0  473   51
Added Vol:      0    0    0    0    0    0    0    0    0    0    0    0
Project Tri:    0    0    0    0    0    4    5    0    0    0    0    2
Initial Fut:    0    0    0   37    0   67   84  341    0    0  473   53
User Adj:    1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:     1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume:     0    0    0   37    0   67   84  341    0    0  473   53
Reduct Vol:     0    0    0    0    0    0    0    0    0    0    0    0
FinalVolume:    0    0    0   37    0   67   84  341    0    0  473   53
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx  6.4 xxxx  6.2  4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx  3.5 xxxx  3.3  2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx 1009 xxxx  500  526 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx  269 xxxx  575 1051 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx  251 xxxx  575 1051 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx 0.15 xxxx 0.12 0.08 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  0.5 xxxx  0.4  0.3 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx 21.8 xxxx 12.1  8.7 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *    C    *    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  0.3 xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx  8.7 xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *    A    *     *     *    *     *
ApproachDel:    xxxxxx            15.5          xxxxxx            xxxxxx
ApproachLOS:         *              C               *                 *
Note: Queue reported is the number of cars per lane.
                    Peak Hour Delay Signal Warrant Report
*******************************************************************************
Intersection #2 INDUSTRIAL AVE & GISH RD
*******************************************************************************
```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```
Future Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        0  0  0  0  0    1  0  0  0  1    0  1  0  0  0    0  0  0  1  0
Initial Vol:    0     0     0    37     0    67    84   341     0     0   473    53
ApproachDel:    xxxxxx              15.5           xxxxxx           xxxxxx
------------|---------------||---------------||---------------||---------------|
Approach[southbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.4]
   FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=104]
   FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1055]
   SUCCEED - Total volume greater than or equal to 650 for intersection
             with less than four approaches.
-------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
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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 #2 INDUSTRIAL AVE & GISH RD
*******************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        0  0  0  0  0    1  0  0  0  1    0  1  0  0  0    0  0  0  1  0
Initial Vol:    0     0     0    37     0    67    84   341     0     0   473    53
------------|---------------||---------------||---------------||---------------|
Major Street Volume:              951
Minor Approach Volume:            104
Minor Approach Volume Threshold: 308
-------------------------------------------------------------------------------
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
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```


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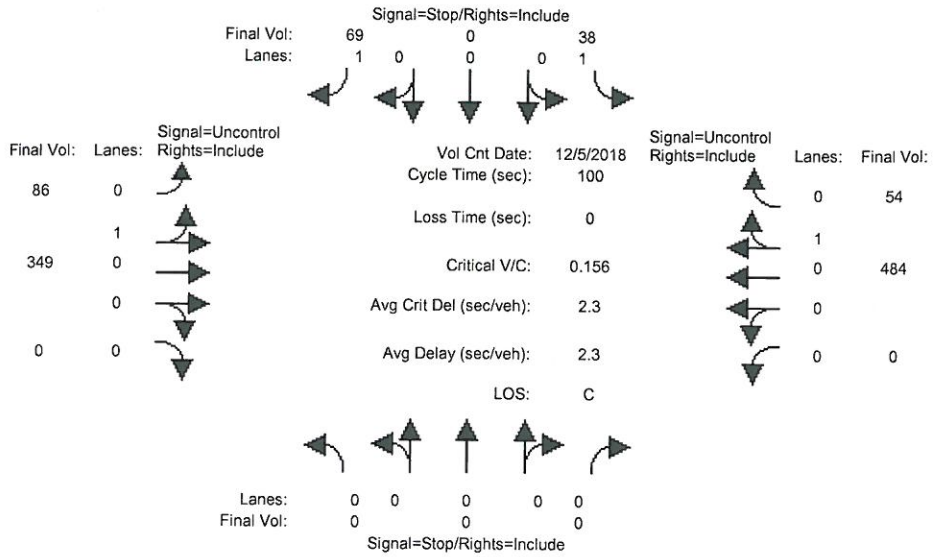
Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Cumulative + Prj AM

Intersection #2: INDUSTRIAL AVE & GISH RD




```
Street Name:          Industrial Ave                          Gish Rd
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: 5 Dec 2018 << 7:45-8:45 AM
Base Vol:       0    0    0   38    0   65   81  349    0    0  484   52
Growth Adj:  1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse:    0    0    0   38    0   65   81  349    0    0  484   52
Added Vol:      0    0    0    0    0    0    0    0    0    0    0    0
Prj AM:         0    0    0    0    0    4    5    0    0    0    0    2
Initial Fut:    0    0    0   38    0   69   86  349    0    0  484   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:     0    0    0   38    0   69   86  349    0    0  484   54
Reduct Vol:     0    0    0    0    0    0    0    0    0    0    0    0
FinalVolume:    0    0    0   38    0   69   86  349    0    0  484   54
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx  6.4 xxxx  6.2  4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx  3.5 xxxx  3.3  2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx 1032 xxxx  511  538 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx  260 xxxx  567 1040 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx  243 xxxx  567 1040 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx 0.16 xxxx 0.12 0.08 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  0.5 xxxx  0.4  0.3 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx 22.6 xxxx 12.2  8.8 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *    *    C    *    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  0.3 xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx  8.8 xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *    *    *    *    *    A    *    *    *    *    *
ApproachDel:   xxxxxx            15.9          xxxxxx          xxxxxx
ApproachLOS:        *              C               *               *
Note: Queue reported is the number of cars per lane.
                    Peak Hour Delay Signal Warrant Report
*******************************************************************************
Intersection #2 INDUSTRIAL AVE & GISH RD
*******************************************************************************
```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```
Future Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign      Uncontrolled     Uncontrolled
Lanes:        0  0  0  0  0    1  0  0  0  1    0  1  0  0  0    0  0  0  1  0
Initial Vol:    0     0     0    38     0    69    86  349     0     0  484    54
ApproachDel:    xxxxxx              15.9           xxxxxx           xxxxxx
------------|---------------||---------------||---------------||---------------|
Approach[southbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.5]
   FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=107]
   FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1080]
   SUCCEED - Total volume greater than or equal to 650 for intersection
             with less than four approaches.
-------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                Peak Hour Volume Signal Warrant Report [Urban]
*******************************************************************************
Intersection #2 INDUSTRIAL AVE & GISH RD
*******************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign      Uncontrolled     Uncontrolled
Lanes:        0  0  0  0  0    1  0  0  0  1    0  1  0  0  0    0  0  0  1  0
Initial Vol:    0     0     0    38     0    69    86  349     0     0  484    54
------------|---------------||---------------||---------------||---------------|
Major Street Volume:              973
Minor Approach Volume:            107
Minor Approach Volume Threshold: 301
-------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

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jurisdiction.  Consideration of the other signal warrants, which is beyond
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```


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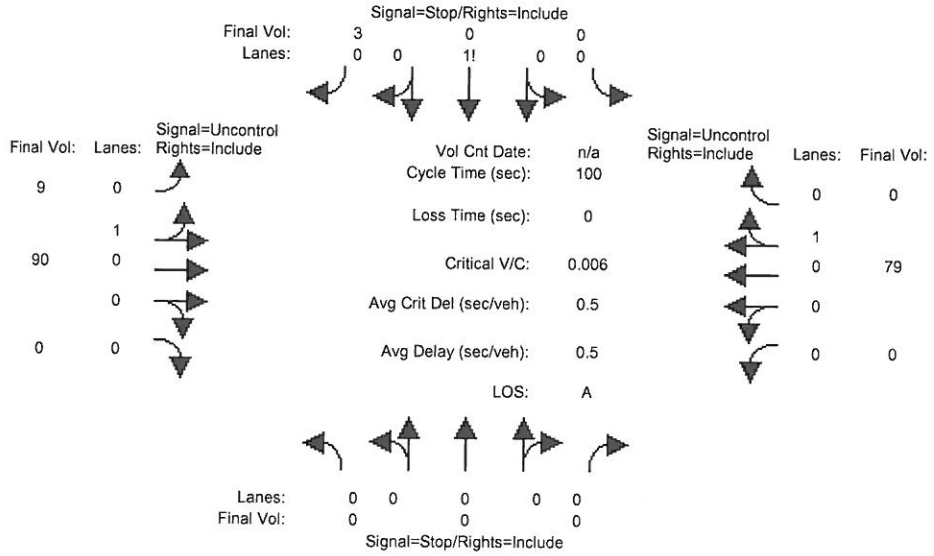
Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Background + Project AM

Intersection #6: PROJECT DRIVEEWAY & KINGS ROW



Street Name:	Project Driveway						Kings Row					
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	0	0	0	0	0	0	90	0	0	79	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	0	0	90	0	0	79	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Project AM:	0	0	0	0	0	3	9	0	0	0	0	0
Initial Fut:	0	0	0	0	0	3	9	90	0	0	79	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	0	0	3	9	90	0	0	79	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	0	0	3	9	90	0	0	79	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	79	79	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	987	1532	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	987	1532	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	0.01	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	0.0	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	8.7	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	A	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			8.7			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

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

Peak Hour Delay Signal Warrant Report

****

Intersection #6 PROJECT DRIVEEWAY & KINGS ROW

****

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```
Future Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        0  0  0  0  0    0  0  0  0  1    0  1  0  0  0    0  0  1  0  0
Initial Vol:    0     0     0    0     0     3    9    90     0    0    79     0
ApproachDel:    xxxxxx              8.7            xxxxxx           xxxxxx
------------|---------------||---------------||---------------||---------------|
Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
   FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=3]
   FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=181]
   FAIL - Total volume less than 650 for intersection
          with less than four approaches.
-------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                Peak Hour Volume Signal Warrant Report [Urban]
*******************************************************************************
Intersection #6 PROJECT DRIVEEWAY & KINGS ROW
*******************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        0  0  0  0  0    0  0  0  0  1    0  1  0  0  0    0  0  1  0  0
Initial Vol:    0     0     0    0     0     3    9    90     0    0    79     0
------------|---------------||---------------||---------------||---------------|
Major Street Volume:              178
Minor Approach Volume:            3
Minor Approach Volume Threshold:  680
-------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
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a traffic signal in the future.  Intersections that exceed this warrant
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```


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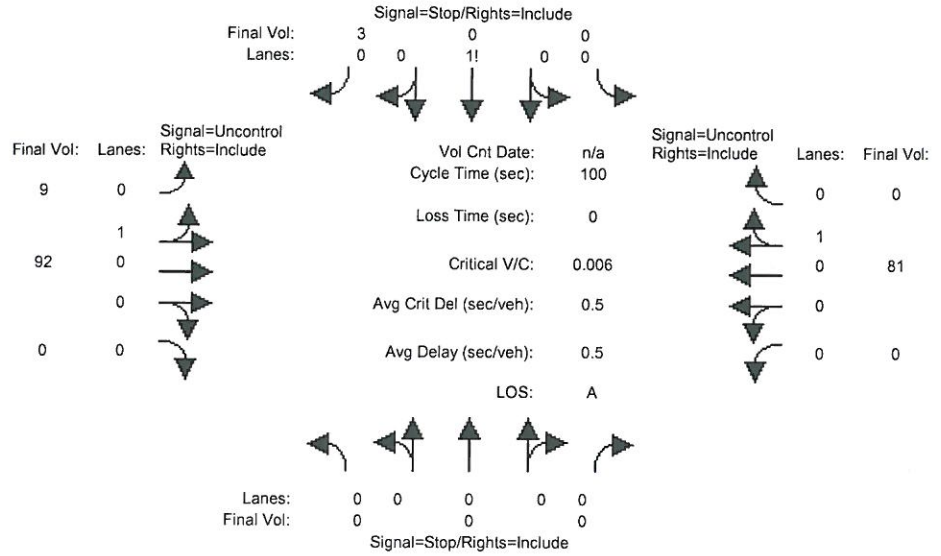
Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Cumulative + Prj AM

Intersection #6: PROJECT DRIVEEWAY & KINGS ROW



Street Name:	Project Driveway						Kings Row					
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	0	0	0	0	0	0	92	0	0	81	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	0	0	92	0	0	81	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Project AM:	0	0	0	0	0	3	9	0	0	0	0	0
Initial Fut:	0	0	0	0	0	3	9	92	0	0	81	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	0	0	3	9	92	0	0	81	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	0	0	3	9	92	0	0	81	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	81	81	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	985	1529	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	985	1529	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	0.01	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	0.0	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	8.7	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	A	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			8.7			xxxxxx			xxxxxx		
ApproachLOS:		*			A			*			*	

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

Peak Hour Delay Signal Warrant Report

****

Intersection #6 PROJECT DRIVEEWAY & KINGS ROW

****

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Future Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign      Uncontrolled     Uncontrolled
Lanes:        0  0  0  0  0    0  0  0  0  1    0  1  0  0  0    0  0  1  0  0
Initial Vol:    0     0     0    0     0     3    9    92     0    0    81     0
ApproachDel:    xxxxxx              8.7          xxxxxx           xxxxxx
------------|---------------||---------------||---------------||---------------|
Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
   FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=3]
   FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=185]
   FAIL - Total volume less than 650 for intersection
          with less than four approaches.
-------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                Peak Hour Volume Signal Warrant Report [Urban]
*******************************************************************************
Intersection #6 PROJECT DRIVEEWAY & KINGS ROW
*******************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign      Uncontrolled     Uncontrolled
Lanes:        0  0  0  0  0    0  0  0  0  1    0  1  0  0  0    0  0  1  0  0
Initial Vol:    0     0     0    0     0     3    9    92     0    0    81     0
------------|---------------||---------------||---------------||---------------|
Major Street Volume:              182
Minor Approach Volume:            3
Minor Approach Volume Threshold:  674
-------------------------------------------------------------------------------
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.
```


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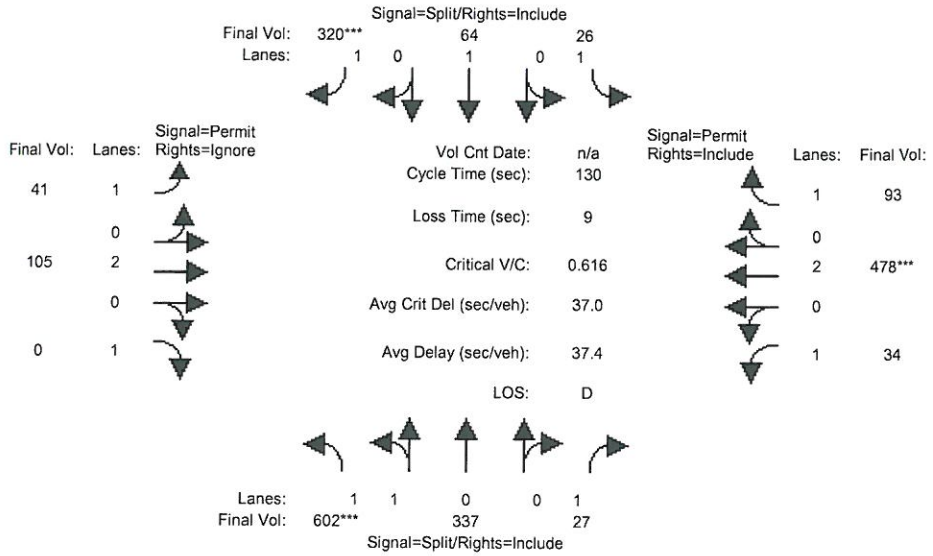
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing AM

Intersection #3289: N 10TH ST & OLD BAYSHORE HWY



Street Name:	N 10TH ST						OLD BAYSHORE HWY					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	10	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:	602	337	27	26	64	320	41	105	326	34	478	93
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:	602	337	27	26	64	320	41	105	326	34	478	93
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:	602	337	27	26	64	320	41	105	326	34	478	93
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	602	337	27	26	64	320	41	105	0	34	478	93
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	602	337	27	26	64	320	41	105	0	34	478	93
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	602	337	27	26	64	320	41	105	0	34	478	93
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.95	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.29	0.71	1.00	1.00	1.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	2276	1274	1750	1750	1900	1750	1750	3800	1750	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.26	0.26	0.02	0.01	0.03	0.18	0.02	0.03	0.00	0.02	0.13	0.05
Crit Moves:	****					****					****	
Green Time:	55.8	55.8	55.8	38.6	38.6	38.6	26.6	26.6	0.0	26.6	26.6	26.6
Volume/Cap:	0.62	0.62	0.04	0.05	0.11	0.62	0.11	0.14	0.00	0.10	0.62	0.26
Uniform Del:	28.8	28.8	21.5	32.6	33.2	39.3	42.1	42.3	0.0	42.0	47.1	43.5
IncremntDel:	0.8	0.8	0.0	0.0	0.1	2.2	0.1	0.1	0.0	0.1	1.5	0.4
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	0.00	1.00	1.00	1.00
Delay/Veh:	29.5	29.5	21.5	32.7	33.3	41.5	42.3	42.4	0.0	42.1	48.6	43.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	29.5	29.5	21.5	32.7	33.3	41.5	42.3	42.4	0.0	42.1	48.6	43.9
LOS by Move:	C	C	C	C	C	D	D	D	A	D	D	D
DesignQueue:	22	22	1	1	3	19	3	3	0	2	14	6

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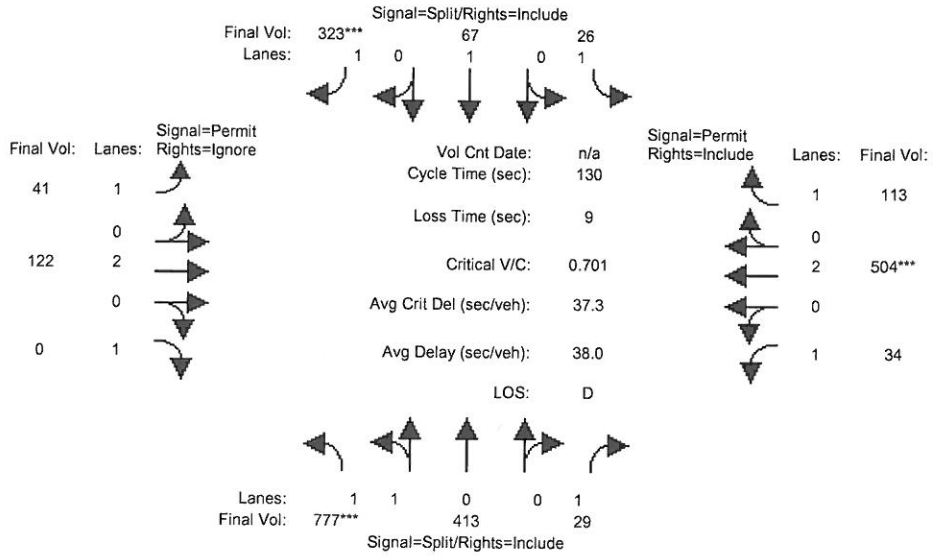
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background AM

Intersection #3289: N 10TH ST & OLD BAYSHORE HWY



Street Name:	N 10TH ST						OLD BAYSHORE HWY					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	10	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:	602	337	27	26	64	320	41	105	326	34	478	93
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:	602	337	27	26	64	320	41	105	326	34	478	93
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI AM:	175	76	2	0	3	3	0	17	15	0	26	20
Initial Fut:	777	413	29	26	67	323	41	122	341	34	504	113
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	777	413	29	26	67	323	41	122	0	34	504	113
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	777	413	29	26	67	323	41	122	0	34	504	113
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	777	413	29	26	67	323	41	122	0	34	504	113
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.95	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.32	0.68	1.00	1.00	1.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	2318	1232	1750	1750	1900	1750	1750	3800	1750	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.34	0.34	0.02	0.01	0.04	0.18	0.02	0.03	0.00	0.02	0.13	0.06
Crit Moves:	****					****					****	
Green Time:	62.2	62.2	62.2	34.2	34.2	34.2	24.6	24.6	0.0	24.6	24.6	24.6
Volume/Cap:	0.70	0.70	0.03	0.06	0.13	0.70	0.12	0.17	0.00	0.10	0.70	0.34
Uniform Del:	26.6	26.6	18.0	35.8	36.6	43.3	43.8	44.1	0.0	43.6	49.3	45.7
IncremntDel:	1.3	1.3	0.0	0.1	0.1	4.8	0.2	0.1	0.0	0.1	3.1	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	0.00	1.00	1.00	1.00
Delay/Veh:	28.0	28.0	18.0	35.9	36.7	48.0	43.9	44.3	0.0	43.7	52.4	46.3
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:	28.0	28.0	18.0	35.9	36.7	48.0	43.9	44.3	0.0	43.7	52.4	46.3
LOS by Move:	C	C	B	D	D	D	D	D	A	D	D	D
DesignQueue:	26	26	1	2	4	20	3	4	0	2	15	7

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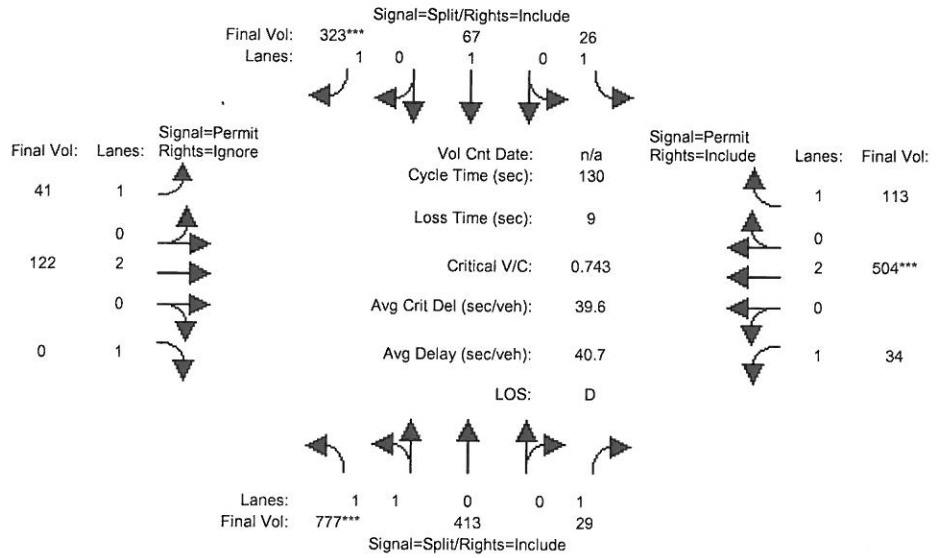
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Project AM

Intersection #3289: N 10TH ST & OLD BAYSHORE HWY



Street Name:	N 10TH ST						OLD BAYSHORE HWY					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	10	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:	777	413	29	26	67	323	41	122	341	34	504	113
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	777	413	29	26	67	323	41	122	341	34	504	113
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	777	413	29	26	67	323	41	122	341	34	504	113
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	777	413	29	26	67	323	41	122	0	34	504	113
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	777	413	29	26	67	323	41	122	0	34	504	113
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	777	413	29	26	67	323	41	122	0	34	504	113
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.89	0.97	0.78	0.88	1.00	0.78	0.17	1.00	0.92	0.60	1.00	0.78
Lanes:	1.34	0.66	1.00	1.00	1.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	2274	1209	1488	1663	1900	1488	317	3800	1750	1143	3800	1488
Capacity Analysis Module:												
Vol/Sat:	0.34	0.34	0.02	0.02	0.04	0.22	0.13	0.03	0.00	0.03	0.13	0.08
Crit Moves:	****					****					****	
Green Time:	59.8	59.8	59.8	38.0	38.0	38.0	23.2	23.2	0.0	23.2	23.2	23.2
Volume/Cap:	0.74	0.74	0.04	0.05	0.12	0.74	0.72	0.18	0.00	0.17	0.74	0.43
Uniform Del:	28.8	28.8	19.3	33.1	33.7	41.6	50.4	45.3	0.0	45.2	50.6	47.5
IncremntDel:	1.9	1.9	0.0	0.0	0.1	6.8	37.1	0.1	0.0	0.4	4.4	1.1
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	0.00	1.00	1.00	1.00
Delay/Veh:	30.7	30.7	19.4	33.1	33.8	48.4	87.5	45.4	0.0	45.6	55.0	48.6
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:	30.7	30.7	19.4	33.1	33.8	48.4	87.5	45.4	0.0	45.6	55.0	48.6
LOS by Move:	C	C	B	C	C	D	F	D	A	D	D	D
HCM2kAvgQ:	21	21	1	1	2	14	3	2	0	1	11	5

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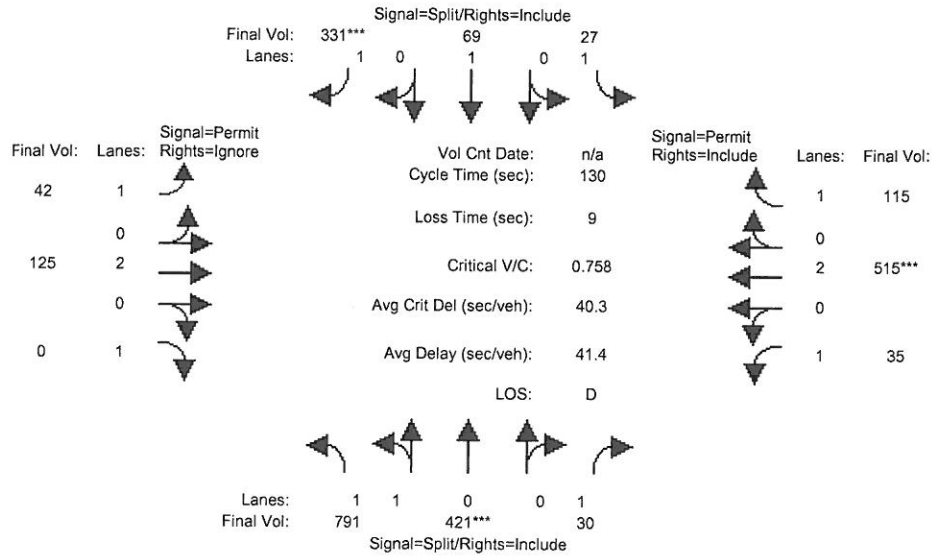
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Cumulative + Prj AM

Intersection #3289: N 10TH ST & OLD BAYSHORE HWY



Street Name:	N 10TH ST						OLD BAYSHORE HWY					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	10	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:	791	421	30	27	69	331	42	125	349	35	515	115
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:	791	421	30	27	69	331	42	125	349	35	515	115
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:	791	421	30	27	69	331	42	125	349	35	515	115
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	791	421	30	27	69	331	42	125	0	35	515	115
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	791	421	30	27	69	331	42	125	0	35	515	115
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	791	421	30	27	69	331	42	125	0	35	515	115
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.89	0.97	0.78	0.88	1.00	0.78	0.16	1.00	0.92	0.60	1.00	0.78
Lanes:	1.34	0.66	1.00	1.00	1.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	2273	1210	1488	1663	1900	1488	312	3800	1750	1136	3800	1488
Capacity Analysis Module:												
Vol/Sat:	0.35	0.35	0.02	0.02	0.04	0.22	0.13	0.03	0.00	0.03	0.14	0.08
Crit Moves:		****				****					****	
Green Time:	59.6	59.6	59.6	38.1	38.1	38.1	23.2	23.2	0.0	23.2	23.2	23.2
Volume/Cap:	0.76	0.76	0.04	0.06	0.12	0.76	0.75	0.18	0.00	0.17	0.76	0.43
Uniform Del:	29.2	29.2	19.4	33.0	33.7	41.7	50.7	45.3	0.0	45.2	50.7	47.5
IncremntDel:	2.2	2.2	0.0	0.0	0.1	7.5	43.9	0.1	0.0	0.4	5.0	1.1
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	0.00	1.00	1.00	1.00
Delay/Veh:	31.4	31.4	19.5	33.0	33.8	49.3	94.5	45.5	0.0	45.6	55.7	48.7
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:	31.4	31.4	19.5	33.0	33.8	49.3	94.5	45.5	0.0	45.6	55.7	48.7
LOS by Move:	C	C	B	C	C	D	F	D	A	D	E	D
HCM2kAvgQ:	22	22	1	1	2	14	3	2	0	1	11	5

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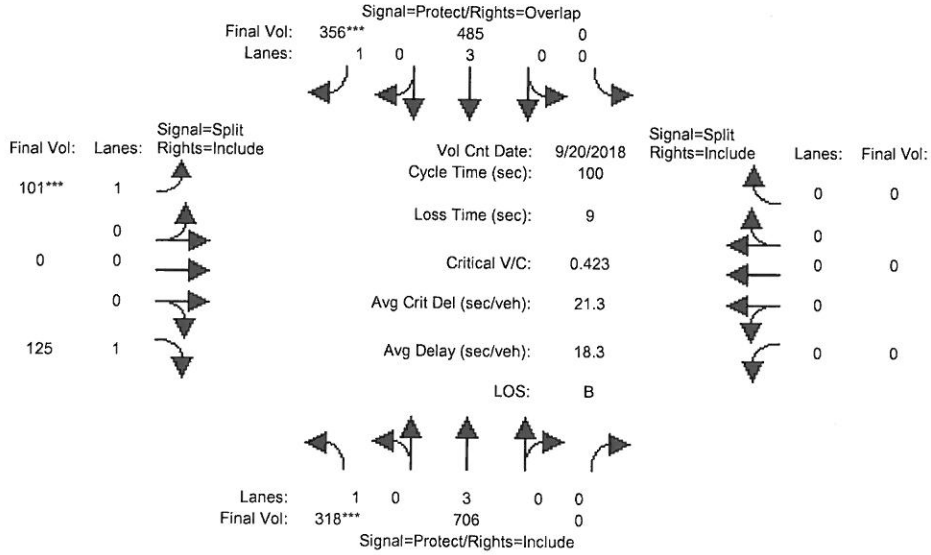
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing AM

Intersection #3554: GISH RD & OAKLAND RD



Street Name:	OAKLAND RD						GISH RD					
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	0	0	10	10	10	0	10	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 20 Sep 2018 << 7:35 - 8:35 AM												
Base Vol:	318	706	0	0	485	356	101	0	125	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	318	706	0	0	485	356	101	0	125	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	318	706	0	0	485	356	101	0	125	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	318	706	0	0	485	356	101	0	125	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	318	706	0	0	485	356	101	0	125	0	0	0
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:	318	706	0	0	485	356	101	0	125	0	0	0
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	0.00	0.00	3.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	1750	5700	0	0	5700	1750	1750	0	1750	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.18	0.12	0.00	0.00	0.09	0.20	0.06	0.00	0.07	0.00	0.00	0.00
Crit Moves:	****					****	****					
Green Time:	47.2	74.1	0.0	0.0	26.9	43.8	16.9	0.0	16.9	0.0	0.0	0.0
Volume/Cap:	0.38	0.17	0.00	0.00	0.32	0.46	0.34	0.00	0.42	0.00	0.00	0.00
Uniform Del:	17.0	3.8	0.0	0.0	29.2	19.9	36.7	0.0	37.2	0.0	0.0	0.0
IncremntDel:	0.3	0.0	0.0	0.0	0.1	0.4	0.7	0.0	1.0	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	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Delay/Veh:	17.3	3.8	0.0	0.0	29.3	20.3	37.4	0.0	38.2	0.0	0.0	0.0
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:	17.3	3.8	0.0	0.0	29.3	20.3	37.4	0.0	38.2	0.0	0.0	0.0
LOS by Move:	B	A	A	A	C	C	D	A	D	A	A	A
DesignQueue:	11	3	0	0	7	13	5	0	6	0	0	0

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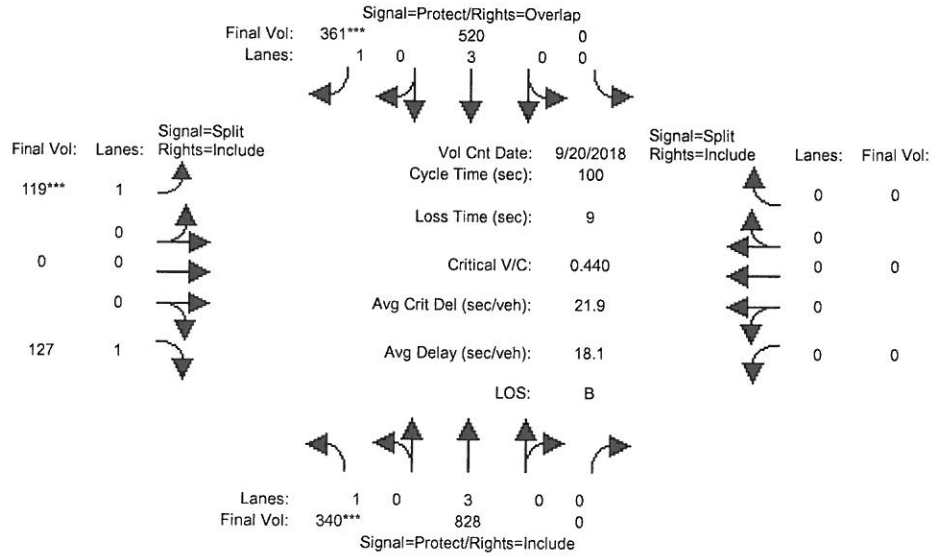
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background AM

Intersection #3554: GISH RD & OAKLAND RD



Street Name:	OAKLAND RD						GISH RD					
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	0	0	10	10	10	0	10	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 20 Sep 2018 << 7:35 - 8:35 AM												
Base Vol:	318	706	0	0	485	356	101	0	125	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	318	706	0	0	485	356	101	0	125	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI AM:	22	122	0	0	35	5	18	0	2	0	0	0
Initial Fut:	340	828	0	0	520	361	119	0	127	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	340	828	0	0	520	361	119	0	127	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	340	828	0	0	520	361	119	0	127	0	0	0
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:	340	828	0	0	520	361	119	0	127	0	0	0
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	0.00	0.00	3.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	1750	5700	0	0	5700	1750	1750	0	1750	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.19	0.15	0.00	0.00	0.09	0.21	0.07	0.00	0.07	0.00	0.00	0.00
Crit Moves:	****					****	****					
Green Time:	48.2	74.5	0.0	0.0	26.3	42.8	16.5	0.0	16.5	0.0	0.0	0.0
Volume/Cap:	0.40	0.19	0.00	0.00	0.35	0.48	0.41	0.00	0.44	0.00	0.00	0.00
Uniform Del:	16.7	3.8	0.0	0.0	29.8	20.6	37.4	0.0	37.6	0.0	0.0	0.0
IncremntDel:	0.3	0.0	0.0	0.0	0.1	0.5	1.0	0.0	1.1	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	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Delay/Veh:	17.0	3.8	0.0	0.0	30.0	21.1	38.4	0.0	38.7	0.0	0.0	0.0
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:	17.0	3.8	0.0	0.0	30.0	21.1	38.4	0.0	38.7	0.0	0.0	0.0
LOS by Move:	B	A	A	A	C	C	D	A	D	A	A	A
DesignQueue:	11	4	0	0	7	13	6	0	7	0	0	0

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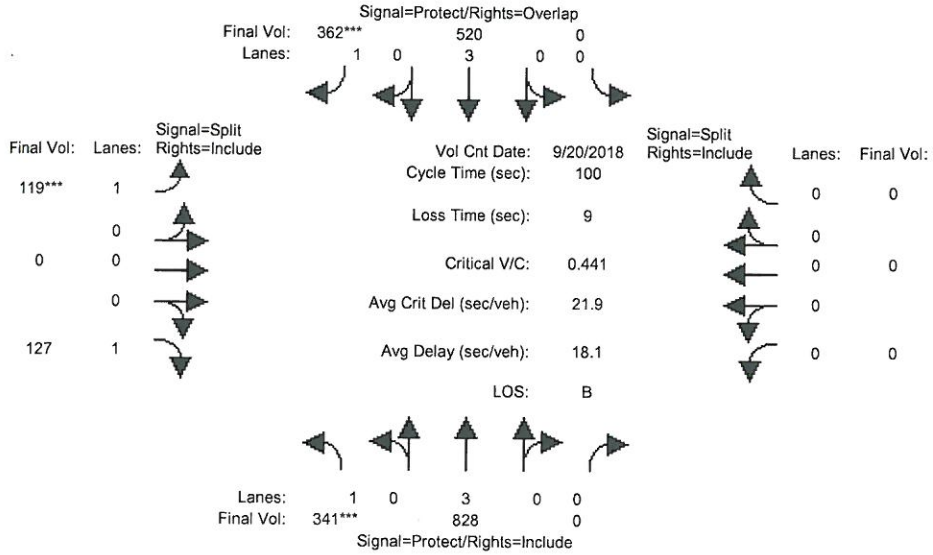
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Project AM

Intersection #3554: GISH RD & OAKLAND RD



Street Name:	OAKLAND RD						GISH RD					
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	0	0	10	10	10	0	10	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 20 Sep 2018 << 7:35 - 8:35 AM												
Base Vol:	340	828	0	0	520	361	119	0	127	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	340	828	0	0	520	361	119	0	127	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Project Tri:	1	0	0	0	0	1	0	0	0	0	0	0
Initial Fut:	341	828	0	0	520	362	119	0	127	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	341	828	0	0	520	362	119	0	127	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	341	828	0	0	520	362	119	0	127	0	0	0
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:	341	828	0	0	520	362	119	0	127	0	0	0
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	0.00	0.00	3.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	1750	5700	0	0	5700	1750	1750	0	1750	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.19	0.15	0.00	0.00	0.09	0.21	0.07	0.00	0.07	0.00	0.00	0.00
Crit Moves:	****					****	****					
Green Time:	48.2	74.6	0.0	0.0	26.4	42.8	16.4	0.0	16.4	0.0	0.0	0.0
Volume/Cap:	0.40	0.19	0.00	0.00	0.35	0.48	0.41	0.00	0.44	0.00	0.00	0.00
Uniform Del:	16.7	3.8	0.0	0.0	29.8	20.6	37.5	0.0	37.6	0.0	0.0	0.0
IncremntDel:	0.3	0.0	0.0	0.0	0.1	0.5	1.0	0.0	1.1	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	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Delay/Veh:	17.0	3.8	0.0	0.0	29.9	21.1	38.4	0.0	38.7	0.0	0.0	0.0
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:	17.0	3.8	0.0	0.0	29.9	21.1	38.4	0.0	38.7	0.0	0.0	0.0
LOS by Move:	B	A	A	A	C	C	D	A	D	A	A	A
HCM2kAvgQ:	7	3	0	0	4	9	4	0	4	0	0	0

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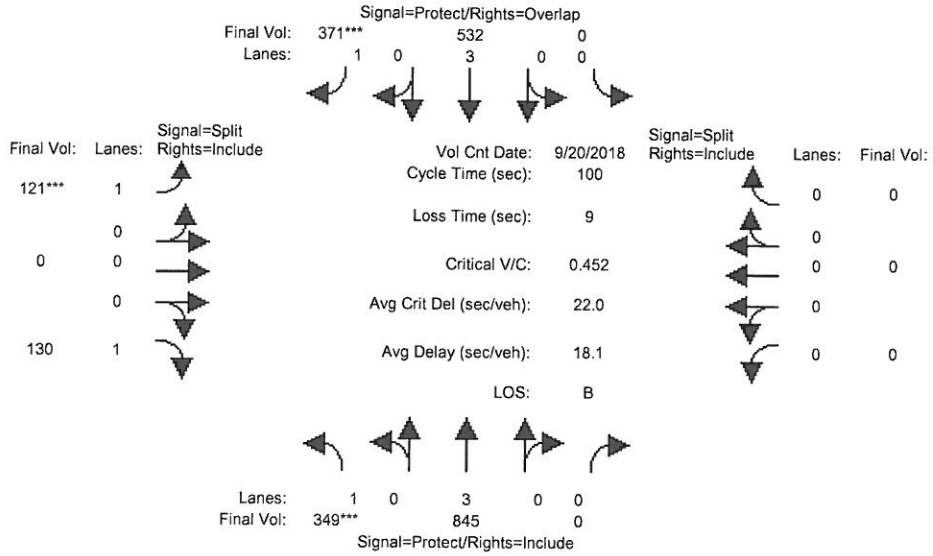
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Cumulative + Prj AM

Intersection #3554: GISH RD & OAKLAND RD



Street Name:	OAKLAND RD						GISH RD					
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	0	0	10	10	10	0	10	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Volume Module: >> Count Date: 20 Sep 2018 << 7:35 - 8:35 AM

Base Vol:	348	845	0	0	532	370	121	0	130	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	348	845	0	0	532	370	121	0	130	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Prj AM:	1	0	0	0	0	1	0	0	0	0	0	0
Initial Fut:	349	845	0	0	532	371	121	0	130	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	349	845	0	0	532	371	121	0	130	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	349	845	0	0	532	371	121	0	130	0	0	0
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:	349	845	0	0	532	371	121	0	130	0	0	0

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	0.00	0.00	3.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	1750	5700	0	0	5700	1750	1750	0	1750	0	0	0

Capacity Analysis Module:

Vol/Sat:	0.20	0.15	0.00	0.00	0.09	0.21	0.07	0.00	0.07	0.00	0.00	0.00
Crit Moves:	****					****	****					
Green Time:	47.8	74.6	0.0	0.0	26.8	43.2	16.4	0.0	16.4	0.0	0.0	0.0
Volume/Cap:	0.42	0.20	0.00	0.00	0.35	0.49	0.42	0.00	0.45	0.00	0.00	0.00
Uniform Del:	17.0	3.8	0.0	0.0	29.5	20.4	37.5	0.0	37.7	0.0	0.0	0.0
IncremntDel:	0.3	0.0	0.0	0.0	0.1	0.5	1.0	0.0	1.1	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	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Delay/Veh:	17.4	3.8	0.0	0.0	29.7	20.9	38.5	0.0	38.9	0.0	0.0	0.0
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:	17.4	3.8	0.0	0.0	29.7	20.9	38.5	0.0	38.9	0.0	0.0	0.0
LOS by Move:	B	A	A	A	C	C	D	A	D	A	A	A
HCM2kAvgQ:	8	3	0	0	5	9	4	0	4	0	0	0

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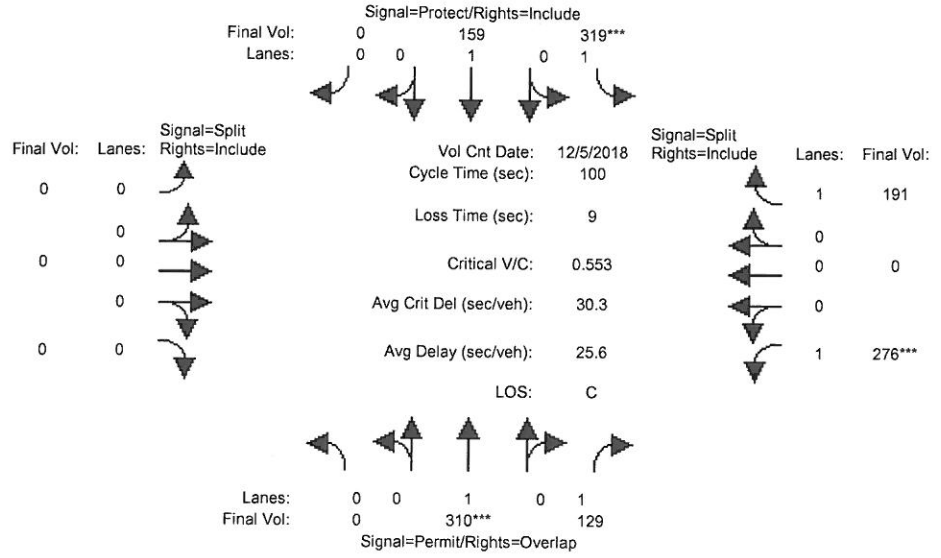
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing AM

Intersection #3555: I-880 & GISH RD



Street Name:	I-880						GISH					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	10	10	7	10	0	0	0	0	10	0	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: 5 Dec 2018 << 7:15 - 8:15 AM												
Base Vol:	0	310	129	319	159	0	0	0	0	276	0	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:	0	310	129	319	159	0	0	0	0	276	0	191
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	310	129	319	159	0	0	0	0	276	0	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:	0	310	129	319	159	0	0	0	0	276	0	191
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	310	129	319	159	0	0	0	0	276	0	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:	0	310	129	319	159	0	0	0	0	276	0	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	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	1900	1750	1750	1900	0	0	0	0	1750	0	1750
Capacity Analysis Module:												
Vol/Sat:	0.00	0.16	0.07	0.18	0.08	0.00	0.00	0.00	0.00	0.16	0.00	0.11
Crit Moves:		****		****						****		
Green Time:	0.0	29.5	58.0	33.0	62.5	0.0	0.0	0.0	0.0	28.5	0.0	28.5
Volume/Cap:	0.00	0.55	0.13	0.55	0.13	0.00	0.00	0.00	0.00	0.55	0.00	0.38
Uniform Del:	0.0	29.7	9.5	27.5	7.7	0.0	0.0	0.0	0.0	30.3	0.0	28.7
IncremntDel:	0.0	1.2	0.1	1.2	0.1	0.0	0.0	0.0	0.0	1.3	0.0	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:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Delay/Veh:	0.0	30.9	9.6	28.6	7.7	0.0	0.0	0.0	0.0	31.7	0.0	29.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	30.9	9.6	28.6	7.7	0.0	0.0	0.0	0.0	31.7	0.0	29.2
LOS by Move:	A	C	A	C	A	A	A	A	A	C	A	C
DesignQueue:	0	13	3	14	3	0	0	0	0	12	0	8

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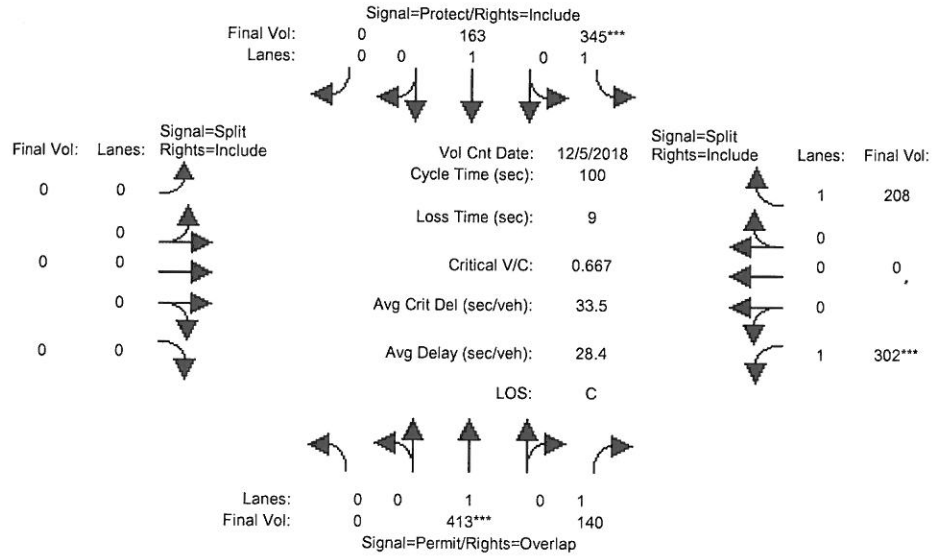
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Cumulative + Prj AM

Intersection #3555: I-880 & GISH RD



Street Name:	I-880						GISH					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	10	10	7	10	0	0	0	0	10	0	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: 5 Dec 2018 << 7:15 - 8:15 AM												
Base Vol:	0	413	139	341	163	0	0	0	0	299	0	207
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	413	139	341	163	0	0	0	0	299	0	207
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Prj AM:	0	0	1	4	0	0	0	0	0	3	0	1
Initial Fut:	0	413	140	345	163	0	0	0	0	302	0	208
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	413	140	345	163	0	0	0	0	302	0	208
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	413	140	345	163	0	0	0	0	302	0	208
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	413	140	345	163	0	0	0	0	302	0	208
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.78	0.88	1.00	0.92	0.92	1.00	0.92	0.88	1.00	0.78
Lanes:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	1900	1488	1663	1900	0	0	0	0	1663	0	1488
Capacity Analysis Module:												
Vol/Sat:	0.00	0.22	0.09	0.21	0.09	0.00	0.00	0.00	0.00	0.18	0.00	0.14
Crit Moves:		****		****						****		
Green Time:	0.0	32.6	59.9	31.1	63.7	0.0	0.0	0.0	0.0	27.3	0.0	27.3
Volume/Cap:	0.00	0.67	0.16	0.67	0.13	0.00	0.00	0.00	0.00	0.67	0.00	0.51
Uniform Del:	0.0	29.0	8.9	29.9	7.2	0.0	0.0	0.0	0.0	32.3	0.0	30.8
IncremntDel:	0.0	2.8	0.1	3.3	0.1	0.0	0.0	0.0	0.0	3.8	0.0	1.1
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:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Delay/Veh:	0.0	31.8	9.0	33.2	7.2	0.0	0.0	0.0	0.0	36.1	0.0	31.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	31.8	9.0	33.2	7.2	0.0	0.0	0.0	0.0	36.1	0.0	31.9
LOS by Move:	A	C	A	C	A	A	A	A	A	D	A	C
HCM2kAvgQ:	0	12	2	11	2	0	0	0	0	10	0	6

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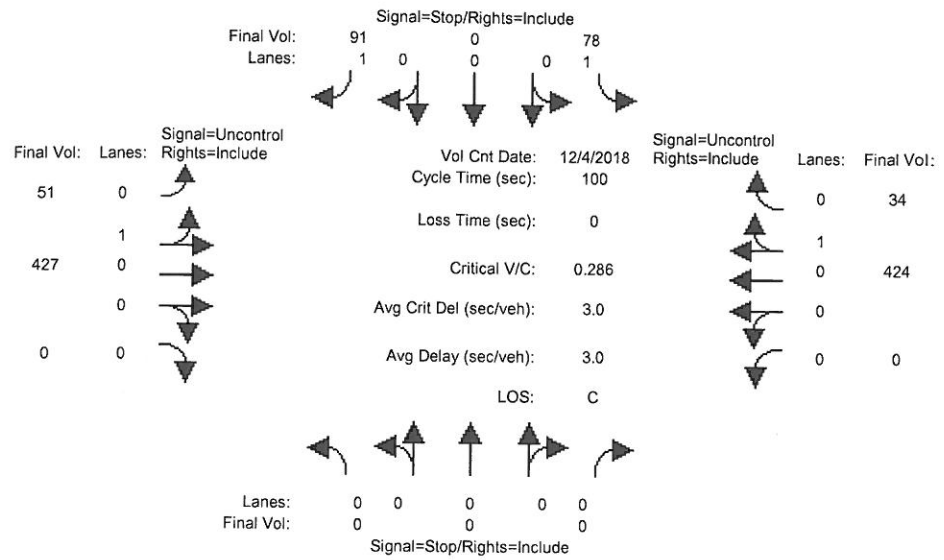
Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing PM

Intersection #2: INDUSTRIAL AVE & GISH RD




```
Street Name:          Industrial Ave                          Gish Rd
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: 4 Dec 2018 << 5:00-6:00
Base Vol:       0    0    0   78    0   91   51  427    0    0  424   34
Growth Adj:  1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse:    0    0    0   78    0   91   51  427    0    0  424   34
Added Vol:      0    0    0    0    0    0    0    0    0    0    0    0
PasserByVol:    0    0    0    0    0    0    0    0    0    0    0    0
Initial Fut:    0    0    0   78    0   91   51  427    0    0  424   34
User Adj:    1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:     1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume:     0    0    0   78    0   91   51  427    0    0  424   34
Reduct Vol:     0    0    0    0    0    0    0    0    0    0    0    0
FinalVolume:    0    0    0   78    0   91   51  427    0    0  424   34
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx  6.4 xxxx  6.2  4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx  3.5 xxxx  3.3  2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  970 xxxx  441  458 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx  283 xxxx  621 1114 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx  273 xxxx  621 1114 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx 0.29 xxxx 0.15 0.05 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  1.1 xxxx  0.5  0.1 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx 23.4 xxxx 11.8  8.4 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *    C    *    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  0.1 xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx  8.4 xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *    *    A    *     *     *    *     *
ApproachDel:    xxxxxx            17.1          xxxxxx          xxxxxx
ApproachLOS:         *              C               *               *
Note: Queue reported is the number of cars per lane.
                    Peak Hour Delay Signal Warrant Report
*******************************************************************************
Intersection #2 INDUSTRIAL AVE & GISH RD
*******************************************************************************
```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```
Future Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign      Uncontrolled     Uncontrolled
Lanes:        0  0  0  0  0    1  0  0  0  1    0  1  0  0  0    0  0  0  1  0
Initial Vol:    0     0     0    78     0    91    51  427     0     0  424    34
ApproachDel:    xxxxxx              17.1           xxxxxx           xxxxxx
------------|---------------||---------------||---------------||---------------|
Approach[southbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.8]
   FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=169]
   SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1105]
   SUCCEED - Total volume greater than or equal to 650 for intersection
             with less than four approaches.
-------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                Peak Hour Volume Signal Warrant Report [Urban]
*******************************************************************************
Intersection #2 INDUSTRIAL AVE & GISH RD
*******************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign      Uncontrolled     Uncontrolled
Lanes:        0  0  0  0  0    1  0  0  0  1    0  1  0  0  0    0  0  0  1  0
Initial Vol:    0     0     0    78     0    91    51  427     0     0  424    34
------------|---------------||---------------||---------------||---------------|
Major Street Volume:              936
Minor Approach Volume:            169
Minor Approach Volume Threshold: 313
-------------------------------------------------------------------------------
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.
```


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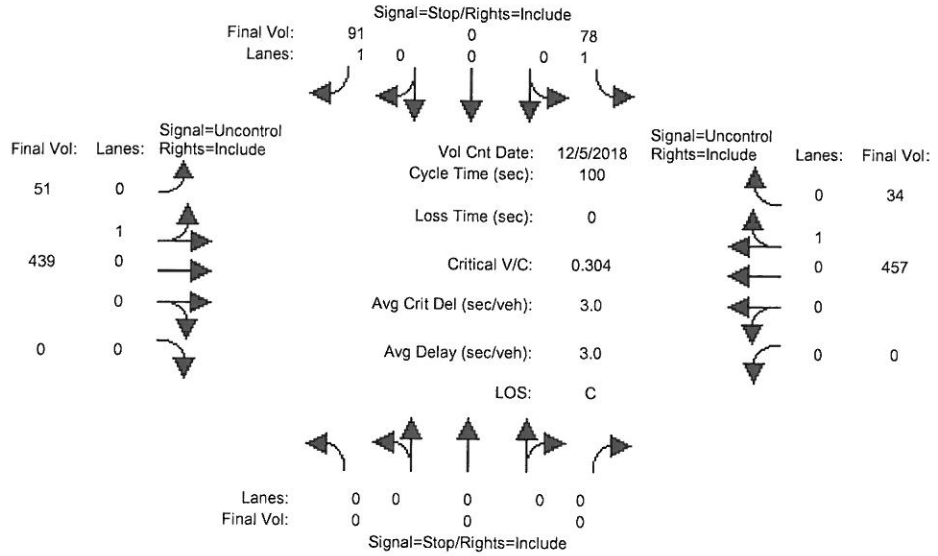
Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Background PM

Intersection #2: INDUSTRIAL AVE & GISH RD




```
Street Name:          Industrial Ave                          Gish Rd
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: 5 Dec 2018 << 7:45-8:45 AM
Base Vol:       0    0    0   78    0   91   51  427    0    0  424   34
Growth Adj:  1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse:    0    0    0   78    0   91   51  427    0    0  424   34
Added Vol:      0    0    0    0    0    0    0    0    0    0    0    0
ATI PM:         0    0    0    0    0    0    0   12    0    0   33    0
Initial Fut:    0    0    0   78    0   91   51  439    0    0  457   34
User Adj:    1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:     1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume:     0    0    0   78    0   91   51  439    0    0  457   34
Reduct Vol:     0    0    0    0    0    0    0    0    0    0    0    0
FinalVolume:    0    0    0   78    0   91   51  439    0    0  457   34
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx  6.4 xxxx  6.2  4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx  3.5 xxxx  3.3  2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx 1015 xxxx  474  491 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx  266 xxxx  595 1083 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx  256 xxxx  595 1083 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx 0.30 xxxx 0.15 0.05 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  1.2 xxxx  0.5  0.1 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx 25.1 xxxx 12.1  8.5 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *    *    D    *    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  0.1 xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx  8.5 xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *    *    *    *    *    A    *    *    *    *    *
ApproachDel:    xxxxxx            18.1          xxxxxx          xxxxxx
ApproachLOS:         *              C               *               *
Note: Queue reported is the number of cars per lane.
                    Peak Hour Delay Signal Warrant Report
*******************************************************************************
Intersection #2 INDUSTRIAL AVE & GISH RD
*******************************************************************************
```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```
Future Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        0  0  0  0  0    1  0  0  0  1    0  1  0  0  0    0  0  0  1  0
Initial Vol:    0     0     0    78     0    91    51  439     0     0  457    34
ApproachDel:    xxxxxx              18.1            xxxxxx           xxxxxx
------------|---------------||---------------||---------------||---------------|
Approach[southbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.8]
   FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=169]
   SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1150]
   SUCCEED - Total volume greater than or equal to 650 for intersection
             with less than four approaches.
-------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                Peak Hour Volume Signal Warrant Report [Urban]
*******************************************************************************
Intersection #2 INDUSTRIAL AVE & GISH RD
*******************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        0  0  0  0  0    1  0  0  0  1    0  1  0  0  0    0  0  0  1  0
Initial Vol:    0     0     0    78     0    91    51  439     0     0  457    34
------------|---------------||---------------||---------------||---------------|
Major Street Volume:              981
Minor Approach Volume:            169
Minor Approach Volume Threshold: 298
-------------------------------------------------------------------------------
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.
```


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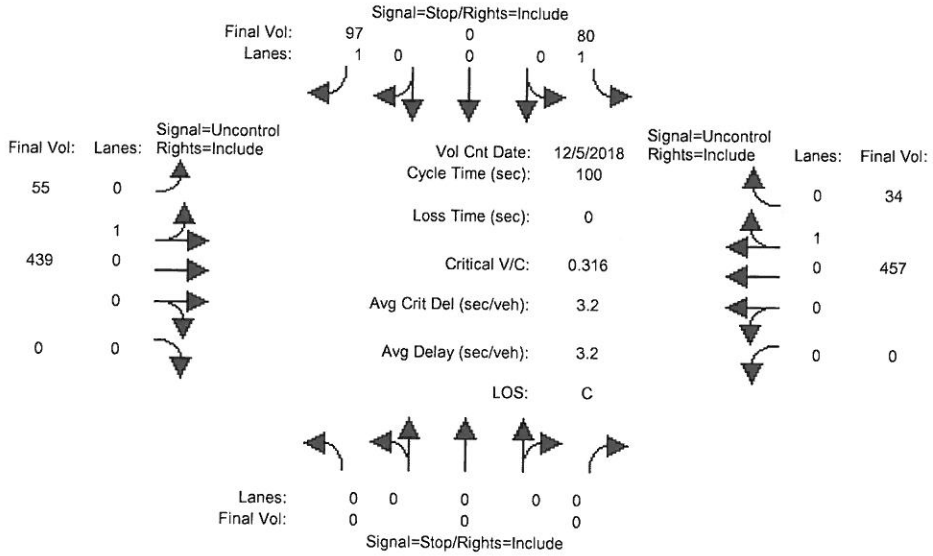
Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Background + Project PM

Intersection #2: INDUSTRIAL AVE & GISH RD




```
Street Name:          Industrial Ave                          Gish Rd
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: 5 Dec 2018 << 7:45-8:45 AM
Base Vol:       0     0     0    78     0    91    51   439     0     0   457    34
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:    0     0     0    78     0    91    51   439     0     0   457    34
Added Vol:      0     0     0     0     0     0     0     0     0     0     0     0
Project PM:     0     0     0     2     0     6     4     0     0     0     0     0
Initial Fut:    0     0     0    80     0    97    55   439     0     0   457    34
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:     0     0     0    80     0    97    55   439     0     0   457    34
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
FinalVolume:    0     0     0    80     0    97    55   439     0     0   457    34
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.4 xxxx   6.2   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5 xxxx   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  1023 xxxx   474   491 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx   263 xxxx   595  1083 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx   253 xxxx   595  1083 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  0.32 xxxx  0.16  0.05 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   1.3 xxxx   0.6   0.2 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx  25.7 xxxx  12.2   8.5 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     D    *     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  0.2 xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx  8.5 xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     A    *     *     *    *     *
ApproachDel:    xxxxxx            18.3          xxxxxx          xxxxxx
ApproachLOS:         *              C               *               *
Note: Queue reported is the number of cars per lane.
                    Peak Hour Delay Signal Warrant Report
*******************************************************************************
Intersection #2 INDUSTRIAL AVE & GISH RD
*******************************************************************************
```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```
Future Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        0  0  0  0  0    1  0  0  0  1    0  1  0  0  0    0  0  0  1  0
Initial Vol:    0     0     0    80     0    97    55  439     0     0  457    34
ApproachDel:    xxxxxx              18.3           xxxxxx           xxxxxx
------------|---------------||---------------||---------------||---------------|
Approach[southbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.9]
   FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=177]
   SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1162]
   SUCCEED - Total volume greater than or equal to 650 for intersection
             with less than four approaches.
-------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                Peak Hour Volume Signal Warrant Report [Urban]
*******************************************************************************
Intersection #2 INDUSTRIAL AVE & GISH RD
*******************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        0  0  0  0  0    1  0  0  0  1    0  1  0  0  0    0  0  0  1  0
Initial Vol:    0     0     0    80     0    97    55  439     0     0  457    34
------------|---------------||---------------||---------------||---------------|
Major Street Volume:              985
Minor Approach Volume:            177
Minor Approach Volume Threshold: 297
-------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

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jurisdiction.  Consideration of the other signal warrants, which is beyond
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```


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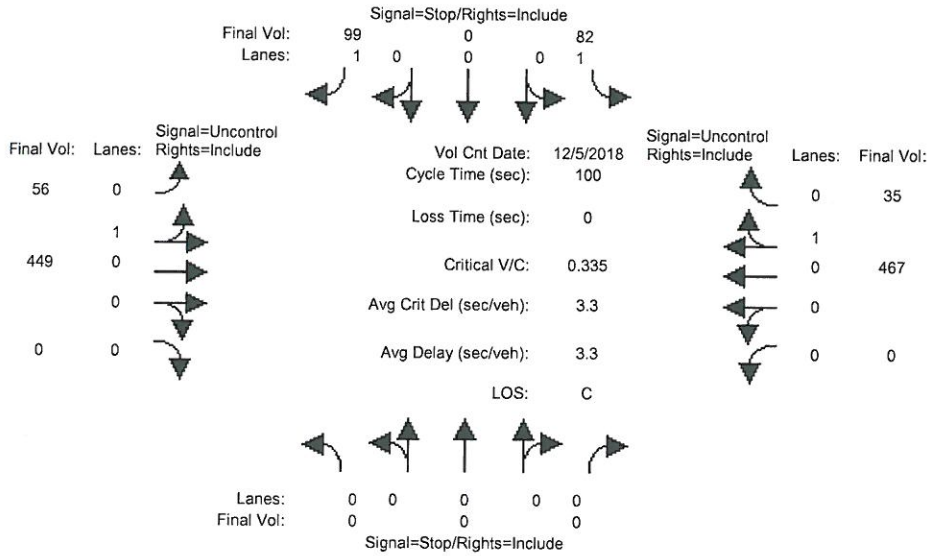
Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Cumulative + Prj PM

Intersection #2: INDUSTRIAL AVE & GISH RD




```
Street Name:          Industrial Ave                          Gish Rd
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: 5 Dec 2018 << 7:45-8:45 AM
Base Vol:       0    0    0   82    0   99   56  449    0    0  467   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:    0    0    0   82    0   99   56  449    0    0  467   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:    0    0    0   82    0   99   56  449    0    0  467   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:     0    0    0   82    0   99   56  449    0    0  467   35
Reduct Vol:     0    0    0    0    0    0    0    0    0    0    0    0
FinalVolume:    0    0    0   82    0   99   56  449    0    0  467   35
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx  6.4 xxxx  6.2  4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx  3.5 xxxx  3.3  2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx 1046 xxxx  485  502 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx  255 xxxx  587 1073 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx  245 xxxx  587 1073 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx 0.33 xxxx 0.17 0.05 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  1.4 xxxx  0.6  0.2 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx 26.9 xxxx 12.4  8.5 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *    D    *    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  0.2 xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx  8.5 xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *    A    *     *     *    *     *
ApproachDel:   xxxxxx            19.0          xxxxxx          xxxxxx
ApproachLOS:        *              C               *               *
Note: Queue reported is the number of cars per lane.
                    Peak Hour Delay Signal Warrant Report
*******************************************************************************
Intersection #2 INDUSTRIAL AVE & GISH RD
*******************************************************************************
```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```
Future Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound       East Bound        West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign      Uncontrolled      Uncontrolled
Lanes:        0  0  0  0  0    1  0  0  0  1    0  1  0  0  0    0  0  0  1  0
Initial Vol:    0     0     0    82     0    99    56  449     0     0  467    35
ApproachDel:    xxxxxx              19.0           xxxxxx            xxxxxx
------------|---------------||---------------||---------------||---------------|
Approach[southbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=1.0]
   FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=181]
   SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1188]
   SUCCEED - Total volume greater than or equal to 650 for intersection
             with less than four 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).

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a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                Peak Hour Volume Signal Warrant Report [Urban]
*******************************************************************************
Intersection #2 INDUSTRIAL AVE & GISH RD
*******************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound       East Bound        West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign      Uncontrolled      Uncontrolled
Lanes:        0  0  0  0  0    1  0  0  0  1    0  1  0  0  0    0  0  0  1  0
Initial Vol:    0     0     0    82     0    99    56  449     0     0  467    35
------------|---------------||---------------||---------------||---------------|
Major Street Volume:              1007
Minor Approach Volume:            181
Minor Approach Volume Threshold: 290
-------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

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jurisdiction.  Consideration of the other signal warrants, which is beyond
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```


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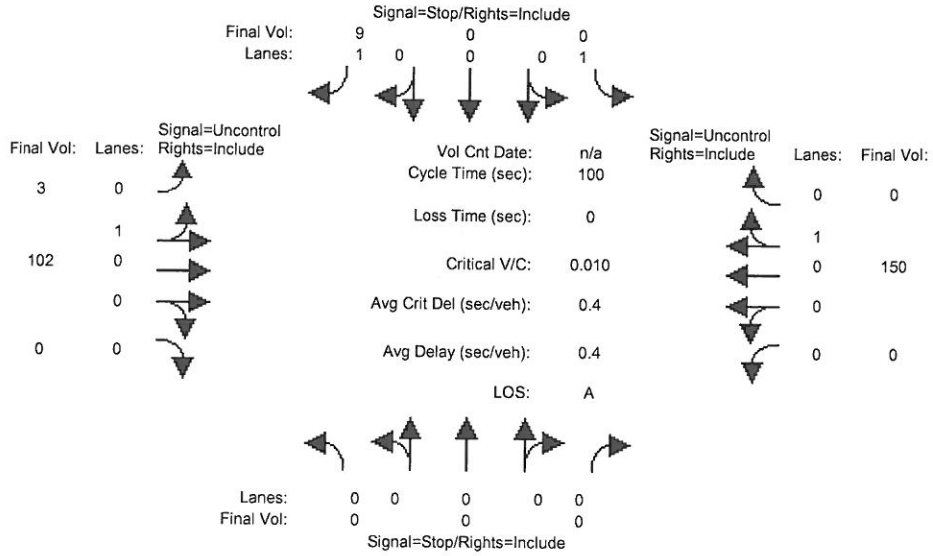
Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Background + Project PM

Intersection #6: PROJECT DRIVEEWAY & KINGS ROW



Street Name:	Project Driveway						Kings Row					
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	0	0	0	0	0	0	102	0	0	150	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	0	0	102	0	0	150	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Project PM:	0	0	0	0	0	9	3	0	0	0	0	0
Initial Fut:	0	0	0	0	0	9	3	102	0	0	150	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	0	0	9	3	102	0	0	150	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	0	0	9	3	102	0	0	150	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	258	xxxx	150	150	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	735	xxxx	902	1444	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	734	xxxx	902	1444	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.00	xxxx	0.01	0.00	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	0.0	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	9.0	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	A	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			9.0			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

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

Peak Hour Delay Signal Warrant Report

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Intersection #6 PROJECT DRIVEEWAY & KINGS ROW

****

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```
Future Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign      Uncontrolled     Uncontrolled
Lanes:        0  0  0  0  0    1  0  0  0  1    0  1  0  0  0    0  0  1  0  0
Initial Vol:    0     0     0    0     0     9    3  102     0    0  150     0
ApproachDel:    xxxxxx              9.0           xxxxxx           xxxxxx
------------|---------------||---------------||---------------||---------------|
Approach[southbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
   FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=9]
   FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=264]
   FAIL - Total volume less than 650 for intersection
          with less than four approaches.
-------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                Peak Hour Volume Signal Warrant Report [Urban]
*******************************************************************************
Intersection #6 PROJECT DRIVEEWAY & KINGS ROW
*******************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign      Uncontrolled     Uncontrolled
Lanes:        0  0  0  0  0    1  0  0  0  1    0  1  0  0  0    0  0  1  0  0
Initial Vol:    0     0     0    0     0     9    3  102     0    0  150     0
------------|---------------||---------------||---------------||---------------|
Major Street Volume:              255
Minor Approach Volume:            9
Minor Approach Volume Threshold:  722
-------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

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jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
```


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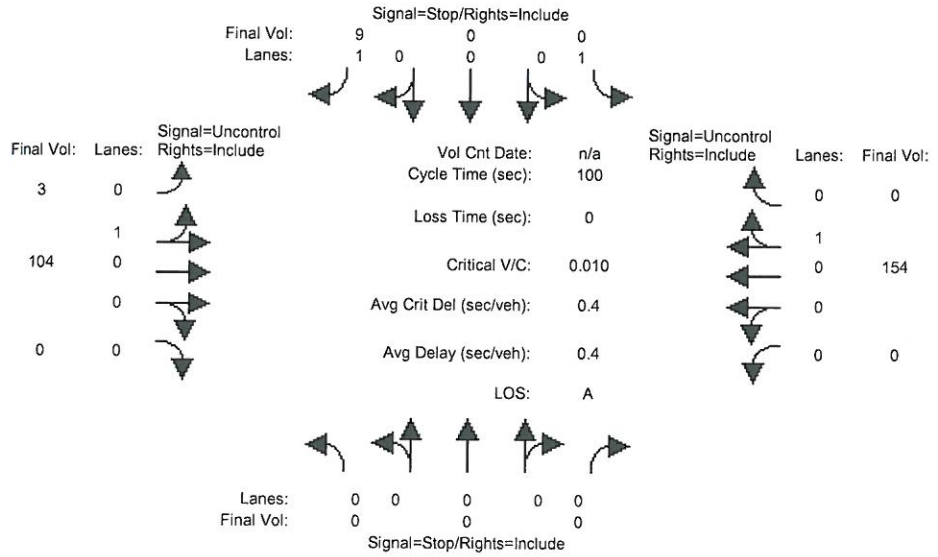
Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Cumulative + Prj PM

Intersection #6: PROJECT DRIVEEWAY & KINGS ROW




```
Street Name:          Project Driveway                    Kings Row
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     0     0     0     0     0     0   104     0     0   154     0
Growth Adj:   1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:     0     0     0     0     0     0     0   104     0     0   154     0
Added Vol:       0     0     0     0     0     0     0     0     0     0     0     0
Project PM:      0     0     0     0     0     9     3     0     0     0     0     0
Initial Fut:     0     0     0     0     0     9     3   104     0     0   154     0
User Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:      1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:      0     0     0     0     0     9     3   104     0     0   154     0
Reduct Vol:      0     0     0     0     0     0     0     0     0     0     0     0
FinalVolume:     0     0     0     0     0     9     3   104     0     0   154     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.4 xxxx   6.2   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5 xxxx   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   264 xxxx   154   154 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx   729 xxxx   897  1439 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx   728 xxxx   897  1439 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  0.00 xxxx  0.01  0.00 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx   0.0   0.0 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx   9.1   7.5 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     A     A    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx   0.0 xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx   7.5 xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     A    *     *     *    *     *
ApproachDel:    xxxxxx              9.1            xxxxxx            xxxxxx
ApproachLOS:         *                A                 *                 *
Note: Queue reported is the number of cars per lane.
                    Peak Hour Delay Signal Warrant Report
*******************************************************************************
Intersection #6 PROJECT DRIVEEWAY & KINGS ROW
*******************************************************************************
```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```
Future Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        0  0  0  0  0    1  0  0  0  1    0  1  0  0  0    0  0  1  0  0
Initial Vol:    0     0     0    0     0     9    3  104     0    0  154     0
ApproachDel:    xxxxxx              9.1            xxxxxx           xxxxxx
------------|---------------||---------------||---------------||---------------|
Approach[southbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
   FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=9]
   FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=270]
   FAIL - Total volume less than 650 for intersection
          with less than four 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).

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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 #6 PROJECT DRIVEEWAY & KINGS ROW
*******************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        0  0  0  0  0    1  0  0  0  1    0  1  0  0  0    0  0  1  0  0
Initial Vol:    0     0     0    0     0     9    3  104     0    0  154     0
------------|---------------||---------------||---------------||---------------|
Major Street Volume:              261
Minor Approach Volume:            9
Minor Approach Volume Threshold:  715
-------------------------------------------------------------------------------
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.
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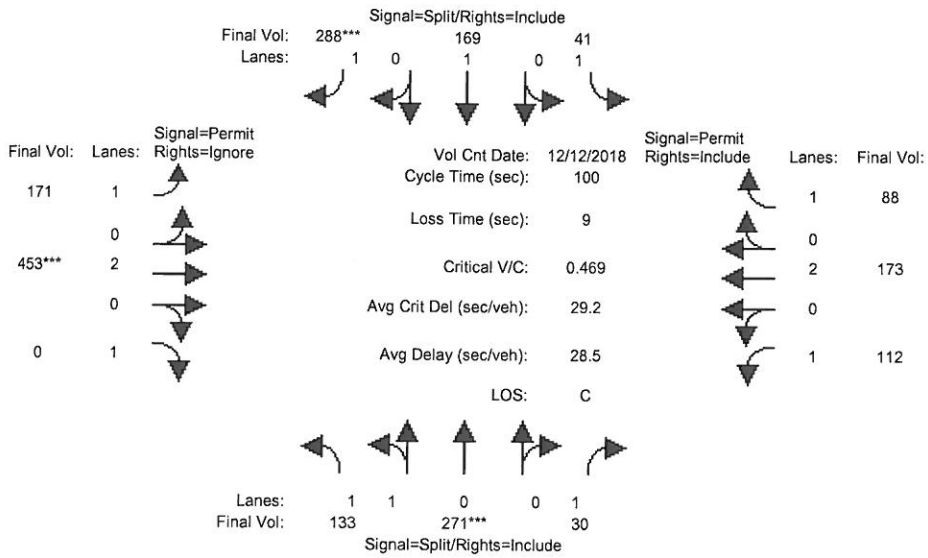
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing PM

Intersection #3289: N 10TH ST & OLD BAYSHORE HWY

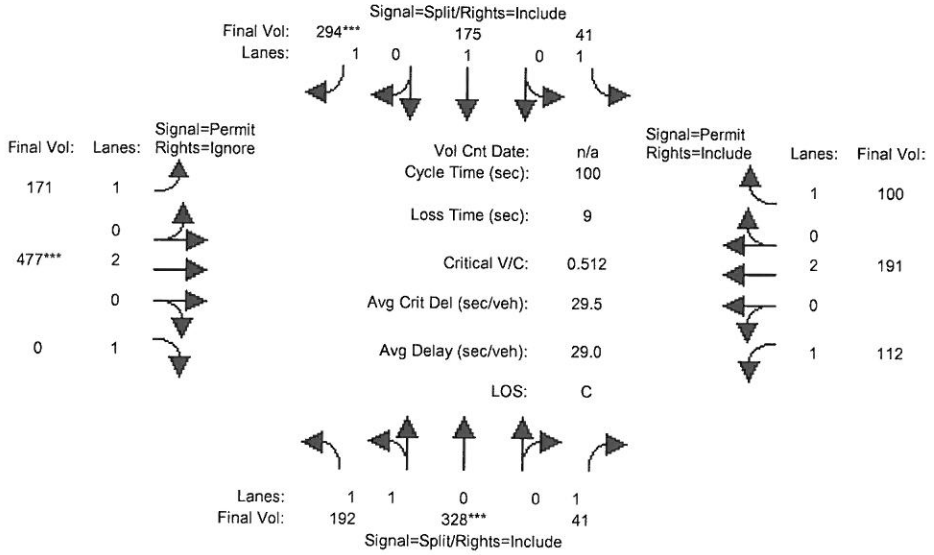


Street Name:	N 10TH ST						OLD BAYSHORE HWY					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 12 Dec 2018 << 4:15-5:15												
Base Vol:	133	271	30	41	169	288	171	453	1398	112	173	88
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:	133	271	30	41	169	288	171	453	1398	112	173	88
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:	133	271	30	41	169	288	171	453	1398	112	173	88
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	133	271	30	41	169	288	171	453	0	112	173	88
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	133	271	30	41	169	288	171	453	0	112	173	88
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	133	271	30	41	169	288	171	453	0	112	173	88
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1750	1900	1750	1750	1900	1750	1750	3800	1750	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.08	0.14	0.02	0.02	0.09	0.16	0.10	0.12	0.00	0.06	0.05	0.05
Crit Moves:		****				****		****				
Green Time:	30.4	30.4	30.4	35.1	35.1	35.1	25.4	25.4	0.0	25.4	25.4	25.4
Volume/Cap:	0.25	0.47	0.06	0.07	0.25	0.47	0.38	0.47	0.00	0.25	0.18	0.20
Uniform Del:	26.2	28.2	24.6	21.6	23.1	25.2	30.8	31.6	0.0	29.7	29.1	29.3
IncremntDel:	0.1	0.4	0.0	0.0	0.2	0.6	0.6	0.4	0.0	0.3	0.1	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	0.00	1.00	1.00	1.00
Delay/Veh:	26.3	28.6	24.7	21.6	23.3	25.8	31.4	31.9	0.0	30.0	29.2	29.5
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:	26.3	28.6	24.7	21.6	23.3	25.8	31.4	31.9	0.0	30.0	29.2	29.5
LOS by Move:	C	C	C	C	C	C	C	C	A	C	C	C
HCM2kAvgQ:	3	7	1	1	4	8	5	6	0	3	2	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 #3289: N 10TH ST & OLD BAYSHORE HWY



Street Name:	N 10TH ST						OLD BAYSHORE HWY					
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	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:	133	271	30	41	169	288	171	453	1398	112	173	88
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:	133	271	30	41	169	288	171	453	1398	112	173	88
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI PM:	59	57	11	0	6	6	0	24	19	0	18	12
Initial Fut:	192	328	41	41	175	294	171	477	1417	112	191	100
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	192	328	41	41	175	294	171	477	0	112	191	100
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	192	328	41	41	175	294	171	477	0	112	191	100
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	192	328	41	41	175	294	171	477	0	112	191	100
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1750	1900	1750	1750	1900	1750	1750	3800	1750	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.11	0.17	0.02	0.02	0.09	0.17	0.10	0.13	0.00	0.06	0.05	0.06
Crit Moves:		****				****		****				
Green Time:	33.7	33.7	33.7	32.8	32.8	32.8	24.5	24.5	0.0	24.5	24.5	24.5
Volume/Cap:	0.33	0.51	0.07	0.07	0.28	0.51	0.40	0.51	0.00	0.26	0.21	0.23
Uniform Del:	24.7	26.6	22.5	23.1	24.9	27.1	31.6	32.6	0.0	30.4	30.0	30.2
IncremntDel:	0.1	0.4	0.1	0.1	0.2	0.8	0.6	0.5	0.0	0.3	0.1	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	0.00	1.00	1.00	1.00
Delay/Veh:	24.8	27.0	22.6	23.2	25.1	27.9	32.2	33.1	0.0	30.8	30.1	30.5
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:	24.8	27.0	22.6	23.2	25.1	27.9	32.2	33.1	0.0	30.8	30.1	30.5
LOS by Move:	C	C	C	C	C	C	C	C	A	C	C	C
HCM2kAvgQ:	5	8	1	1	4	8	5	7	0	3	2	3

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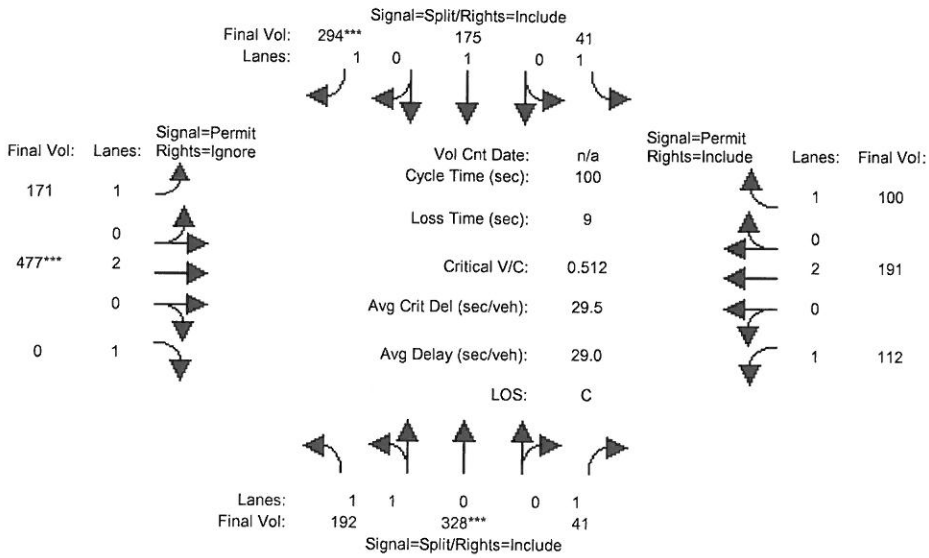
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Project PM

Intersection #3289: N 10TH ST & OLD BAYSHORE HWY



Street Name:	N 10TH ST						OLD BAYSHORE HWY					
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	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:	192	328	41	41	175	294	171	477	1417	112	191	100
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	192	328	41	41	175	294	171	477	1417	112	191	100
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Project Tri:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	192	328	41	41	175	294	171	477	1417	112	191	100
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	192	328	41	41	175	294	171	477	0	112	191	100
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	192	328	41	41	175	294	171	477	0	112	191	100
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	192	328	41	41	175	294	171	477	0	112	191	100
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1750	1900	1750	1750	1900	1750	1750	3800	1750	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.11	0.17	0.02	0.02	0.09	0.17	0.10	0.13	0.00	0.06	0.05	0.06
Crit Moves:		****				****		****				
Green Time:	33.7	33.7	33.7	32.8	32.8	32.8	24.5	24.5	0.0	24.5	24.5	24.5
Volume/Cap:	0.33	0.51	0.07	0.07	0.28	0.51	0.40	0.51	0.00	0.26	0.21	0.23
Uniform Del:	24.7	26.6	22.5	23.1	24.9	27.1	31.6	32.6	0.0	30.4	30.0	30.2
IncremntDel:	0.1	0.4	0.1	0.1	0.2	0.8	0.6	0.5	0.0	0.3	0.1	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	0.00	1.00	1.00	1.00
Delay/Veh:	24.8	27.0	22.6	23.2	25.1	27.9	32.2	33.1	0.0	30.8	30.1	30.5
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:	24.8	27.0	22.6	23.2	25.1	27.9	32.2	33.1	0.0	30.8	30.1	30.5
LOS by Move:	C	C	C	C	C	C	C	C	A	C	C	C
HCM2kAvgQ:	5	8	1	1	4	8	5	7	0	3	2	3

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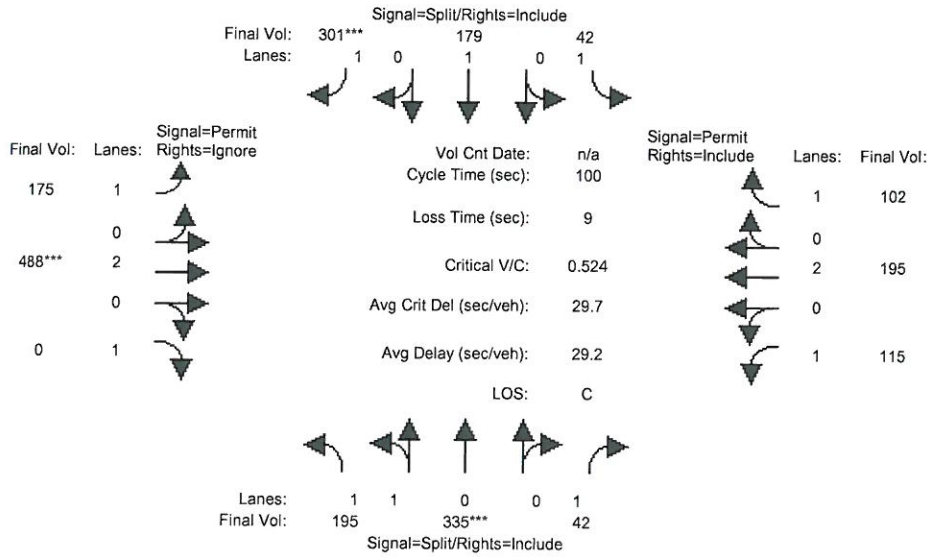
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Cumulative + Prj PM

Intersection #3289: N 10TH ST & OLD BAYSHORE HWY



Street Name:	N 10TH ST						OLD BAYSHORE HWY					
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	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:	195	335	42	42	179	301	175	488	1451	115	195	102
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:	195	335	42	42	179	301	175	488	1451	115	195	102
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:	195	335	42	42	179	301	175	488	1451	115	195	102
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	195	335	42	42	179	301	175	488	0	115	195	102
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	195	335	42	42	179	301	175	488	0	115	195	102
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	195	335	42	42	179	301	175	488	0	115	195	102
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1750	1900	1750	1750	1900	1750	1750	3800	1750	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.11	0.18	0.02	0.02	0.09	0.17	0.10	0.13	0.00	0.07	0.05	0.06
Crit Moves:		****				****		****				
Green Time:	33.7	33.7	33.7	32.8	32.8	32.8	24.5	24.5	0.0	24.5	24.5	24.5
Volume/Cap:	0.33	0.52	0.07	0.07	0.29	0.52	0.41	0.52	0.00	0.27	0.21	0.24
Uniform Del:	24.8	26.7	22.5	23.1	24.9	27.2	31.7	32.7	0.0	30.5	30.0	30.3
IncremntDel:	0.1	0.5	0.1	0.1	0.3	0.9	0.6	0.5	0.0	0.3	0.1	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	0.00	1.00	1.00	1.00
Delay/Veh:	24.9	27.2	22.6	23.2	25.2	28.1	32.3	33.2	0.0	30.8	30.1	30.5
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:	24.9	27.2	22.6	23.2	25.2	28.1	32.3	33.2	0.0	30.8	30.1	30.5
LOS by Move:	C	C	C	C	C	C	C	C	A	C	C	C
HCM2kAvgQ:	5	9	1	1	4	8	5	7	0	3	2	3

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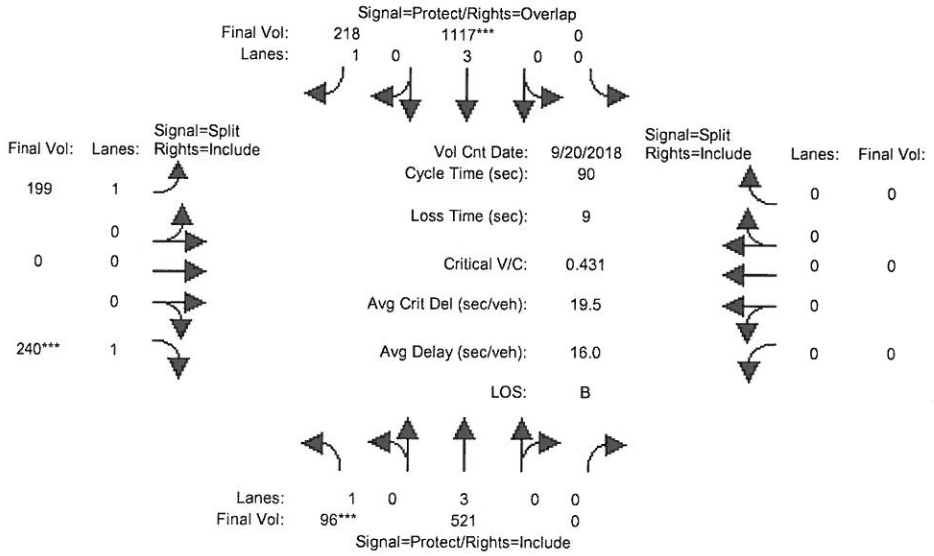
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing PM

Intersection #3554: GISH RD & OAKLAND RD



Street Name:	OAKLAND RD						GISH RD					
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	0	0	10	10	10	0	10	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 20 Sep 2018 << 7:35 - 8:35 AM												
Base Vol:	96	521	0	0	1117	218	199	0	240	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	96	521	0	0	1117	218	199	0	240	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	96	521	0	0	1117	218	199	0	240	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	96	521	0	0	1117	218	199	0	240	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	96	521	0	0	1117	218	199	0	240	0	0	0
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:	96	521	0	0	1117	218	199	0	240	0	0	0
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	0.00	0.00	3.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	1750	5700	0	0	5700	1750	1750	0	1750	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.05	0.09	0.00	0.00	0.20	0.12	0.11	0.00	0.14	0.00	0.00	0.00
Crit Moves:	****				****				****			
Green Time:	11.5	52.4	0.0	0.0	40.9	69.5	28.6	0.0	28.6	0.0	0.0	0.0
Volume/Cap:	0.43	0.16	0.00	0.00	0.43	0.16	0.36	0.00	0.43	0.00	0.00	0.00
Uniform Del:	36.3	8.7	0.0	0.0	16.6	2.7	23.6	0.0	24.2	0.0	0.0	0.0
IncremntDel:	1.3	0.0	0.0	0.0	0.1	0.1	0.4	0.0	0.5	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	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Delay/Veh:	37.6	8.7	0.0	0.0	16.8	2.7	24.0	0.0	24.8	0.0	0.0	0.0
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:	37.6	8.7	0.0	0.0	16.8	2.7	24.0	0.0	24.8	0.0	0.0	0.0
LOS by Move:	D	A	A	A	B	A	C	A	C	A	A	A
HCM2kAvgQ:	3	2	0	0	7	2	5	0	6	0	0	0

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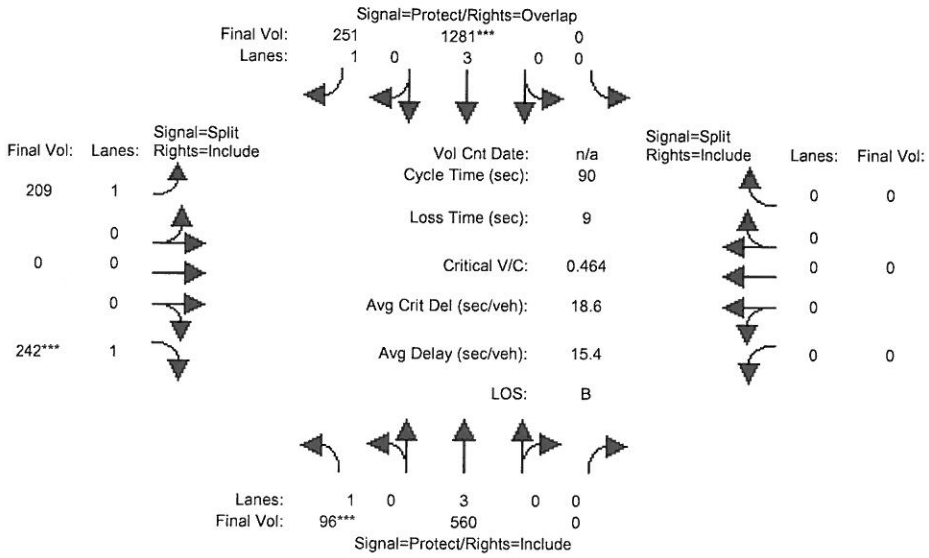
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background PM

Intersection #3554: GISH RD & OAKLAND RD



Street Name:	OAKLAND RD						GISH RD					
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	0	0	10	10	10	0	10	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:	7:35 - 8:35 AM											
Base Vol:	96	521	0	0	1117	218	199	0	240	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	96	521	0	0	1117	218	199	0	240	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI PM:	0	39	0	0	164	33	10	0	2	0	0	0
Initial Fut:	96	560	0	0	1281	251	209	0	242	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	96	560	0	0	1281	251	209	0	242	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	96	560	0	0	1281	251	209	0	242	0	0	0
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:	96	560	0	0	1281	251	209	0	242	0	0	0
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	0.00	0.00	3.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	1750	5700	0	0	5700	1750	1750	0	1750	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.05	0.10	0.00	0.00	0.22	0.14	0.12	0.00	0.14	0.00	0.00	0.00
Crit Moves:	****				****				****			
Green Time:	10.6	54.2	0.0	0.0	43.6	70.4	26.8	0.0	26.8	0.0	0.0	0.0
Volume/Cap:	0.46	0.16	0.00	0.00	0.46	0.18	0.40	0.00	0.46	0.00	0.00	0.00
Uniform Del:	37.0	7.9	0.0	0.0	15.5	2.5	25.2	0.0	25.7	0.0	0.0	0.0
IncremntDel:	1.6	0.0	0.0	0.0	0.1	0.1	0.5	0.0	0.7	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	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Delay/Veh:	38.7	7.9	0.0	0.0	15.6	2.6	25.7	0.0	26.4	0.0	0.0	0.0
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:	38.7	7.9	0.0	0.0	15.6	2.6	25.7	0.0	26.4	0.0	0.0	0.0
LOS by Move:	D	A	A	A	B	A	C	A	C	A	A	A
HCM2kAvgQ:	3	2	0	0	8	2	5	0	6	0	0	0

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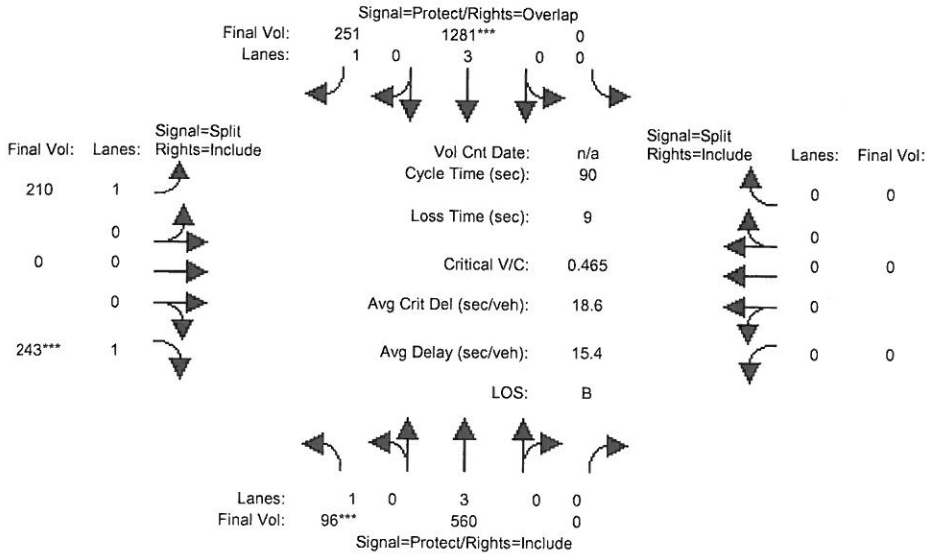
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Project PM

Intersection #3554: GISH RD & OAKLAND RD



Street Name:	OAKLAND RD						GISH RD					
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	0	0	10	10	10	0	10	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:	7:35 - 8:35 AM											
Base Vol:	96	560	0	0	1281	251	209	0	242	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	96	560	0	0	1281	251	209	0	242	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Project Tri:	0	0	0	0	0	0	1	0	1	0	0	0
Initial Fut:	96	560	0	0	1281	251	210	0	243	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	96	560	0	0	1281	251	210	0	243	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	96	560	0	0	1281	251	210	0	243	0	0	0
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:	96	560	0	0	1281	251	210	0	243	0	0	0
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	0.00	0.00	3.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	1750	5700	0	0	5700	1750	1750	0	1750	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.05	0.10	0.00	0.00	0.22	0.14	0.12	0.00	0.14	0.00	0.00	0.00
Crit Moves:	****				****				****			
Green Time:	10.6	54.1	0.0	0.0	43.5	70.4	26.9	0.0	26.9	0.0	0.0	0.0
Volume/Cap:	0.46	0.16	0.00	0.00	0.46	0.18	0.40	0.00	0.46	0.00	0.00	0.00
Uniform Del:	37.0	7.9	0.0	0.0	15.5	2.5	25.2	0.0	25.7	0.0	0.0	0.0
IncremntDel:	1.7	0.0	0.0	0.0	0.1	0.1	0.5	0.0	0.7	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	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Delay/Veh:	38.7	8.0	0.0	0.0	15.6	2.6	25.7	0.0	26.4	0.0	0.0	0.0
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:	38.7	8.0	0.0	0.0	15.6	2.6	25.7	0.0	26.4	0.0	0.0	0.0
LOS by Move:	D	A	A	A	B	A	C	A	C	A	A	A
HCM2kAvgQ:	3	2	0	0	8	2	5	0	6	0	0	0

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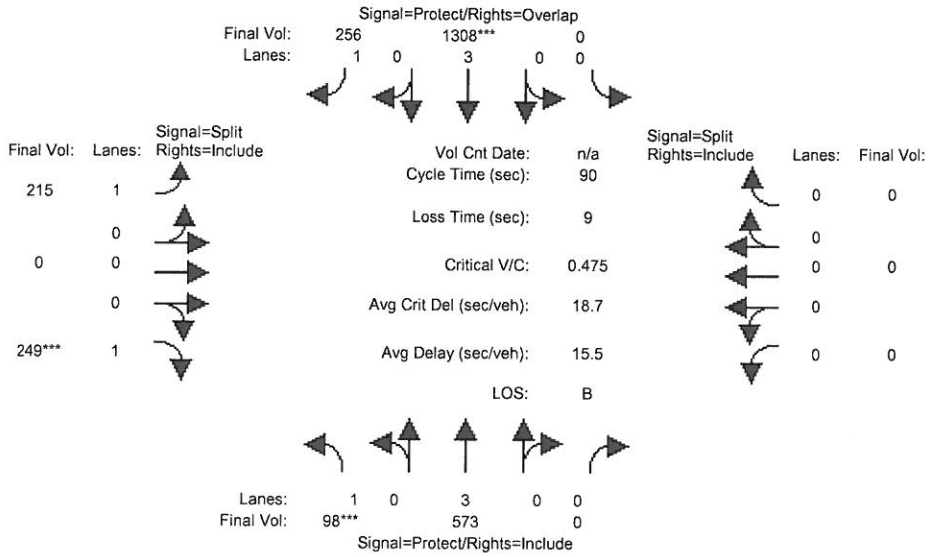
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Cumulative + Prj PM

Intersection #3554: GISH RD & OAKLAND RD



Street Name:	OAKLAND RD						GISH RD					
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	0	0	10	10	10	0	10	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: 7:35 - 8:35 AM												
Base Vol:	98	573	0	0	1308	256	215	0	249	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	98	573	0	0	1308	256	215	0	249	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	98	573	0	0	1308	256	215	0	249	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	98	573	0	0	1308	256	215	0	249	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	98	573	0	0	1308	256	215	0	249	0	0	0
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:	98	573	0	0	1308	256	215	0	249	0	0	0
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	0.00	0.00	3.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	1750	5700	0	0	5700	1750	1750	0	1750	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.06	0.10	0.00	0.00	0.23	0.15	0.12	0.00	0.14	0.00	0.00	0.00
Crit Moves:	****				****				****			
Green Time:	10.6	54.1	0.0	0.0	43.5	70.4	26.9	0.0	26.9	0.0	0.0	0.0
Volume/Cap:	0.48	0.17	0.00	0.00	0.48	0.19	0.41	0.00	0.48	0.00	0.00	0.00
Uniform Del:	37.1	8.0	0.0	0.0	15.6	2.5	25.2	0.0	25.8	0.0	0.0	0.0
IncremntDel:	1.7	0.0	0.0	0.0	0.1	0.1	0.5	0.0	0.7	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	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Delay/Veh:	38.8	8.0	0.0	0.0	15.8	2.6	25.7	0.0	26.4	0.0	0.0	0.0
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:	38.8	8.0	0.0	0.0	15.8	2.6	25.7	0.0	26.4	0.0	0.0	0.0
LOS by Move:	D	A	A	A	B	A	C	A	C	A	A	A
HCM2kAvgQ:	3	2	0	0	8	2	5	0	6	0	0	0

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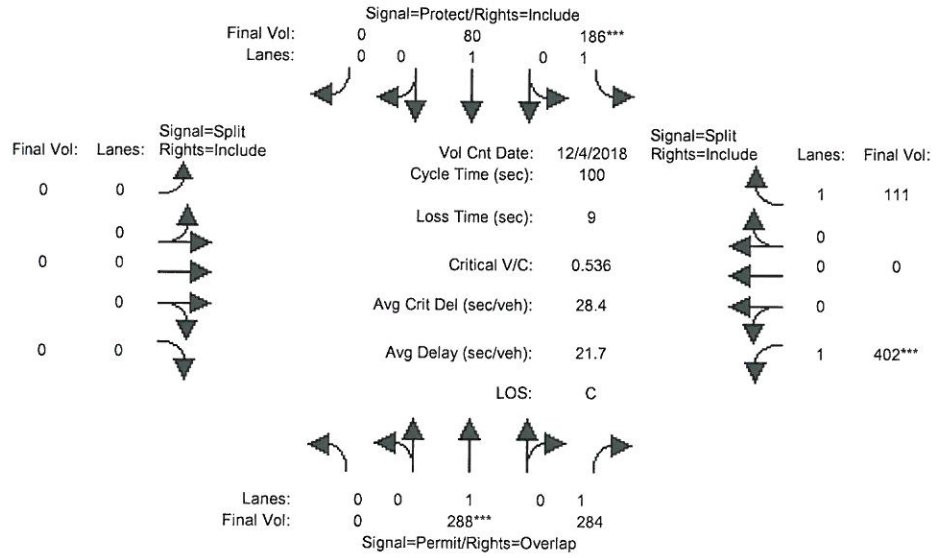
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing PM

Intersection #3555: I-880 & GISH RD



Street Name:	I-880						GISH					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	10	10	7	10	0	0	0	0	10	0	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: 4 Dec 2018 << 4:45-5:45												
Base Vol:	0	288	284	186	80	0	0	0	0	402	0	111
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	288	284	186	80	0	0	0	0	402	0	111
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	288	284	186	80	0	0	0	0	402	0	111
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	288	284	186	80	0	0	0	0	402	0	111
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	288	284	186	80	0	0	0	0	402	0	111
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	288	284	186	80	0	0	0	0	402	0	111
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:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	1900	1750	1750	1900	0	0	0	0	1750	0	1750
Capacity Analysis Module:												
Vol/Sat:	0.00	0.15	0.16	0.11	0.04	0.00	0.00	0.00	0.00	0.23	0.00	0.06
Crit Moves:		****		****						****		
Green Time:	0.0	28.3	71.2	19.8	48.1	0.0	0.0	0.0	0.0	42.9	0.0	42.9
Volume/Cap:	0.00	0.54	0.23	0.54	0.09	0.00	0.00	0.00	0.00	0.54	0.00	0.15
Uniform Del:	0.0	30.3	5.0	36.0	14.0	0.0	0.0	0.0	0.0	21.2	0.0	17.4
IncremntDel:	0.0	1.1	0.1	1.6	0.0	0.0	0.0	0.0	0.0	0.8	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:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Delay/Veh:	0.0	31.4	5.1	37.6	14.1	0.0	0.0	0.0	0.0	21.9	0.0	17.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	31.4	5.1	37.6	14.1	0.0	0.0	0.0	0.0	21.9	0.0	17.5
LOS by Move:	A	C	A	D	B	A	A	A	A	C	A	B
HCM2kAvgQ:	0	8	3	6	1	0	0	0	0	10	0	2

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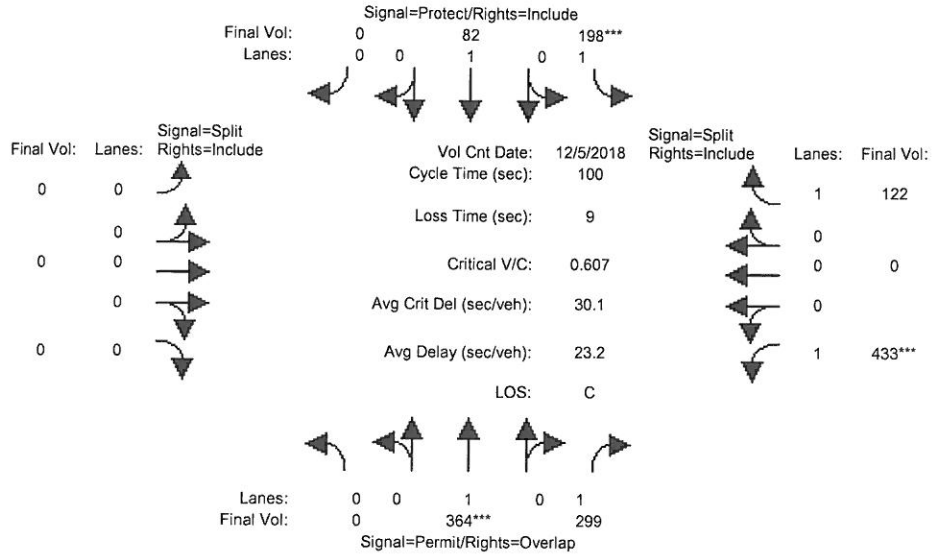
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Cumulative + Prj PM

Intersection #3555: I-880 & GISH RD



Street Name:	I-880						GISH					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	10	10	7	10	0	0	0	0	10	0	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: 5 Dec 2018 << 7:15 - 8:15 AM												
Base Vol:	0	364	299	198	82	0	0	0	0	433	0	122
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	364	299	198	82	0	0	0	0	433	0	122
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	364	299	198	82	0	0	0	0	433	0	122
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	364	299	198	82	0	0	0	0	433	0	122
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	364	299	198	82	0	0	0	0	433	0	122
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	364	299	198	82	0	0	0	0	433	0	122
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:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	1900	1750	1750	1900	0	0	0	0	1750	0	1750
Capacity Analysis Module:												
Vol/Sat:	0.00	0.19	0.17	0.11	0.04	0.00	0.00	0.00	0.00	0.25	0.00	0.07
Crit Moves:		****		****						****		
Green Time:	0.0	31.6	72.4	18.6	50.2	0.0	0.0	0.0	0.0	40.8	0.0	40.8
Volume/Cap:	0.00	0.61	0.24	0.61	0.09	0.00	0.00	0.00	0.00	0.61	0.00	0.17
Uniform Del:	0.0	29.0	4.6	37.3	12.9	0.0	0.0	0.0	0.0	23.3	0.0	18.8
IncremntDel:	0.0	1.8	0.1	3.3	0.0	0.0	0.0	0.0	0.0	1.5	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:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Delay/Veh:	0.0	30.7	4.7	40.6	13.0	0.0	0.0	0.0	0.0	24.8	0.0	19.0
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:	0.0	30.7	4.7	40.6	13.0	0.0	0.0	0.0	0.0	24.8	0.0	19.0
LOS by Move:	A	C	A	D	B	A	A	A	A	C	A	B
HCM2kAvgQ:	0	10	3	7	1	0	0	0	0	12	0	3

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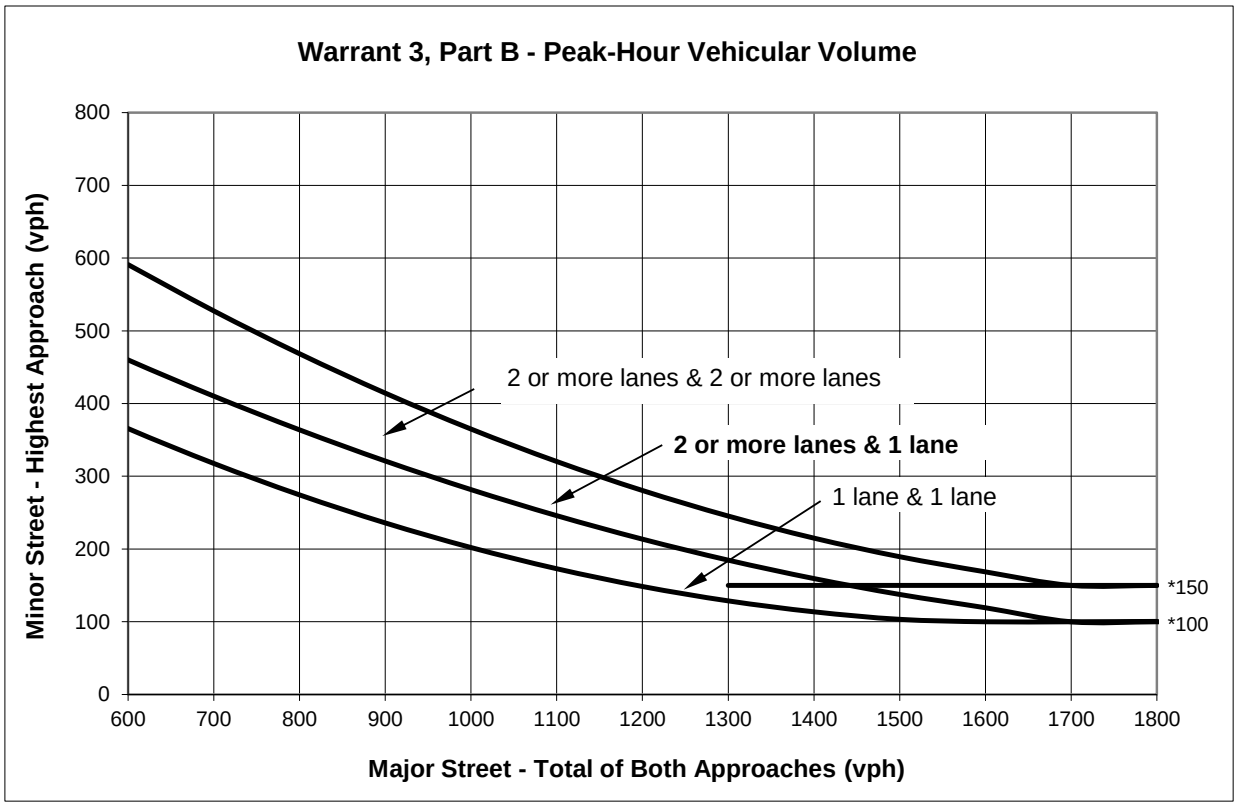
Appendix E
Signal Warrant Sheets

1605 Industrial Avenue

I-880 & Gish Road **AM PEAK PERIOD**



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

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

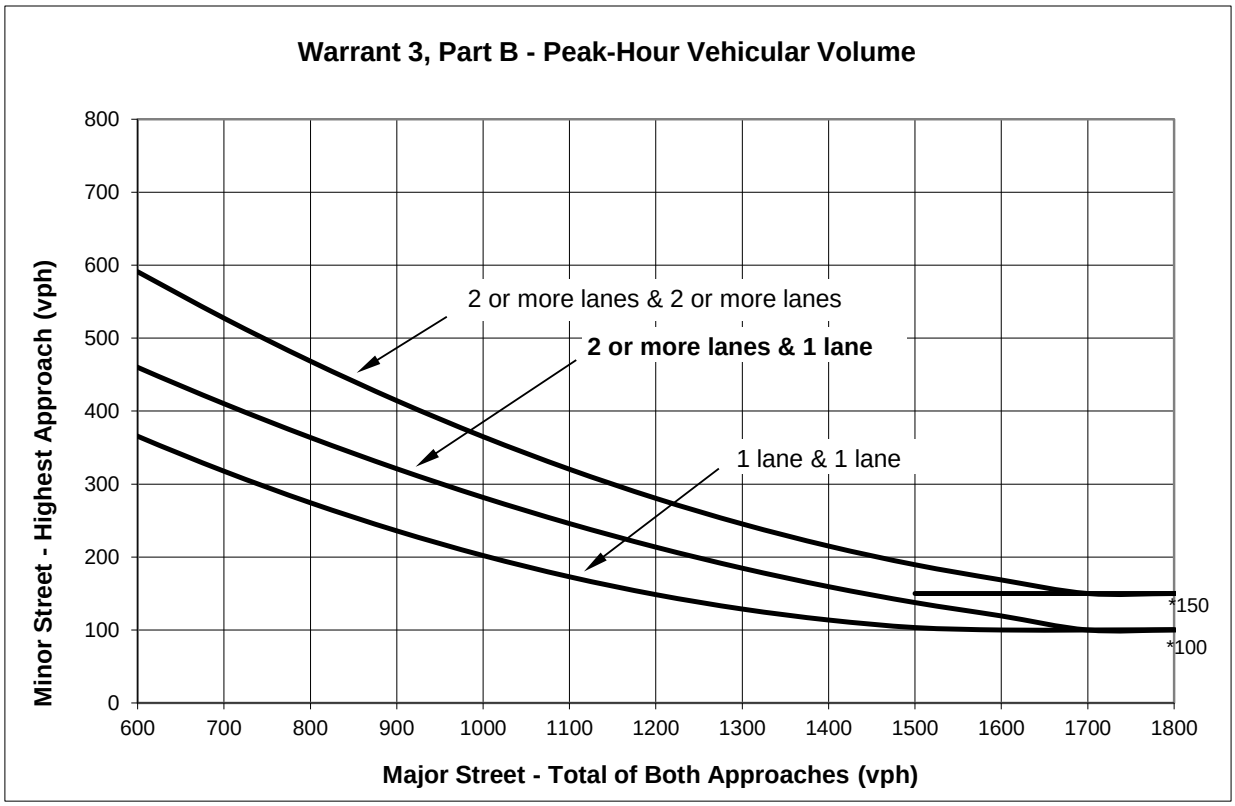
Warrant 3, Part B - Peak-Hour Vehicular Volume

		Approach Lanes		AM PEAK PERIOD							
		One	2 or More	Existing	Background	Background + Prj					
Major Street - Both Approaches	I-880 Off Ramp /		X	478	492	496					
Minor Street - Highest Approach	Gish Road		X	467	541	542					
Signal Warranted Based on Part B - Peak-Hour Volumes?				**Yes**	**Yes**	**Yes**					

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

1605 Industrial Avenue

I-880 & Gish Road **PM PEAK HOUR**



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

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

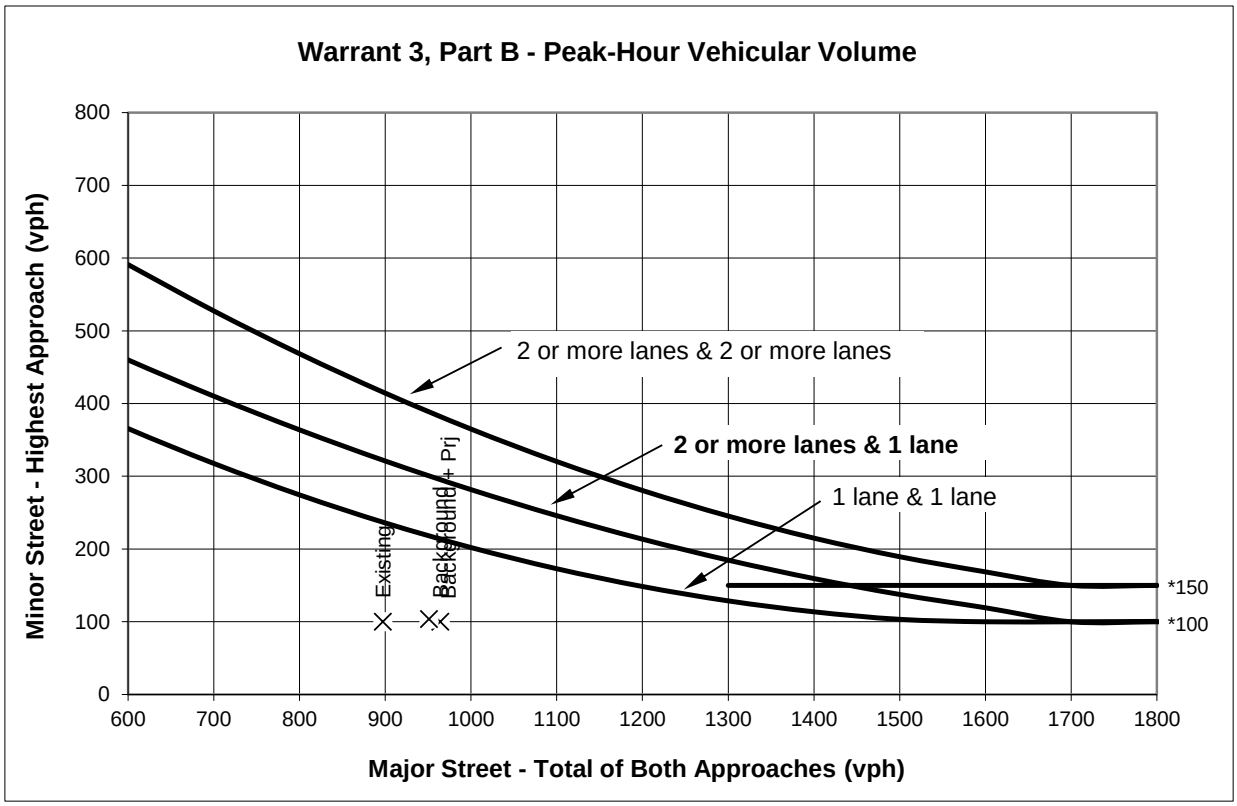
Warrant 3, Part B - Peak-Hour Vehicular Volume

		Approach Lanes		PM PEAK HOUR							
		One	2 or More	Existing	Background	Background + Prj					
Major Street - Both Approaches	I-880 Off Ramp /		X	266	271	274					
Minor Street - Highest Approach	Gish Road		X	572	648	649					
Signal Warranted Based on Part B - Peak-Hour Volumes?				**No**	**No**	**No**					

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

1605 Industrial Avenue

Industrial Avenue & Gish Road **AM PEAK PERIOD**



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

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

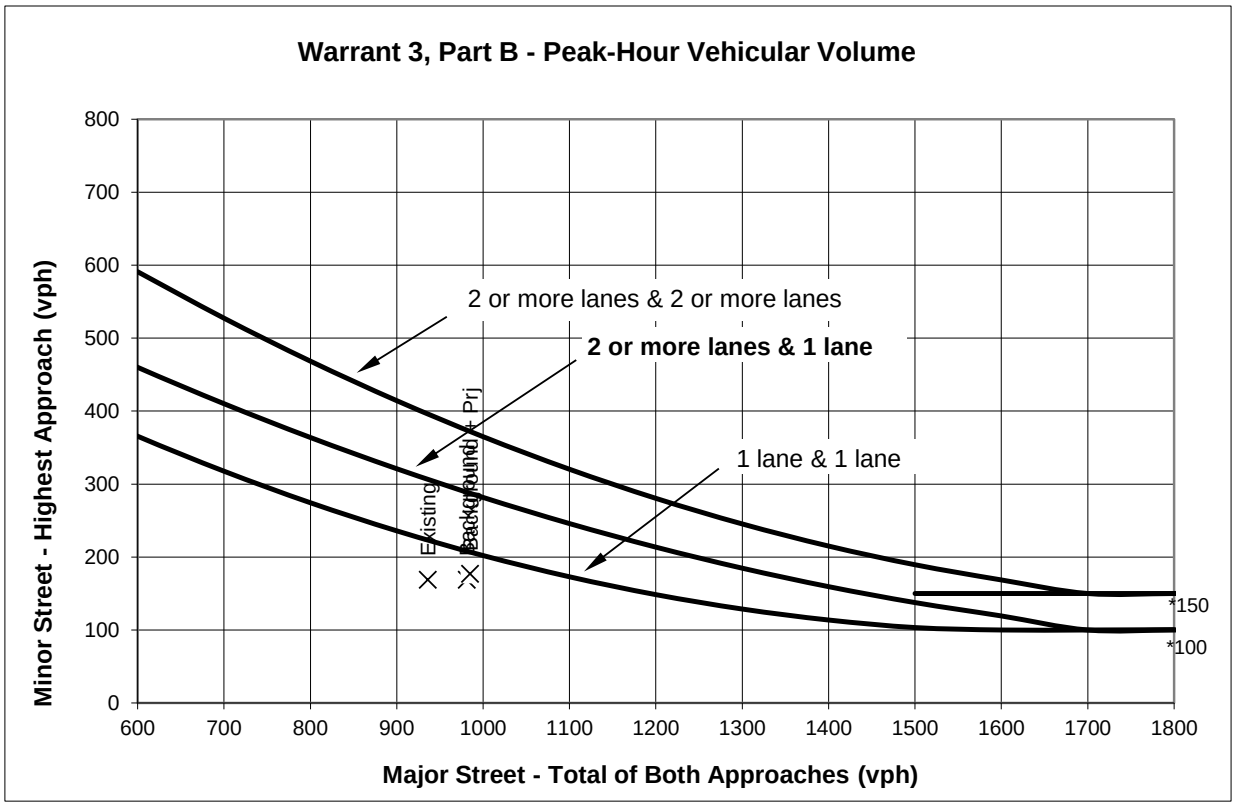
Warrant 3, Part B - Peak-Hour Vehicular Volume

		Approach Lanes		AM PEAK PERIOD							
		One	2 or More	Existing	Background	Background + Prj					
Major Street - Both Approaches	Gish Road	X		897	964	951					
Minor Street - Highest Approach	Industrial Avenue/	X		100	100	104					
Signal Warranted Based on Part B - Peak-Hour Volumes?				**No**	**No**	**No**					

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

1605 Industrial Avenue

Industrial Avenue & Gish Road **PM PEAK HOUR**



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

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

Warrant 3, Part B - Peak-Hour Vehicular Volume

		Approach Lanes		PM PEAK HOUR							
		One	2 or More	Existing	Background	Background + Prj					
Major Street - Both Approaches	Gish Road	X		936	981	985					
Minor Street - Highest Approach	Industrial Avenue/	X		169	169	177					
Signal Warranted Based on Part B - Peak-Hour Volumes?				**No**	**No**	**No**					

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