





1530-1544 W. San Carlos Street Mixed-Use Development



Transportation Analysis

Prepared for:

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No

November 20, 2020











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Executive Summary

This report presents the results of a Transportation Analysis (TA) for the proposed mixed-use development located at 1530-1544 San Carlos Street. The project site consists of three parcels (APN 277-18-018, -019, -020) and is located south of San Carlos Street and east of Buena Vista Avenue in the City of San José. The project site is located within a designated Urban Village (West San Carlos) per the Envision San Jose 2040 General Plan. According to the Envision San Jose 2040 General Plan, the Urban Village strategy fosters:

- Mixed residential and employment activities that are attractive to an innovative workforce
- Revitalization of underutilized properties that have access to existing infrastructure
- Densities that support transit use, bicycling, and walking
- High-quality urban design

The project site is currently occupied by two automobile sales lots, an approximately 2,250 square-foot restaurant and eight detached residential units. The project as currently proposed consists of 173 multifamily residential units and 18,242 s.f. of commercial space. However, the project could include up to 21,164 s.f. of commercial space. Therefore, this study conservatively evaluates the greater amount of commercial space (21,164 s.f.). A total of 189 parking spaces are provided within one ground-level and one below-ground parking level. The proposed project site will be accessed by one right-in/right-out driveway on San Carlos Street.

Transportation Analysis Scope

The transportation analysis of the project was evaluated following the standards and methodologies set forth in the City of San Jose's Transportation Analysis Policy (Council Policy 5-1), the City of San Jose's *Transportation Analysis Handbook 2018*, the Santa Clara Valley Transportation Authority (VTA) Congestion Management Program's *Transportation Impact Guidelines* (October 2014), and by the California Environmental Quality Act (CEQA). Based on the City of San Jose's Transportation Policy and *Transportation Analysis Handbook 2018*, the TA report for the project consists of a CEQA vehicle-miles-traveled (VMT) analysis and a supplemental Local Transportation Analysis (LTA).

CEQA Transportation Analysis Scope

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

Local Transportation Analysis Scope

The LTA includes the evaluation of weekday AM and PM peak hour operations at a limited number of intersections for the purpose of identifying operational issues (queuing, signal operations, and potential



multi-modal issues) at intersections in the general vicinity of the project site. However, the determination of project impacts per CEQA requirements is based solely on the VMT analysis.

CEQA VMT Analysis

CEQA Transportation Analysis Exemption Criteria

The City of San Jose *Transportation Analysis Handbook* identifies screening criteria that determines whether a CEQA transportation analysis would be required for development projects. The criteria are based on the type of project, characteristics, and/or location. If a project meets the City's screening criteria, the project is expected to result in less-than-significant VMT impacts and a detailed CEQA VMT analysis is not required.

The project site is located within a planned Growth Area (West San Carlos Urban Village) with low VMT per capita as identified by the City of San Jose. San Carlos Street, located along the north project frontage, is a high-quality transit corridor with VTA bus service headways of less than 15 minutes during peak commute periods. The proposed 21,164 s.f. of retail space is less than the 100,000 s.f. retail threshold screening criterion for local-serving retail. Therefore, both the residential and commercial land use components of the project are anticipated to result in less-than-significant VMT impacts and a detailed CEQA transportation analysis that evaluates the project's effects on VMT is not required. However, for informational purposes, a VMT evaluation for the project was completed.

Project-Level VMT Impact Analysis

The results of the VMT evaluation, using the City's VMT Evaluation Tool, indicate that the proposed project is projected to generate VMT per capita (7.21) that is below the established threshold (10.12). Therefore, the proposed project would not result in an impact on the transportation system based on the City's VMT impact criteria.

Cumulative (GP Consistency) Evaluation

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 per the City's *Transportation Analysis Handbook*.

The project site is located within the West San Carlos Urban Village. Urban villages are defined as walkable, bicycle-friendly, transit-oriented, mixed use settings that provide both housing and jobs, thus supporting the policies and goals of the General Plan. The project is consistent with the General Plan and West San Carlos Urban Village goals and policies for the following reasons:

- The proposed residential uses for the project site are consistent with the Urban Village land use designation per the West San Carlos Urban Village plan.
- The project frontage along San Carlos Street will be consistent with planned streetscape design features West San Carlos Urban Village Plan.
- The project site is within walking distance (less than 100 feet) of bus stops on San Carlos Street.

Therefore, based on the project description, the proposed project would be consistent with the *Urban Village Planning Concepts* and the *Envision San José 2040 General Plan*. Thus, the project would be



considered as 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

The intersection operations analysis is intended to quantify the operations of intersections and to identify potential negative effects due to the addition of project traffic. However, a potential adverse effect on a study intersection operation is not considered a CEQA impact metric.

The LTA includes the analysis of AM and PM peak-hour traffic conditions for four signalized intersections and one unsignalized intersection, following the standards and methodology set forth by the City of San Jose.

Trip Generation

After applying the ITE trip rates, appropriate trip reductions, and existing site trip credits, it is estimated that the project would generate an additional 993 daily vehicle trips, with 63 trips (21 inbound and 42 outbound) occurring during the AM peak hour and 91 trips (52 inbound and 39 outbound) occurring during the PM peak hour.

Future Intersection Operation Conditions

The operations analysis shows that all of the study intersections are projected to operate at acceptable levels of service, based on the City of San Jose intersection operations standard of LOS D, under background conditions, background plus project conditions, and cumulative conditions during both the AM and PM peak hours.

Site Access and On-Site Circulation

Site access was evaluated to determine the adequacy of the site's access points with regard to the following: traffic volume, delays, vehicle queues, geometric design, and corner sight distance. On-site vehicular circulation was reviewed in accordance with generally accepted traffic engineering standards and transportation planning principles.

Recommended Site Access and On-Site Circulation Improvements

- On-site drive aisles are shown to be 24 to 26 feet wide. All on-site drive aisles are shown to
 provide two-way access and must therefore provide a minimum 26-foot width to meet City
 standards.
- The site plan should be adjusted to provide looped drive aisles within the parking levels or provide adequate turn-around space for U-turning vehicles adjacent to all dead-end drive aisles. This adjustment will require the removal or relocation of planned parking spaces. Alternatively, the below-ground parking level should be restricted to resident use only with assigned parking. With implementation of assigned parking, residents will be familiar with the parking garage and will not circulate to the dead-end drive aisles in search of available parking.
- Access to the move-in loading space should be restricted to smaller truck deliveries or personal vehicles. Larger trucks will need to perform loading activities along San Carlos Street. Ideally, the on-site loading space should be located along the east or west side of the drive aisle such that trucks are able to back-in to the loading area.
- The City supports on-site pickup of trash. Therefore, trash bins should be wheeled out to a designated location on-site, adjacent to the entry drive aisle and accessible to garbage trucks for pickup. The designated pickup location should not inhibit vehicular on-site circulation along the drive aisle or parking garage.



Parking Supply

Vehicular Parking

Based on the City's parking requirements, the project would be required to provide a total of 328 parking spaces before any reductions. The project is proposing to provide a total of 189 parking spaces, which represents a 42% reduction in on-site parking spaces from the baseline 328 parking spaces. However, the project site is within the West San Carlos Urban Village and the project proposes to provide bicycle parking that will exceed the City's bicycle parking requirements. Therefore, the vehicle parking requirement would be reduced by 20% to 262 vehicle parking spaces.

With the proposed 189 on-site parking spaces, the project on-site parking will require an additional 22% reduction in on-site parking spaces. Therefore, the project will need to submit and have approved a TDM plan.

Bicycle Parking

The project site plan shows bicycle parking would be provided within a room located between the ground-floor commercial space and parking area. The bicycle storage room is accessible from the San Carlos Street frontage via a walkway that runs along the east side of the entry drive aisle and along the north side of the parking area. Per the site plan, a total of 65 spaces are provided within the storage room and an additional 8 bicycles spaces are provided within the ground-floor parking area. The 73 total bicycle parking spaces proposed on-site will exceed the City's requirement for on-site bicycle parking and will encourage non-vehicular modes of travel to and from the site.

Pedestrian, Bicycle, and Transit Analysis

Pedestrian Facilities

Pedestrian generators in the project vicinity include commercial areas and bus stops along the San Carlos Street corridor. The project site is within the service boundaries of Trace Elementary School, Herbert Hoover Middle School, and Lincoln High School, all of which are located on Dana Avenue approximately ½-mile to ¾-mile from the project site. Existing sidewalks along San Carlos Street and Dana Avenue provide a pedestrian connection between the project site and pedestrian destinations in the project vicinity.

The project proposes to extend the existing 10-foot wide sidewalk along the north project frontage by 8 feet to a total width of 18 feet. However, the West San Carlos Urban Village Plan (Policy CS-4.4) requires new developments to provide a 20-foot wide sidewalk along San Carlos Street. Additionally, the plan recommends the installation of paseos which function as pedestrian- and bike-only circulation paths. The Plan identifies a "Potential Paseo" between Buena Vista Avenue and Meridian Avenue, along the south project frontage. The "Potential Paseo" category is used to designate lands that can be publicly- or privately owned that are intended to be programmed for active or passive linear open space. An approximately 30-foot wide paseo is proposed along the south project frontage, which would accommodate the future Paseo identified in the Plan. The paseo will be required to be built to a design as approved by the City. The City will require an Irrevocable Offer of Dedication for Public Accessibility to be recorded against the property encompassing the paseo. In the interim, while the paseo is landlocked from the public right-of-way, it will remain private.

The West San Carlos Urban Village Plan includes a Streetscape Prioritization Plan (Appendix A of the Urban Village Plan) that identifies five streetscape improvement projects, some of which would benefit the project and adhere to the goals of the Envision 2040 General Plan. Of the planned facilities, a



proposed mid-block crosswalk across San Carlos Street at Muller Place is most relevant to the project. The improvement includes:

- A pedestrian refuge island in the existing median surrounded by new planting, with a control for the rapid flashing beacon
- Curb extensions with ADA curb ramps on either end of the mid-block crosswalk.

The City has indicated that the project will be required to install a crosswalk along the east leg of the San Carlos Street and Buena Vista Avenue intersection via a signal modification. Additionally, the City is requesting that an existing bus stop located at the southwest corner of the intersection be moved to the southeast corner of the intersection, along the north project frontage. The proposed changes would provide the most direct walking routes between the project site and transit stops.

Bicycle Facilities

The bikeways within the vicinity of the project site would remain unchanged under project conditions. The nearest bike facility is a bike route located along Dana Avenue, between San Carlos Street and Brooklyn Avenue (near Trace Elementary School). A bike route also is located along Scott Street to Bascom Avenue, approximately 0.25-mile from the project site via Buena Vista Avenue.

The San Jose Bike Plan 2020 indicates that a variety of bicycle facilities are planned in the study area, some of which would benefit the project and adhere to the goals of the Envision 2040 General Plan. Of the planned facilities, the following are relevant to the project.

Class II bike lanes are planned for:

- Leigh Avenue, between San Carlos Street and Stokes Street
- Parkmoor Avenue, between Bascom Avenue and Meridian Avenue

Class III bike routes are planned for:

- Shasta Avenue, between San Carlos Street and Park Avenue
- Race Street, between San Carlos Street and Park Avenue

Transit Services

The project site is adequately served by the existing VTA transit services. The project site is primarily served by two VTA bus routes (Frequent Route 23 and Rapid Route 523). The nearest bus stops to the project site serve Frequent Route 23 and are located along both sides of San Carlos Street (near Buena Vista Avenue), approximately 100 feet from the project site. The nearest bus stop serving Rapid Route 523 is located at the intersection of Meridian Avenue and San Carlos Street, approximately ¼-mile from the project site. Additionally, the Diridon Transit Center is located approximately 1.36-mile north and east of the project site, along Cahill Street. The Diridon Transit Center provides connections between local and regional bus routes, light rail lines, and commuter rail lines. The new transit trips generated by the project are not expected to create demand in excess of the transit service that is currently provided.

Trip Reduction (TDM Program)

In order to be granted a reduction in required off-street parking per the West San Carlos Urban Village Plan, the project will be required to establish a TDM program that will reduce the parking demand for the project by 22%. The TDM program should encourage multimodal travel and use of the extensive bus service and pedestrian/bicycle facilities in the immediate project area to the maximum extent possible. The applicant/property owner should manage the TDM program to ensure tenant employee participation. The project will be required to submit and have approved by the City its TDM program for reduction in off-street parking.



1. Introduction

This report presents the results of a Transportation Analysis (TA) for the proposed mixed-use development located at 1530-1544 San Carlos Street. The project site consists of three parcels (APN 277-18-018, -019, -020) and is located south of San Carlos Street and east of Buena Vista Avenue in the City of San José. The project site location and the surrounding study area are shown on Figure 1. The project site is located within a designated Urban Village (West San Carlos) per the Envision San Jose 2040 General Plan. On May 8, 2018, the City of San Jose adopted the West San Carlos Urban Village Plan as shown in Figure 2. The West San Carlos Urban Village Plan provides a vision for the transformation of San Carlos Street into a more urban and walkable corridor. The adopted UV Plan will be the City's official Planning policy document for the corridor, providing goals, policies, actions, and urban design guidelines to guide private and public investment to achieve this vision.

The project site is currently occupied by two automobile sales lots, an approximately 2,250 square-foot restaurant and eight detached residential units. The project as currently proposed consists of 173 multifamily residential units and 18,242 s.f. of commercial space. However, the project could include up to 21,164 s.f. of commercial space. Therefore, this study conservatively evaluates the greater amount of commercial space (21,164 s.f.). A total of 189 parking spaces are proposed to be provided within one ground-level and one below-ground parking level. The proposed project site will be accessed by one right-in/right-out driveway on San Carlos Street. The project site plan is shown on Figure 3.

The transportation analysis of the project was evaluated following the standards and methodologies set forth in the City of San Jose's Transportation Analysis Policy (Council Policy 5-1), the City of San Jose's *Transportation Analysis Handbook 2018*, the Santa Clara Valley Transportation Authority (VTA) Congestion Management Program's *Transportation Impact Guidelines* (October 2014), and by the California Environmental Quality Act (CEQA). Based on the City of San Jose's Transportation Policy and *Transportation Analysis Handbook 2018*, the TA report for the project consists of a CEQA vehicle-milestraveled (VMT) analysis and a supplemental Local Transportation Analysis (LTA).

Transportation Policies

Historically, transportation analysis has utilized delay and congestion on the roadway system as the primary metric for the identification of traffic impacts and potential roadway improvements to relieve traffic congestion that may result due to proposed/planned growth. However, the State of California has recognized the limitations of measuring and mitigating only vehicle delay at intersections and in 2013 passed Senate Bill (SB) 743, which requires jurisdictions to stop using congestion and delay metrics, such as Level of Service (LOS), as the measurement for CEQA transportation analysis. With the adoption of SB 743 legislation, public agencies will soon be required to base the determination of transportation impacts on Vehicle Miles Traveled (VMT) rather than level of service.



Figure 1 Site Location





Figure 2 West San Carlos Urban Village Boundary

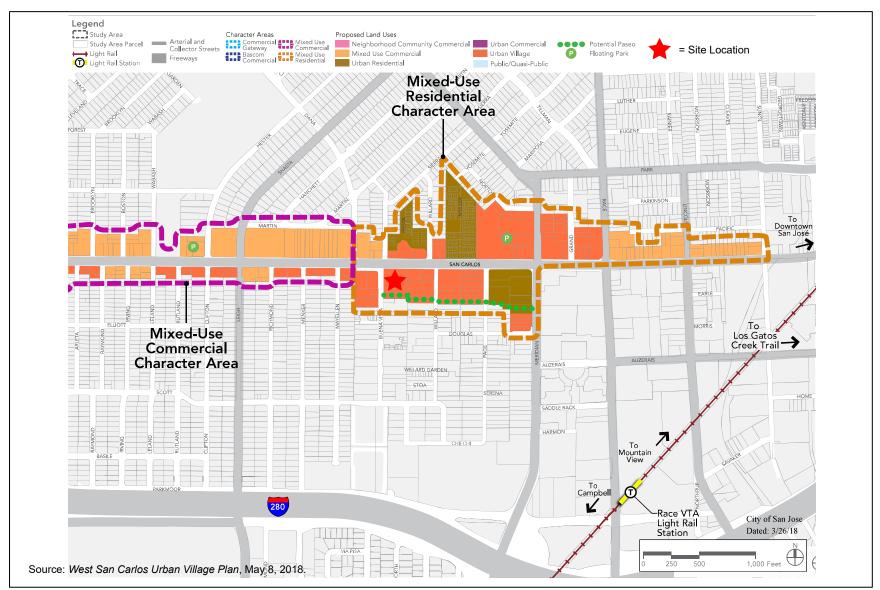
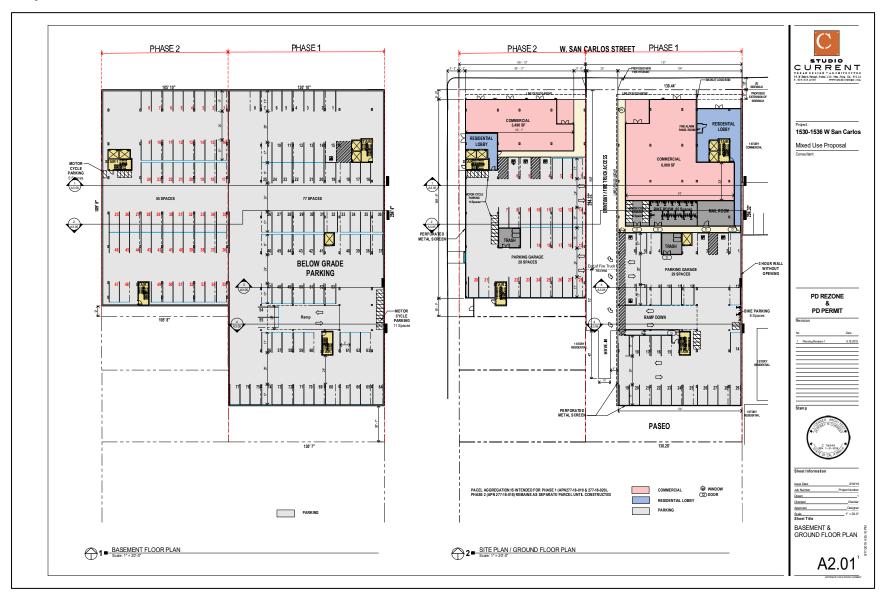




Figure 3
Proposed Site Plan





In adherence to SB 743, 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. The new transportation policy aligns with the currently adopted General Plan which seeks to focus new development growth within Planned Growth Areas, bringing together office, residential, and supporting service land uses to internalize trips and reduce VMT. All new development projects are required to analyze transportation impacts using the VMT metric and conform to Council Policy 5-1.

The Circulation Element of the *Envision San José 2040 General Plan* includes a set of balanced, long-range, multi-modal transportation goals and policies that provide for a transportation network that is safe, efficient and sustainable (minimizes environmental, financial, and neighborhood impacts). These transportation goals and policies are intended to improve multi-modal accessibility to all land uses and create a city where people are less reliant on driving to meet their daily needs. 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:

- Consider impacts on overall mobility and all travel modes when evaluating transportation impacts of new developments or infrastructure projects (TR-1.2);
- Through the entitlement process for new development, projects shall be required to fund or construct needed transportation improvements for all transportation modes, giving first consideration to improvement of biking, walking and transit facilities and services that encourage reduced vehicle travel demand (TR-1.4);
- Require new development where feasible to provide on-site facilities such as bicycle storage and showers, provide connections to existing and planned facilities, dedicate land to expand existing facilities or provide new facilities such as sidewalks and/or bicycle lanes/paths, or share in the cost of improvements (TR-2.8);
- As part of the development review process, require that new development along existing and planned transit facilities consist of land use and development types and intensities that contribute towards transit ridership. In addition, require that new development is designed to accommodate and to provide direct access to transit facilities (TR-3.3);
- Discourage, as part of the entitlement process, the provision of parking spaces significantly above the number of spaces required by code for a given use (TR-8.4);
- Allow reduced parking requirements for mixed-use developments and for developments providing shared parking or a comprehensive transportation demand management (TDM) program, or developments located near major transit hubs or within 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 CEQA transportation analysis for the project consists a project-level VMT impact analysis using the City's VMT tool and a cumulative impact analysis that demonstrates the project's consistency with the Envision San Jose 2040 General Plan.

VMT Analysis

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 is calculated for residential, office, and industrial projects using the Origin-Destination VMT method, which measures the full distance of personal motorized vehicle-trips with one end within the project. A project's VMT is compared to established thresholds of significance based on the project location and type of development. When assessing a residential project, the project's VMT is divided by the number of residents expected to occupy the project to determine the VMT per capita. When assessing an office or industrial project, the project's VMT is divided by the number of employees.

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 serve in the project vicinity.

VMT Evaluation Tool

To determine whether a project would result in CEQA transportation impacts related to VMT, the City has developed the San Jose VMT Evaluation Tool (VMT Evaluation tool) to streamline the analysis for development projects. 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.

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

The thresholds of significance for development projects, as established in the Transportation Analysis Policy, are based on the existing citywide average VMT level for residential uses and the existing



regional average VMT level for employment uses. Figure 4 and Figure 5 show the current VMT levels estimated by the City for residents and workers, respectively, based on the locations of residences and jobs. Areas are color-coded based on the level of existing VMT:

- Green-filled areas are parcels with existing VMT less than the City's residential and employee thresholds of 10.12 VMT per capita and 12.21 per employee. The thresholds are calculated by subtracting 15 percent from the citywide average of 11.91 VMT per capita and regional average of 14.37 per employee.
- Yellow-filled areas are parcels with existing VMT between the residential and employee thresholds and the city-wide average of 11.91 VMT per capita and regional average 14.37 VMT per employee.
- Orange-filled areas are parcels with existing VMT greater than the residential and employee thresholds. However, a project's VMT impact may be mitigated by implementing VMT-reducing measures
- Red-filled areas are parcels with existing VMT greater than the residential and employee threshold. Implementing VMT-reducing measures will not be sufficient to reduce a project's VMT to less than the threshold of significance.

Average per-capita and per-employee VMT for all the existing developments within ½ mile buffer of each parcel in the City serves as the baseline from which a project is evaluated. The VMT in the proposed project site vicinity is presented in further detail in Chapter 3.

Screening for VMT Analysis

The City's VMT methodology includes screening criteria that are used to identify types, characteristics, and/or locations of projects that would not exceed the CEQA thresholds of significance. If a project or a component of a mixed-use project meets the screening criteria, it is then presumed that the project or the component would result in a less-than-significant VMT impact and a VMT analysis is not required. The type of development projects that may meet the screening criteria include the following:

- (1) small infill projects
- (2) local-serving retail
- (3) local-serving public facilities
- (4) projects located in Planned Growth Areas with low VMT and High-Quality Transit
- (5) deed-restricted affordable housing located in Planned Growth Areas with High-Quality Transit

Table 1 summarizes the screening criteria for each type of development project as identified in the in the City of San Jose Transportation Analysis Handbook. Figure 6 and Figure 7 identify areas within the City that currently have low VMT levels estimated by the City for residents and workers, respectively, for which transit supportive development located within a priority growth area would be screened out of the evaluation of VMT.

The project site is located within a planned Growth Area (West San Carlos Urban Village) with low VMT per capita as identified by the City of San Jose. San Carlos Street, located along the north project frontage, is a high-quality transit corridor with VTA bus service headways of less than 15 minutes during peak commute periods. The proposed 21,164 s.f. of retail space is less than the 100,000 s.f. retail threshold screening criterion for local-serving retail. Therefore, both the residential and commercial land use components of the project are anticipated to result in less-than-significant VMT impacts and a detailed CEQA transportation analysis that evaluates the project's effects on VMT is not required. However, for informational purposes, a VMT evaluation for the project was completed.



Figure 4 VMT per Capita Heat Map in San Jose

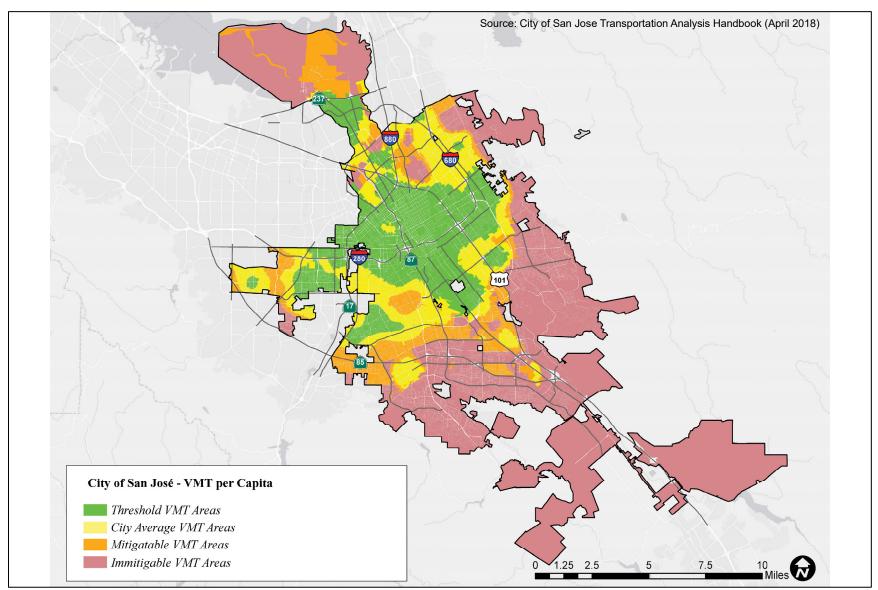




Figure 5 VMT per Job Heat Map in San Jose

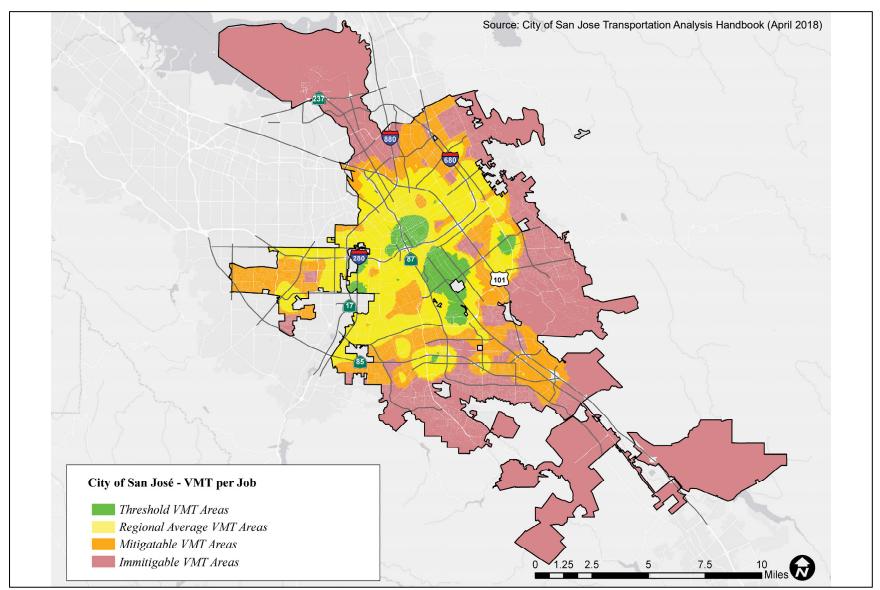




Figure 6 Low VMT per Capita Areas in San Jose

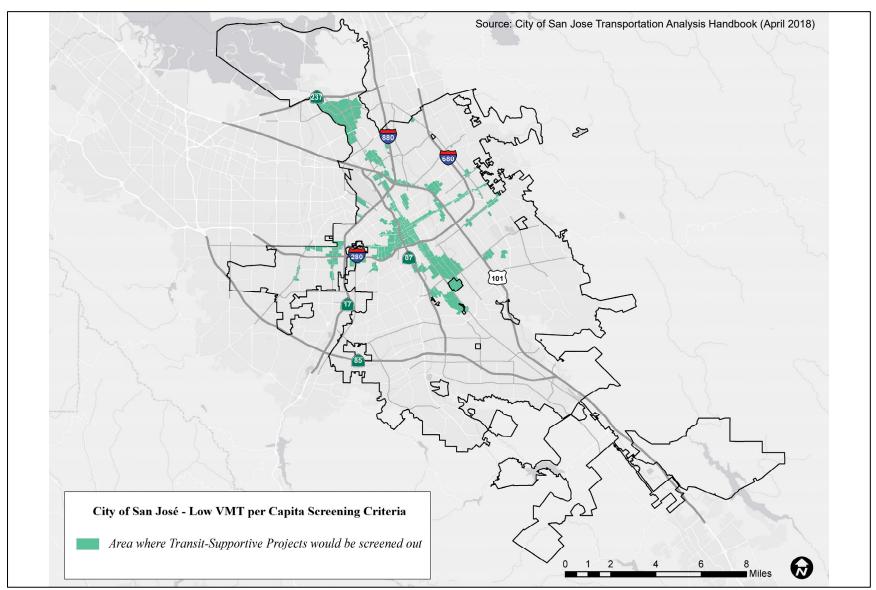




Figure 7 Low VMT per Job Areas in San Jose

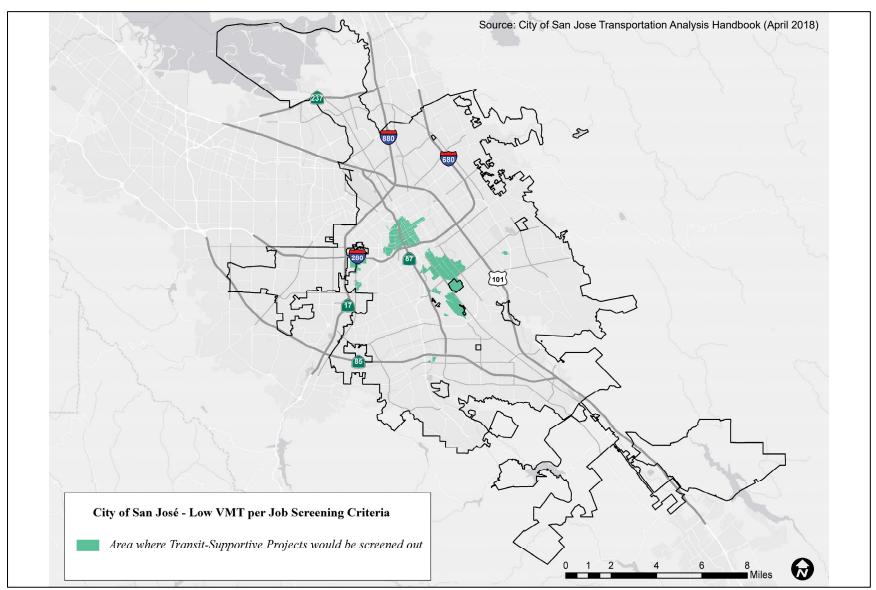




Table 1 CEQA VMT Analysis Screening Criteria for Development Projects

 Single-family detached housing of 15 units or less; OR Single-family attached or multi-family housing of 25 units or less; OR Office of 10,000 square feet of gross floor area or less; OR Industrial of 30,000 square feet of gross floor area or less Local-Serving Retail 100,000 square feet of total gross floor area or less without drive-through operations 	
Retail Retail	
Local-Serving Public Facilities • Local-serving public facilities	
 Planned Growth Areas: Located within a Planned Growth Area as defined in the Envision José 2040 General Plan; AND High-Quality Transit: Located within ½ a mile of an existing major transit stop or an existing along a high-quality transit corridor; AND Low VMT: Located in an area in which the per capita VMT is less than or equal to the CEQ significance threshold for the land use; AND Transit-Supporting Project Density: Minimum Gross Floor Area Ratio (FAR) of 0.75 for office projects or components; Minimum of 35 units per acre for residential projects or components; Minimum of 35 units per acre for residential projects or components; If located in a Planned Growth Area that has a maximum density below 0.75 FAR or 35 per acre, the maximum density allowed in the Planned Growth Area must be met; AND Parking: No more than the minimum number of parking spaces required; If located in Urban Villages or Downtown, the number of parking spaces must be adjusted the lowest amount allowed; however, if the parking is shared, publicly available, and/or "unbundled", the number of parking spaces can be up to the zoned minimum; AND Active Transportation: Not negatively impact transit, bike or pedestrian infrastructure. 	g stop A units
 Affordability: 100% restricted affordable units, excluding unrestricted manager units; affordability must extend for a minimum of 55 years for rental homes or 45 years for for-sale homes; AND Planned Growth Areas: Located within a Planned Growth Area as defined in the Envision José 2040 General Plan; AND High Quality Transit: Located within ½ a mile of an existing major transit stop or an existing stop along a high quality transit corridor; AND Transit-Supportive Project Density: Minimum of 35 units per acre for residential projects or components; If located in a Planned Growth Area that has a maximum density below 35 units per acre the maximum density allowed in the Planned Growth Area must be met; AND Transportation Demand Management (TDM): If located in an area in which the per capitary VMT is higher than the CEQA significance threshold, a robust TDM plan must be included; Parking: No more than the minimum number of parking spaces required; If located in Urban Villages or Downtown, the number of parking spaces must be adjusted the lowest amount allowed; however, if the parking is shared, publicly available, and/or "unbundled", the number of parking spaces can be up to the zoned minimum; AND Active Transportation: Not negatively impact transit, bike or pedestrian infrastructure.) ; , <u>AND</u>



Local Transportation Analysis Scope

A local transportation analysis (LTA) supplements the CEQA VMT analysis and identifies transportation and traffic operational issues that may arise due to a development project. The LTA includes an evaluation of the effects of the project on transportation, access, circulation, and related safety elements in the proximate area of the project.

Intersection Operations Analysis

The evaluation of a project's impact on level of service at intersections under the jurisdiction of the City of San Jose is no longer required. Per Senate Bill (SB) 743 and the updated CEQA Guidelines. (Section 15064.3) Nov 2017, beginning July 1, 2020 the use of intersection level of service as a metric for determining impacts of development growth on the transportation system will no longer be permitted. However, since the VTA's Congestion Management Program (CMP) has yet to adopt and implement guidelines and standards for the evaluation of transportation impacts using VMT, the effects of the proposed project traffic on CMP-designated intersections and freeway segments in the vicinity of the project area were evaluated following the current peak-hour LOS standards and methodologies as outlined in the VTA Transportation Impact Analysis Guidelines. However, the determination of project impacts per CEQA requirements is based solely on the VMT analysis.

The LTA includes the evaluation of weekday AM and PM peak hour operations at a limited number of intersections for the purpose of identifying operational issues (queuing, signal operations, and potential multi-modal issues) at intersections in the general vicinity of the project site. However, the determination of project impacts per CEQA requirements is based solely on the VMT analysis.

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 typically occurs between 7:00 AM and 9:00 AM and the PM peak hour typically occurs between 4:00 PM and 6:00 PM on a regular weekday. These are the peak commute hours during which most weekday traffic congestion occurs on the roadways in the study area.

Intersection operations conditions were evaluated for the following scenarios:

- **Existing Conditions**. Existing AM and PM peak hour traffic volumes at all study intersections were obtained from the City of San Jose, previously completed traffic studies, and new traffic counts.
- Background Conditions. Background traffic volumes were estimated by adding to existing peak
 hour volumes the projected volumes from approved but not yet completed developments. The
 approved project traffic was provided by the City of San Jose in the form of the Approved Trips
 Inventory (ATI).
- 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.
- **Cumulative Conditions**. Cumulative traffic volumes reflect projected traffic volumes on the planned roadway network with completion of the pending developments in the area as well as the proposed project and approved developments. A list of pending projects in the vicinity was provided by the City of San Jose.

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



Report Organization

The remainder of this report is divided into four chapters. Chapter 2 describes existing transportation system including the existing roadway network, transit service, bicycle and pedestrian facilities. Chapter 3 describes the CEQA transportation analysis, including VMT analysis methodology, baseline and potential project VMT impacts, mitigation measures to reduce the VMT impact, and potential cumulative transportation impacts. Chapter 4 describes the LTA including the method by which project traffic is estimated, intersection operations analysis methodology, any adverse intersection traffic effects caused by the project, intersection vehicle queuing analysis, site access and on-site circulation review, effects on bicycle, pedestrian, and transit facilities, and parking. Chapter 5 presents the conclusions of the transportation analysis.



2. **Existing Transportation Setting**

This chapter describes the existing conditions of the transportation system within the study area of the project. It describes transportation facilities in the vicinity of the project site, including the roadway network, transit services, and pedestrian and bicycle facilities.

Existing Roadway Network

Regional access to the project site is provided via I-880 and I-280. These facilities are described below.

I-880 is a six-lane freeway in the vicinity of the site. It extends north to Oakland and south to I-280 in San Jose, at which point it makes a transition into SR 17 to Santa Cruz. Access to the site is provided via its interchanges with Stevens Creek Boulevard and I-280.

I-280 is an eight-lane freeway in the vicinity of the site. It extends northwest to San Francisco and east to King Road in San Jose, at which point it makes a transition into I-680 to Oakland. North of I-880, I-280 has high occupancy vehicle (HOV) lanes in both directions. Access to and from northbound I-280 to the site is provided via ramps at Parkmoor Avenue. Access to and from southbound I-280 to the site is provided via ramps at Moorpark Avenue. Alternative access to I-280 is provided via an interchange at Meridian Avenue.

Local access to the site is provided by San Carlos Street/Stevens Creek Boulevard, Leigh Avenue/Shasta Avenue, Dana Avenue, Buena Vista Avenue, Meridian Avenue, and Race Street. These roadways are described below.

San Carlos Street is a divided four-lane east-west roadway in the vicinity of the project site. It extends from Downtown San Jose westward to I-880, at which point it makes a transition into Stevens Creek Boulevard to Cupertino. In the project vicinity, San Carlos Street has a posted speed limit of 35 mph with sidewalks and on-street parking on both sides of the street and no bike lanes. San Carlos Street runs along the north project frontage and provides direct access to the project site via one driveway.

Leigh Avenue is a two-lane north-south roadway that extends southward from San Carlos Street to Blossom Hill Road. North of San Carlos Street, Leigh Avenue makes a transition to Shasta Avenue. In the project vicinity, Leigh Avenue has a posted speed limit of 25 mph with sidewalks and on-street parking on both sides of the street and no bike lanes. Access to the project site from Leigh Avenue is provided via San Carlos Street.

Dana Avenue is a two-lane north-south roadway that extends northward from San Carlos Street to Hedding Street. In the project vicinity, Dana Avenue has a posted speed limit of speed limit of 25 mph with sidewalks and on-street parking on both sides of the street. Dana Avenue is a designated Class III



bike route with "sharrows" and bike route signage. Access to the project site from Dana Avenue is provided via San Carlos Street.

Buena Vista Avenue is a two-lane north-south roadway that extends between Martin Avenue and Scott Street. In the project vicinity, Buena Vista Avenue is a residential street with a speed limit of 25 mph with sidewalks and on-street parking on both sides of the street and no bike lanes. Buena Vista Avenue runs along the west project frontage. Access to the project site from Buena Vista Avenue is provided via San Carlos Street.

Meridian Avenue is generally a four-lane north-south arterial that runs northward from Camden Avenue to Park Avenue. The roadway narrows to two lanes between San Carlos Street and Park Avenue. Access to the project site from Meridian Avenue is provided via San Carlos Street.

Race Street is a north-south roadway that runs northward from Fruitdale Avenue to The Alameda. It is a four-lane road between Saddle Rack Street and the I-280 off-ramp and a two-lane road north of Saddle Rack Street and south of the I-280 off-ramp. Bike lanes are provided along both sides of Race Street, between The Alameda and Park Avenue and between San Carlos Street and Parkmoor Avenue. Access to the project site from Race Street is provided via San Carlos Street.

Existing Pedestrian, Bicycle and Transit Facilities

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

Existing Pedestrian Facilities

Pedestrian facilities near the project site consist mostly of sidewalks along the streets in the study area. Sidewalks are found along both sides of all streets near the project site including San Carlos Street. Other pedestrian facilities in the project area include crosswalks and pedestrian push buttons at all signalized study intersections. At the intersection of Buena Vista Avenue and San Carlos Street, marked crosswalks are located along the west, north, and south legs of the intersection.

Pedestrian generators in the project vicinity include commercial areas and bus stops along the San Carlos Street corridor. The project site is within the service boundaries of Trace Elementary School, Herbert Hoover Middle School, and Lincoln High School, all of which are located on Dana Avenue approximately ½-mile to ¾-mile from the project site. Existing sidewalks along San Carlos Street and Dana Avenue provide a pedestrian connection between the project site and pedestrian destinations in the project vicinity. Overall, the existing network of sidewalks and crosswalks provides good connectivity and provides pedestrians with safe routes to transit services and other points of interest in the area.

Existing Bicycle Facilities

There are several bicycle facilities in the vicinity of the project site. Bicycle facilities are divided into the following three classes of relative significance:

Class I Bikeway (Bike Path). Class I bikeways are bike paths that are physically separated from motor vehicles and offer two-way bicycle travel on a separate path. The Los Gatos Creek Trail is located in the project area and is a continuous multi-purpose pathway for pedestrians and bicycles that is separated from motor vehicles. It begins at Vasona Lake County Park in the south and continues to West San Carlos Street in the north, all alongside Los Gatos Creek. A connection to the northern segment of the Los Gatos Creek Trail system is located on San Carlos Avenue, approximately 0.85-mile east of the project site.



Class II Bikeway (Bike Lane). 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.

- San Carlos Street, between Leigh Avenue and Lincoln Avenue (including along the north project frontage)
- Park Avenue, along the entire length of the street
- Race Street, between The Alameda and Park Avenue; between San Carlos Street and Parkmoor Avenue
- Lincoln Avenue, between San Carlos Street and Minnesota Avenue

Class III Bikeway (Bike Route). Class III bikeways are bike routes and only have signs to help guide bicyclists on recommended routes to certain locations. In the vicinity of the project site, the following roadway segments are designated as bike routes.

- Dana Avenue, between San Carlos Street and Hedding Street
- Douglas Street, between Meridian Avenue and Willard Avenue
- Willard Avenue, between Douglas Street and Scott Street
- Scott Street, between Willard Avenue and Bascom Avenue
- Lincoln Avenue, between Park Avenue and San Carlos Street
- Auzerais Avenue, all segments east of Race Street without striped bike lanes

The existing bicycle facilities are shown in Figure 8.

Existing Transit Services

Existing transit services in the study area are provided by the VTA and are shown on Figure 9.

The Diridon Transit Center is located approximately 1.36-mile northeast of the project site, along Cahill Street. The Diridon Transit Center provides connections between local and regional bus routes, light rail lines, and commuter rail lines.

VTA Bus Service

The project site is primarily served by two VTA bus routes (Frequent Route 23 and Rapid Route 523). These bus lines are listed in Table 2, including their terminus points and commute hour headways. The nearest bus stops to the project site serve Frequent Route 23 and are located along both sides of San Carlos Street (near Buena Vista Avenue), approximately 100 feet from the project site. The nearest bus stop serving Rapid Route 523 is located at the intersection of Meridian Avenue and San Carlos Street, approximately ½-mile from the project site.

VTA Light Rail Transit (LRT) Service

The VTA currently operates the 42.2-mile VTA light rail line system extending from south San Jose through downtown to the northern areas of San Jose, Santa Clara, Milpitas, Mountain View and Sunnyvale. The nearest LRT station is located at the Diridon Transit Center. LRT service at the Diridon Transit Center is provided by the Green LRT line (Winchester – Old Ironsides). The Green LRT line provides service from the Winchester station in Campbell, through Downtown San Jose. A transfer point to the Blue LRT line (Santa Teresa – Baypointe) is provided at all Downtown stations, starting at the Convention Center LRT Station. From Downtown San Jose, the Green LRT line runs to north San Jose where it curves west and operates along the Tasman Corridor to Old Ironsides station, where a connection is provided to the Orange LRT line (Mountain View – Alum Rock).



Figure 8
Existing Bicycle Facilities

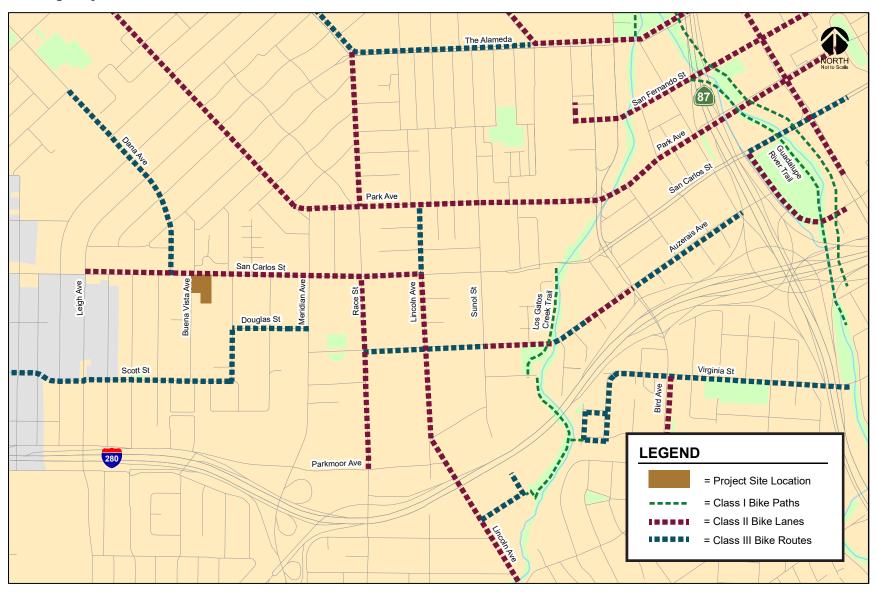




Figure 9
Existing Transit Services





Table 2
Existing Transit Services

Bus Route	Route Description	Nearest Stop	Headway ¹				
Frequent Route 23	DeAnza College to Alum Rock Transit Center via Stevens Creek	San Carlos/Buena Vista	12 - 15 min				
Rapid Route 523	Berryessa BART to Lockheed Martin via De Anza College	San Carlos/Meridian	15 - 20 min				
Notes: 1 Approximate headways during peak commute periods.							

Other Transit Services Near the Project Site

Additional local and express bus routes, as well as commuter rail services, are provided at the Diridon Transit Center. Services to regional destinations are provided by VTA Express bus routes 168, 181, Rapid Route 500, and the Amtrak Highway 17 Express. North of the Diridon Transit Center, the Rapid Route 522 stops at the SAP Center and provides service between Palo Alto and East San Jose with 12-minute headways.

Regional commuter rail services provided at the Diridon Transit Center include the following:

Caltrain Service

Caltrain operates a commuter rail service seven days a week between San Jose and San Francisco. During weekday commuting hours, Caltrain also serves the South County including Gilroy, San Martin, and Morgan Hill. The existing Caltrain station is located at the Diridon Transit Center. Trains stop frequently at the Diridon station between 4:28 AM and 10:30 PM in the northbound direction, and between 6:31 AM and 1:38 AM in the southbound direction. The Diridon station provides 581 parking spaces, as well as 16 bike racks, 48 bike lockers, and 27 bike share docks.

Altamont Corridor Express Service (ACE)

ACE provides commuter rail service between Stockton, Lathrop/Manteca, Tracy, Livermore, Pleasanton, Fremont, Santa Clara, and San Jose during commute hours, Monday through Friday. Service is limited to four westbound trips in the morning and four eastbound trips in the afternoon and evening with headways averaging 60 minutes. ACE trains stop at the Diridon Station between 6:32 AM and 9:17 AM in the westbound direction, and between 3:35 PM and 6:38 PM in the eastbound direction.

Amtrak Capitol Corridor

Amtrak provides daily commuter passenger train service along the 170-mile Capitol Corridor between the Sacramento region and the Bay Area, with stops in San Jose, Santa Clara, Fremont, Hayward, Oakland, Emeryville, Berkeley, Richmond, Martinez, Suisun City, Davis, Sacramento, Roseville, Rocklin, and Auburn. The Capitol Corridor trains stop at the San Jose Diridon Station eight times during the weekdays between approximately 7:38 AM and 11:55 PM in the westbound direction. In the eastbound direction, Amtrak stops at the Diridon Station seven times during the weekdays between 6:40 AM and 7:15 PM.



3. **CEQA Transportation Analysis**

This chapter describes the CEQA transportation analysis, including the VMT analysis methodology and significance criteria, potential project impacts on VMT, mitigation measures recommended to reduce significant impacts, and an evaluation of consistency with the City of San Jose's General Plan.

VMT Analysis Methodology

Per Council Policy 5-1, the effects of the proposed project on VMT was evaluated using the methodology outlined in the City's *Transportation Analysis Handbook*. VMT is the total miles of travel by personal motorized vehicles a project is expected to generate in a day. VMT measures the full distance of personal motorized vehicle-trips with one end within the project. Because the proposed project is relatively small and would not significantly alter existing traffic patterns, the VMT Evaluation tool is used to estimate the project VMT and determine whether the project would result in a significant VMT impact. Figure 10 shows the current VMT levels estimated by the City for residents in the immediate project area.

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

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

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



Figure 10 VMT per Capita Heat Map in Project Area





Thresholds of Significance

If a project is found to have a significant impact on VMT, the impact must be reduced by modifying the project to reduce its VMT to an acceptable level (below the established thresholds of significance applicable to the project) and/or mitigating the impact through multimodal transportation improvements or establishing a Trip Cap.

Table 3 shows the VMT thresholds of significance for development projects, as established in the Transportation Analysis Policy.

The proposed project consists mainly of a residential development with complementary commercial land use (retail use). However, it is anticipated that the commercial use component of the proposed project would not generate sufficient traffic to have an effect on the existing VMT per capita. Therefore, the VMT analysis of the proposed project is based on the residential component of the project.

Projects that include residential uses are said to create a significant adverse impact when the estimated project-generated VMT exceeds the existing citywide average VMT per capita minus 15 percent or existing regional average VMT per capita minus 15 percent, whichever is lower. Currently, the reported citywide average is 11.94 VMT per capita, which is less than the regional average. This equates to a significant impact threshold of 10.12 VMT per capita.

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.

CEQA Transportation Analysis Exemption Criteria

The City of San Jose *Transportation Analysis Handbook* identifies screening criteria that determines whether a CEQA transportation analysis would be required for development projects. The criteria are based on the type of project, characteristics, and/or location. If a project meets the City's screening criteria, the project is expected to result in less-than-significant VMT impacts and a detailed CEQA VMT analysis is not required.

Evaluation of Screening Criteria

The project site is located within a planned Growth Area (West San Carlos Urban Village) with low VMT per capita as identified by the City of San Jose (see Figure 11). San Carlos Street, located along the north project frontage, is a high-quality transit corridor with VTA bus service headways of less than 15 minutes during peak commute periods. The residential use of the proposed project will meet the applicable residential screening criteria as described below.

Per the City of San Jose VMT screening criteria, retail projects of 100,000 square feet or less are considered local-serving. The maximum proposed 21,164 s.f. of retail space is less than the 100,000 s.f. retail threshold screening criterion for local-serving retail and a detailed VMT analysis is not required.

Therefore, both the residential and commercial land use components of the project are anticipated to result in less-than-significant VMT impacts and a detailed CEQA transportation analysis that evaluates the project's effects on VMT is not required. However, for informational purposes, a VMT evaluation for the project was completed and presented below.

Planned Growth Areas

Requirement: Located within a Planned Growth Area as defined in the Envision San José 2040 General Plan.



The project site is located within the West San Carlos Urban Village.

High-Quality Transit

Requirement: Located within ½ a mile of an existing major transit stop or an existing stop along a high-quality transit corridor

The project site is located approximately 100 feet from bus stops serving VTA Frequent Route 23 near the intersection of Buena Vista Avenue and San Carlos Street. San Carlos Street is considered a high-quality transit corridor due to Frequent Route 23 having headways of 15 minutes or less during peak commute hours.

Low VMT

Requirement: Located in an area in which the per capita VMT is less than or equal to the CEQA significance threshold for the land use.

The project site is located within an Urban Village Area (San Carlos Street) with low VMT per capita (7.38 compared to the threshold VMT per capita of 10.12 for residential uses).

Transit-Supporting Project Density

Requirement: Minimum of 35 units per acre for residential projects or components; if located in a Planned Growth Area that has a maximum density below 35 units per acre, the maximum density allowed in the Planned Growth Area must be met.

A total of 173 units are proposed to be constructed on the 1.34-acre project site. The proposed development density will equate to 129 units per acre, exceeding the required minimum of 35 units per acre. The proposed project also will meet the minimum 55 units per acre as required by the West San Carlos Urban Village Plan for the "Urban Village in the Mixed-Use Residential Character Area" land use.

Parking

Requirement: No more than the minimum number of parking spaces required; if located in Urban Villages or Downtown, the number of parking spaces must be adjusted to the lowest amount allowed; however, if the parking is shared, publicly available, and/or "unbundled", the number of parking spaces can be up to the zoned minimum.

The site is within the West San Carlos Urban Village, which is subject to city-wide parking rates. The project proposes a total of 189 parking spaces on-site which is less than the required 262 spaces for residential and commercial uses within an urban village.

Active Transportation

Requirement: Not negatively impact transit, bike or pedestrian infrastructure

No negative impacts to transit, bike or pedestrian infrastructure are anticipated with the proposed development. Potential impacts to transit services, bike and pedestrian facilities within the project study area are discussed in Chapter 3.

VMT of Existing Land Uses

The results of the VMT analysis using the VMT Evaluation tool indicate that the existing VMT for residential uses in the project vicinity is 7.38 per capita. As shown in Table 3, the current citywide average VMT for residential uses is 11.91 per capita. Therefore, the VMT levels of existing uses in the project vicinity are



Figure 11 Low VMT per Capita Areas





Table 3
CEQA VMT Analysis Significant Impact Criteria for Development Projects

Туре	Significance Criteria	Current Level	Threshold		
Residential Uses	Project VMT per capita exceeds existing citywide average VMT per capita minus 15 percent <u>OR</u> existing regional average VMT per capita minus 15 percent, whichever is lower.	11.91 VMT per capita (Citywide Average)	10.12 VMT per capita		
General Employment Uses	Project VMT per employee exceeds existing regional average VMT per employee minus 15 percent	14.37 VMT per employee (Regional Average)	12.21 VMT per employee		
Industrial Employment Uses	Project VMT per employee exceeds existing regional average VMT per employee	14.37 VMT per employee (Regional Average)	14.37 VMT per employee		
Retail/ Hotel/ School Uses	Net increase in existing regional total VMT	Regional Total VMT	Net Increase		
Public/Quasi-Public Uses	In accordance with the 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 or 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 José Transportation Analysis Handbook, April 2018.					

currently less than the average VMT levels. Appendix A presents the VMT Evaluation tool summary report for the project.

Project-Level VMT Impact Analysis

The City's Transportation Policy identifies an impact threshold of 15% below the citywide average percapita VMT of 11.91. Thus, the proposed project would result in a significant impact if it results in VMT that exceeds per capita VMT of 10.12.

The results of the VMT evaluation, using the City's VMT Evaluation Tool, indicate that the proposed project is projected to generate VMT per capita (7.21) that is below the established threshold. Therefore, the proposed project would not result in an impact on the transportation system based on the City's VMT impact criteria.



The reduction in per-capita VMT could be indicative of the addition of residents to an area with extensive opportunities for the use of transit, bicycles, and other non-auto modes of travel. In addition, the project site is located within two miles of the Diridon Transit Center and is supported by major bus stops, and bicycle and pedestrian facilities in its immediate proximity. Therefore, a larger percentage of the residents of the project would likely use transit more regularly than the average transit usage for these land uses in Santa Clara County. The increase in transit usage would result in a reduction of length of those trips that are added to the roadway system due to the proposed project. Figure 12 shows the VMT evaluation summary generated by the City of San Jose's VMT Evaluation Tool.

Cumulative (GP Consistency) Evaluation

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 per the City's *Transportation Analysis Handbook*.

The project site is located within the West San Carlos Urban Village. Urban villages were developed as one of the major strategies of the *Envision San José 2040 General Plan*. Urban villages are defined as walkable, bicycle-friendly, transit-oriented, mixed use settings that provide both housing and jobs, thus supporting the policies and goals of the General Plan.

The West San Carlos Urban Village Plan identifies the following goals to improve alternative transportation options.

- Make transit a more desirable option within the Urban Village.
- Develop safe and direct pedestrian and bicycle connections (sidewalks or pathways) between transit stops and local destinations.
- Improve roadway crossings through high-visibility treatments and shorter crossing distances, especially where transit stops are located.
- Enhance the environment around transit stops and improve the overall transit rider/pedestrian/bicyclist experience at bus stops.

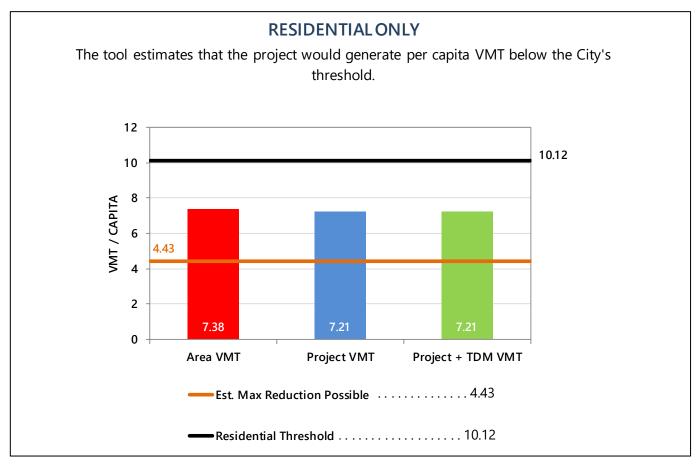
The project is consistent with the General Plan and West San Carlos Urban Village goals and policies for the following reasons:

- The proposed residential uses for the project site are consistent with the Urban Village land use designation per the West San Carlos Urban Village plan.
- The project frontage along San Carlos Street will be consistent with planned streetscape design features West San Carlos Urban Village Plan.
- The project site is within walking distance (less than 100 feet) of bus stops on San Carlos Street.

Therefore, based on the project description, the proposed project would be consistent with the *Urban Village Planning Concepts* and the *Envision San José 2040 General Plan*. Thus, the project would be considered as 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.



Figure 12 VMT Analysis Summary





4.

Local Transportation Analysis

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

Project Description

The project site is currently occupied by two automobile sales lots, an approximately 2,250 square-foot restaurant and eight detached residential units. The project as currently proposed consists of 173 multifamily residential units and 18,242 s.f. of commercial space. However, the project could include up to 21,164 s.f. of commercial space. Therefore, this study conservatively evaluates the greater amount of commercial space (21,164 s.f.). A total of 189 parking spaces are proposed to be provided within one ground-level and one below-ground parking level. The proposed project site will be accessed by one right-in/right-out driveway on San Carlos Street.

The project site is located within a designated Urban Village (West San Carlos) per the Envision San Jose 2040 General Plan. Urban villages are walkable, bicycle-friendly, transit-oriented, mixed-use settings that provide both housing and jobs, thus supporting the General Plan's environmental goals.

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

Proposed Project Trips

Through empirical research, data have been collected that indicate the amount of traffic that can be expected to be generated by common land uses. Project trip generation was estimated by applying to the size and uses of the development the appropriate trip generation rates. The average trip generation rates for Multi-Family Housing – Mid Rise (Land Use 221) and Shopping Center (Land Use 820) as published in



the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 10th Edition* (2017) were applied to the proposed number of residential units and commercial square footage, respectively.

Trip Reductions

In accordance with San Jose's *Transportation Analysis Handbook* (November 20018, Section 4.8, "Intersection Operations Analysis"), the project is eligible for adjustments and reductions from the baseline (gross) trip generation described above.

A mixed-use development with complementary land uses such as residential and retail, will result in a reduction of external site trips. Thus, the number of vehicle trips generated for each use may be reduced, since a portion of the trips would not require entering or exiting the site. Therefore, based on VTA's recommended mixed-use reduction, a 15 percent trip reduction is applied for the housing/retail mixed use, based on the smaller retail component. The reduction is applied to the smaller of the two complimentary trip generators and the same number of trips is then subtracted from the larger trip generator.

Based on the 2018 San Jose guidelines, the project also qualifies for a location-based adjustment. The location-based adjustment reflects the project's vehicle mode share based on the place type in which the project is located per the San Jose Travel Demand Model. The project's place type was obtained from the San Jose VMT Evaluation Tool. Based on the Tool, the project site is located within a designated urban area with low access to transit. Therefore, the baseline project trips were adjusted to reflect an urban low-transit mode share. Urban low-transit is characterized as an area with good accessibility, low vacancy, and middle-aged housing stock. Residential developments and retail uses within urban low-transit areas have a vehicle mode share of 87%. Thus, a 13% reduction was applied to the residential and retail trips generated by the proposed project.

Additionally, based on the San Jose VMT Evaluation Tool, the project is anticipated to generate 7.21 VMT per-capita in an area that currently generates approximately 7.38 VMT per-capita. It is assumed that every percent reduction from the existing per-capita VMT is equivalent to one percent reduction in peak-hour vehicle trips. Thus, the project trip estimates were reduced by two percent to reflect the reduction in peak hour trips.

Existing Site Trips

Trips associated with the existing restaurant and detached residential units on the project site are subtracted from the estimated trips to be generated by the proposed project. Daily and peak-hour trips generated by the existing uses on site were obtained from new driveway counts completed in March 2019.

Based on driveway counts, the existing restaurant and residential units currently generate a total of 159 daily vehicle trips, with one outbound trip occurring during the AM peak hour and 22 trips (10 inbound and 12 outbound) occurring during the PM peak hour.

The existing automobile sales lots (used car dealership and rental service) located on 1544 San Carlos Street are not estimated to generate a significant number of peak-hour trips due to limited on-site parking. It is likely that trips generated by these uses currently utilize on-street parking located along Buena Vista Avenue and San Carlos Street, including along the project site frontages. As a conservative measure, no credit is applied to the project trip generation for the existing automobile commercial uses on-site.

Net Project Trips

After applying the ITE trip rates, appropriate trip reductions, and existing site trip credits, it is estimated that the project would generate an additional 1,130 daily vehicle trips, with 64 trips (22 inbound and 42 outbound) occurring during the AM peak hour and 93 trips (53 inbound and 41 outbound) occurring during the PM peak hour. The project trip generation estimates are presented in Table 4.



Table 4
Project Trip Generation Estimates

												AM Pea	ık Hou	r				PM Pea	ak Hou	r	
	ITE Land		% of Vehicle	VM	T ³	%		Dai	ly	Pk-Hr	S	olit		Trip		Pk-Hr	Sp	olit		Trip	
Land Use	Use Code	Location	Mode Share	Existing	Project	Reduction	Size	Rate	Trip	Rate	ln	Out	ln	Out	Total	Rate	ln	Out	ln	Out	Total
Proposed Land Uses																					
Multifamily Housing (Mid-Rise) ¹	221						173 Dwelling Units	5.440	941	0.360	26%	74%	16	46	62	0.440	61%	39%	46	30	76
- Residential - Retail Internal Redu	uction ²								-120				-1	-2	-3				-6	-6	-12
- Location Based Reduction ³		Urban Low-Transit	87%			13%			-107				-2	-6	-8				-5	-3	-8
- VMT Reduction ⁴				7.38	7.21	2%			-16				0	-1	-1				-1	0	-1
Shopping Center ¹	820						21,164 Square Feet	37.750	799	0.940	62%	38%	12	8	20	3.810	48%	52%	39	42	81
- Residential - Retail Internal Redu	uction ²					15%			-120				-2	-1	-3				-6	-6	-12
- Location Based Reduction ²		Urban Low-Transit	87%			13%			-88				-1	-1	-2				-4	-5	-9
Project Trips After Reductions									1,289				22	43	65				63	53	115
Existing Land Use																					
Sit-Down Restaurant ⁵							2,250 Square Feet		-147				0	0	0				-9	-12	-21
Single-Family Detached Housing ⁵	i						8 Dwelling Units		-12				0	-1	-1				-1	0	-1
Total Credit for Existing Land U	Jses	•	•	•			_	•	-159				0	-1	-1			•	-10	-12	-22
Net Project Trips									1,130				22	42	64				53	41	93

Notes:



¹ Source: ITE *Trip Generation Manual*, 10th Edition 2017, average trip generation rates.

² As prescribed by the Transportation Impact Analysis Guidelines from VTA (October 2014), the maximum trip reduction for a mixed-use development project with residential and retail is equal to 15% off the smaller trip generator.

³ The project site is located within an urban low-transit area based on the City of San Jose VMT Evaluation Tool (March 14, 2018). The location-based vehicle mode shares are obtained from Table 6 of the City of San Jose Transportation Analysis Handbook (April 2018). The trip reductions are based on the percent of mode share for all of the other modes of travel besides vehicle.

⁴ VMT per capita for residential use. Existing and project VMTs were estimated using the City of San Jose VMT Evaluation Tool.

It is assumed that every percent reduction in VMT per-capita is equivalent to one percent reduction in peak-hour vehicle trips.

⁵ Trips for the existing on-site uses were obtained from driveway counts conducted March 2019.

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 13 shows the trip distribution pattern, and Figure 14 shows the net trip assignment of project traffic on the local transportation network.

Intersection Operations Methodology

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

The intersection operations analysis is intended to quantify the operations of intersections and to identify potential negative effects due to the addition of project traffic. However, a potential adverse effect on a study intersection is not considered a CEQA impact metric.

Study Intersections

The study includes an analysis of AM and PM peak-hour traffic conditions for four signalized intersections and one unsignalized intersection within the City of San Jose. Intersections were selected for study if the project is expected to add 10 vehicle trips per hour per lane to a signalized intersection that meets one of the following criteria as outlined in the *Transportation Analysis Handbook*.

- Within a ½-mile buffer from the project's property line;
- Outside a ½-mile buffer but within a one-mile buffer from the project AND currently operating at D or worse:
- Designated Congestion Management Program (CMP) facility outside of the City's Infill Opportunity Zones;
- Outside the City limits with the potential to be affected by the project, per the transportation standards of the corresponding external jurisdiction;
- With the potential to be affected by the project, per engineering judgement of Public Works.

The $\frac{1}{2}$ a mile and 1-mile radii from the project site are shown in Figure 15. Based on the above criteria, the following City of San Jose study intersections were selected and are shown in Figure 13.

- 1. Buena Vista Avenue and San Carlos Street
- 2. Muller Place and San Carlos Street (unsignalized)
- 3. Meridian Avenue and San Carlos Street
- 4. Race Street and San Carlos Street
- 5. Leigh Avenue/Shasta Avenue and San Carlos Street

Data Requirements

The data required for the analysis were obtained from new traffic counts, the City of San Jose, and field observations. The following data were collected from these sources:

- existing traffic volumes
- existing lane configurations
- signal timing and phasing
- approved and pending project trips

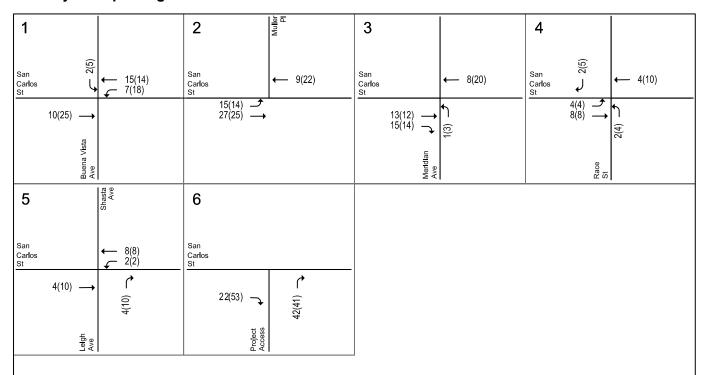


Figure 13 Project Trip Distribution





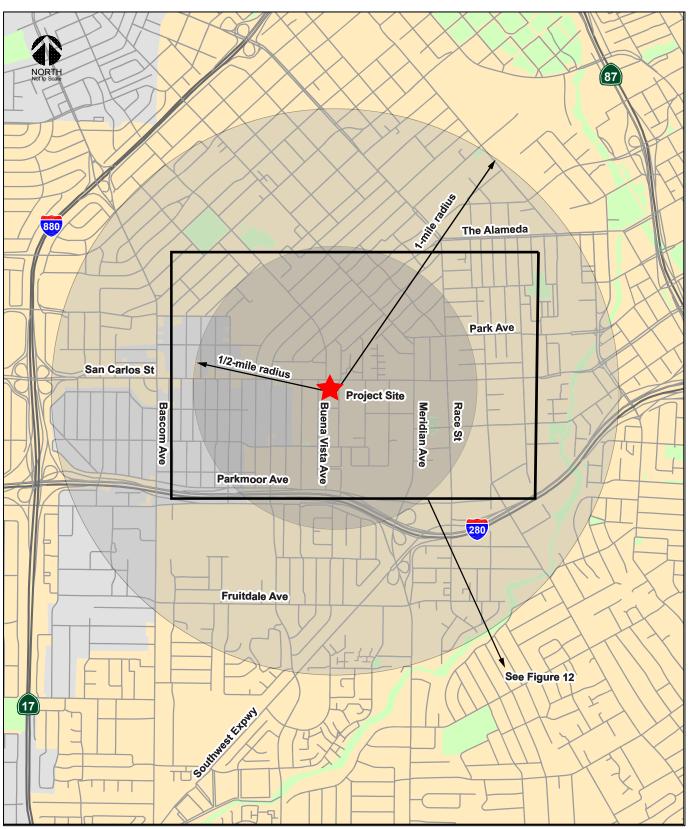
Figure 14 Net Project Trip Assignment



LEGEND:



Figure 15 ½-Mile and 1-Mile Radii from Project Site





Lane Configurations

The existing lane configurations at the study intersections were determined by observations in the field and are shown on Figure 16. It is assumed in this analysis that the transportation network under background, background plus project, and cumulative plus project conditions would be the same as the existing transportation network with the exception of the following improvement under cumulative conditions.

Leigh Avenue/Shasta Avenue and San Carlos Street – This improvement is proposed as part of the West San Carlos Vision Zero Safety Improvement project, discussed in further detail below. The planned improvement consists of the narrowing of the north and south approaches at this intersection. This will be achieved by removing the existing left-turn pockets at the north and south approaches, resulting in one shared lane for all movements at each approach.

Traffic Volumes

Existing Conditions

Existing peak hour traffic volumes at all study intersections were obtained from the City of San Jose, recently completed traffic studies, and new traffic counts conducted March 19, 2019. The existing peak-hour intersection volumes are shown on **Figure 17**. Intersection turning-movement counts conducted for this analysis are presented in Appendix B. Peak hour intersection turning movement volumes for all intersections and study scenarios are tabulated in Appendix D.

Future Conditions

Background peak hour traffic volumes were estimated by adding to existing volumes the estimated traffic from approved but not yet constructed developments. The added traffic from approved but not yet constructed developments was obtained from the City of San Jose's Approved Trips Inventory (ATI) database. The background traffic scenario predicts a realistic traffic condition that would occur as approved development is built. Background traffic volumes are shown in Figure 18. Project trips were added to background traffic volumes to obtain background plus project traffic volumes (see Figure 19).

Traffic volumes under cumulative conditions were estimated by adding to the background traffic volumes the trips from proposed, but not yet approved (pending), development projects within the City of San Jose. Pending project trips and/or pending project information was obtained from the City of San Jose. Cumulative plus project peak-hour traffic volumes were estimated by adding to cumulative traffic volumes the additional traffic generated by the project. The cumulative plus project traffic volumes at study intersections are shown in Figure 20.

The approved and pending project information are included in Appendix C. The approved trips, proposed project trips, pending project trips, and traffic volumes for all components of traffic are tabulated in Appendix D.

Level of Service Standards and Analysis Methodologies

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



Figure 16 Existing Lane Configurations

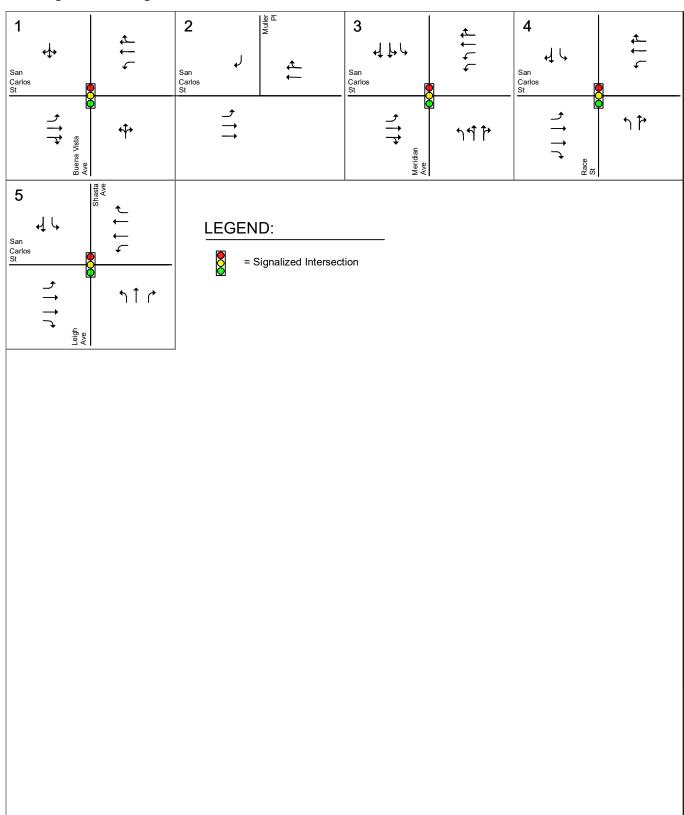
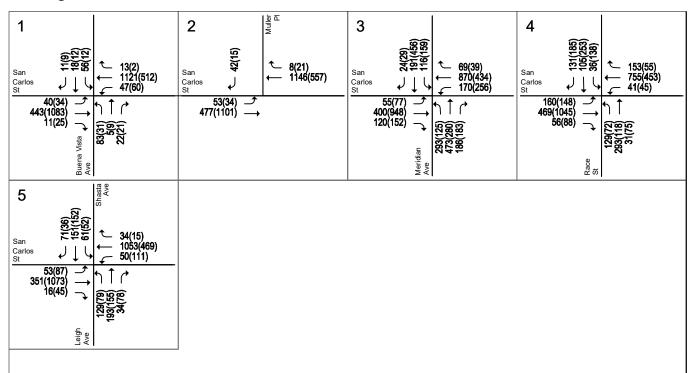


Figure 17 Existing Traffic Volumes



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Figure 18 **Background Traffic Volumes**

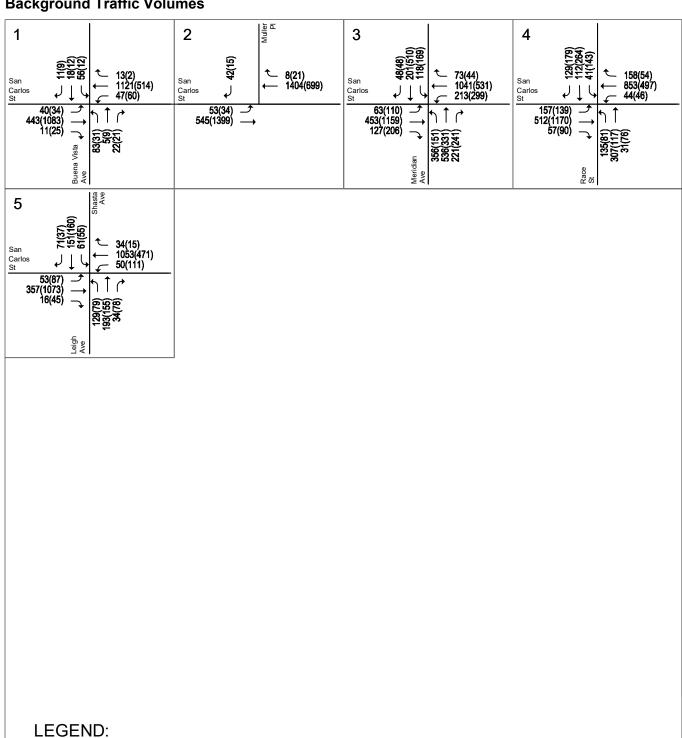






Figure 19
Background Plus Project Traffic Volumes

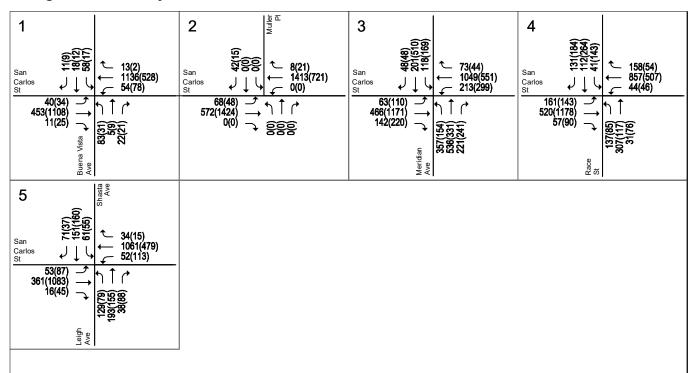
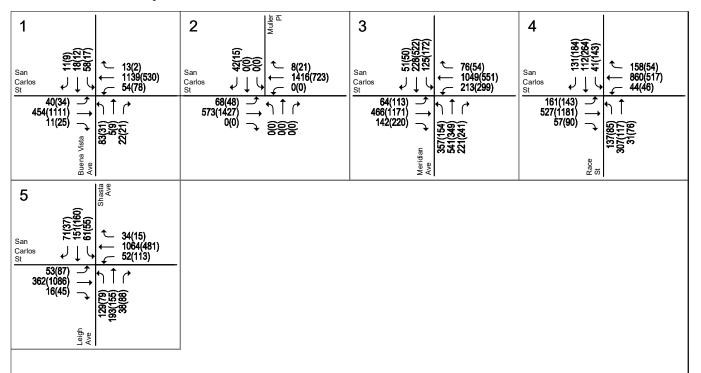






Figure 20 Cumulative Plus Project Traffic Volumes







All study intersections were evaluated based on the 2000 Highway Capacity Manual (HCM) level of service methodology using the TRAFFIX software. This method evaluates signalized intersection operations on the basis of average control delay time for all vehicles at the intersection. 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 5.

Signalized study intersections are 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.

City of San Jose 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 the intersection degrades from an acceptable level (LOS D or better) under background conditions to an unacceptable level under background plus project conditions, or
- 2. The level of service at the intersection is an unacceptable level (LOS E or F) under background conditions and the addition of project trips cause both the critical-movement delay at the intersection to increase by four 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.

An adverse intersection operations effect by City of San Jose standards may be addressed by implementing measures that would restore intersection level of service to background conditions or better. The City recommends prioritizing improvements related to alternative transportation modes, parking measures, and/or TDM measures.

Improvements that increase vehicle capacity are secondary and must not have unacceptable effects on existing or planned transportation facilities. Unacceptable effects on existing or planned transportation facilities include the following:

- Inconsistent with the General Plan Transportation Network and Street Typologies;
- Reduction of any physical dimension of a transportation facility below the minimum design standards per the San José Complete Streets Design Standards and Guidelines; OR
- Substantial deterioration in the quality of existing or planned transportation facilities, including pedestrian, bicycle, and transit systems and facilities, as determined by the Director of Transportation.

Intersection Operations Analysis Results

The intersection level of service analysis is summarized in Table 6.

Existing Intersection Operation Conditions

Intersection levels of service were evaluated against applicable City of San Jose operations standards. The results of the level of service analysis show all study intersections currently operate at an



Table 5
Signalized Intersection Level of Service Definitions Based on Control Delay

Level of Service	Description	Average Control Delay per Vehicle (sec.)
А	Operations with very low delay occurring with favorable progression and/or short cycle lengths.	up to 10.0
В	Operations with low delay occurring with good progression and/or short cycle lengths.	10.1 to 20.0
С	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.1 to 35.0
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	35.1 to 55.0
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	55.1 to 80.0
F	Operation with delays unacceptable to most drivers occurring due to oversaturation, poor progression, or very long cycle lengths.	Greater than 80.0
	ransportation Research Board, 2000 Highway Capacity Manual. Trauidelines, Santa Clara County Transportation Authority Congestion I	



Table 6
Intersection Level of Service Results

			Existing Background Background Plus Project				Cumulative		Cumulative Plus Project								
Int.	LOS	Peak	Count	Avg.		Avg.		Avg.		Incr. In	Incr. In	Avg.		Avg.		Incr. In	Incr. In
# Intersection	Standard	Hour	Date	Delay	LOS	Delay	LOS	Delay	LOS	Crit. Delay	Crit. V/C	Delay	LOS	Delay	LOS	Crit. Delay	Crit. V/C
Buena Vista Avenue and San Carlos Street	D		03/19/19 03/19/19	22.3 16.9	C B	22.3 16.9	C B	22.4 17.9	C B	0.0 1.6	0.006 0.022	22.3 16.8	C B	22.3 17.8	C B	0.0 1.6	0.006 0.022
3 Meridian Avenue and San Carlos Street	D	AM	05/18/17 05/18/17	39.7 44.5	D D	41.5 49.4	D D	41.5 49.6	D D	0.0	0.002 0.008	42.2 50.2	D D	42.2 50.4	D D	0.0 0.5	0.002 0.008
4 Race Street and San Carlos Street	D		05/18/17 05/18/17	39.1 39.5	D D	39.0 39.5	D D	39.2 39.9	D D	0.2 0.5	0.004 0.008	39.0 39.5	D D	39.2 39.9	D D	0.2 0.5	0.004 0.008
5 Leigh Avenue/Shasta Avenue and San Carlos Stree	t D		03/19/19 03/19/19	26.2 26.8	C C	26.1 27.1	C C	26.1 27.1	C C	-0.1 0.0	0.002 0.004	29.4 30.4	C C	29.4 30.6	C C	0.1 0.5	0.005 0.010

* Denotes CMP Intersection Bold indicates unacceptable level of service.

Bold and boxed indicate adverse operations effect.



acceptable LOS D or better during both the AM and PM peak hours, based on the City of San Jose intersection operations standard of LOS D. The level of service calculation sheets are included in Appendix E.

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 levels of service. The purpose of this effort was (1) to identify any existing traffic problems that may not be directly related to intersection level of service, and (2) to identify any locations where the level of service calculation does not accurately reflect level of service in the field.

Field observations revealed the following operational problems that may not be reflected in level of service calculations:

In general, San Carlos Street experiences heavy congestion during the weekday PM peak hour in the eastbound direction in the project vicinity. The congestion is made worse by the close spacing of several signalized intersections along the roadway. At its intersection with Meridian Avenue, vehicles within the through-movement lanes frequently do not clear at the eastbound approach within the allotted green time during the PM peak hour, causing queues to extend to upstream intersections. The through-movement queues frequently blocked access to the eastbound left-turn pocket. Additionally, heavy east-west pedestrian volumes along the south approach of the San Carlos/Meridian intersection were observed to cause delays to right-turning vehicle traffic. Since the eastbound approach provides a shared though- and right-turn lane, the delays also impacted through-movement traffic at the intersection.

Spillback from the eastbound through-movement queues at San Carlos Street/Meridian Avenue frequently extended past the eastbound left-turn pocket providing access to Muller Place. The spillback also frequently extended past the San Carlos Street/Buena Vista Avenue intersection, causing vehicles to wait behind the stop bar during their allotted green time. The through-movement queues sometimes blocked access to the eastbound left-turn pocket.

All other study intersections operate without any major operational problems.

Future Intersection Operation Conditions

The operations analysis shows that all of the study intersections are projected to operate at acceptable levels of service, based on the City of San Jose intersection operations standard of LOS D, under background conditions, background plus project conditions, and cumulative conditions during both the AM and PM peak hours. The intersection level of service calculation sheets are included in Appendix E.

Intersection 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. 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 gueue 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. The operations analysis is based on vehicle queuing for high-demand movements at intersections (see Table 7).

As shown in Table 7, the queues at high-demand movements will be served by the existing queue storage space at all study intersections under existing, background conditions, and background plus project conditions.

Site Access and On-Site Circulation

The evaluation of site access and circulation is based on the September 18, 2019 site plan prepared by the Studio Current. Site access was evaluated to determine the adequacy of the site's access points with regard to the following: traffic volume, delays, vehicle queues, geometric design, and corner sight distance. On-site vehicular circulation was reviewed in accordance with generally accepted traffic engineering standards and transportation planning principles. The site plan is shown on Figure 21.

Project Driveway Design

Vehicular access to the project site would be provided via a right-in, right-out driveway along the north project frontage on San Carlos Street, approximately 80 feet east of the Buena Vista Avenue and San Carlos Street intersection. The project driveway will be required to meet the City's minimum 26-foot width for two-way multi-family residential driveways.

Sight Distance

Adequate sight distance will be required at the project driveway along San Carlos Street. The project access point 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 San Carlos Street. 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 project driveway in accordance with the *American Association of State Highway Transportation Officials* (AASHTO) 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.



Table 7
Queuing Analysis Summary

		Vista/ Carlos		ller/ Carlos
Magaziramant	WBL	WBL	EBL	EBL
Measurement	AM	PM	AM	PM
Existing Conditions				
Cycle/Delay ¹ (sec)	140	140	11.4	8.7
Lanes	1	1	1	1
Volume (vph)	47	60	53	34
Volume (vphpl)	47	60	53	34
Avg. Queue (veh/ln.)	2	2	0	0
Avg. Queue ² (ft./ln)	46	58	4	2
95th %. Queue (veh/ln.)	4	5	1	1
95th %. Queue (ft./ln)	100	125	25	25
Storage (ft./ In.)	150	150	175	175
Adequate (Y/N)	YES	YES	YES	YES
Background Conditions				
Cycle/Delay ¹ (sec)	140	140	13.3	9.2
Lanes	1	1	1	1
Volume (vph)	47	60	53	34
Volume (vphpl)	47	60	53	34
Avg. Queue (veh/ln.)	2	2	0	0
Avg. Queue ² (ft./ln)	46	58	5	2
95th %. Queue (veh/ln.)	4	5	1	1
95th %. Queue (ft./ln)	100	125	25	25
Storage (ft./ In.)	150	150	175	175
Adequate (Y/N)	YES	YES	YES	YES
Background Plus Project Conditions				
Cycle/Delay ¹ (sec)	140	140	13.6	9.4
Lanes	1	1	1	1
Volume (vph)	54	78	68	48
Volume (vphpl)	54	78	68	48
Avg. Queue (veh/ln.)	2	3	0	0
Avg. Queue ² (ft./ln)	53	76	6	3
95th %. Queue (veh/ln.)	5	6	1	1
95th %. Queue (ft./ln)	125	150	25	25
Storage (ft./ In.)	150	150	175	175
Adequate (Y/N)	YES	YES	YES	YES

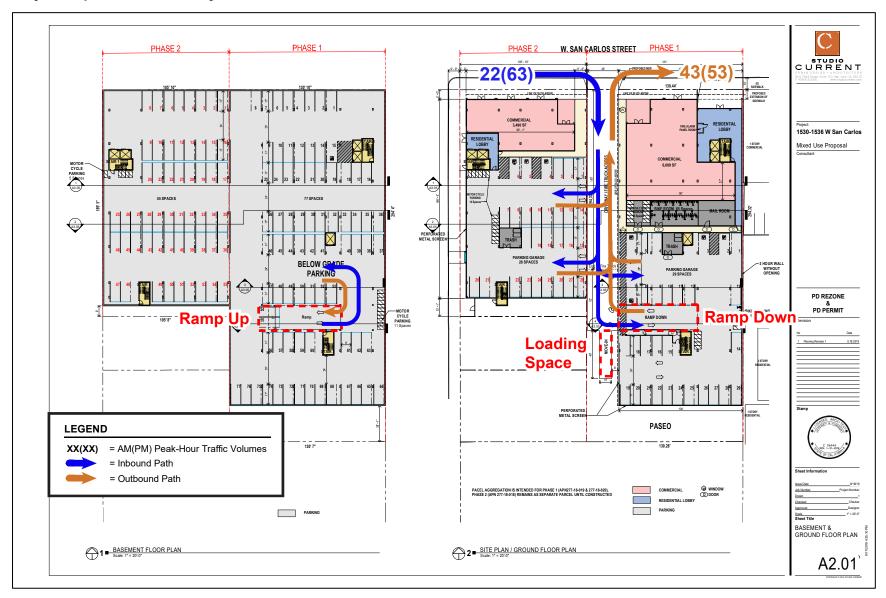
¹ Vehicle queue calculations based on cycle length for signalized intersections.

NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound, R = Right, T = Through, L = Left.



² Assumes 25 feet per vehicle in the queue.

Figure 21
Project Trips at Site Driveways and On-Site Circulation





The minimum acceptable sight distance is often considered the AASHTO stopping sight distance. Sight distance requirements vary depending on the roadway speeds. San Carlos Street has a posted speed limit of 35 miles per hour (mph). The AASHTO stopping sight distance for a facility with a posted speed limit of 35 mph is 250 feet. Thus, a driver exiting the proposed project driveway on San Carlos Street must be able to see 250 feet to the west along San Carlos Street in order to stop and avoid a collision.

Although the proposed project driveway would be located only 80 feet east of the intersection of Buena Vista Avenue and San Carlos Street, vehicles exiting the project site driveway would be able to see approaching traffic on eastbound San Carlos Street at least to Dana Avenue located approximately 400 feet to the west. Therefore, it can be concluded that the project driveway would meet the AASHTO minimum stopping sight distance standards.

Project Driveway Operations

Based on the project trip generation and trip assignment, it is estimated that the project driveway will serve 22 inbound trips and 43 outbound trips during the AM peak hour and 63 inbound trips and 53 outbound trips during the PM peak hour. The estimated project trips at the project site driveway are shown on Figure 21.

Entry gates are not indicated on the site plan. Therefore, inbound queueing into the parking garage is not anticipated.

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 proposed site plan would provide vehicle traffic with adequate connectivity throughout the parking garage.

The project would provide 90-degree parking stalls at ground-floor level and within the below-ground parking level, shown in Figure 21. On-site drive aisles are shown to be 24 to 26 feet wide. All on-site drive aisles are shown to provide two-way access and must therefore provide a minimum 26-foot width to meet City standards. The proposed parking space dimensions of 17 to 18 feet in length and 9 feet in width will meet the City's standards for full-sized and compact-size parking spaces. The City identifies full-size parking spaces as 18 feet long and 9 feet wide and compact parking spaces as 16 feet long and 8 feet wide.

From the project driveway, a 26-foot wide drive aisle provides access to ground-floor parking areas located beneath the east and west residential towers. The parking area beneath the west tower consists of 28 parking spaces and a looped drive aisle that is accessible on both ends from the main north-south project drive aisle. Access to the parking area beneath the east tower is provided via one access point along the main drive aisle, approximately 150 feet south of the project driveway. The parking area contains 30 parking spaces and the drive aisle terminates as a dead-end. Approximately 40 feet south of the east tower parking access point, a ramp provides access to a below-ground parking level. Multiple dead-end aisles are shown throughout the below-ground parking level. Dead-ends are undesirable because vehicles must park at a parking space or perform a U-turn to exit the parking structure. The site plan should be adjusted to provide looped drive aisles within the parking levels or provide adequate turn-around space for U-turning vehicles adjacent to all dead-end drive aisles. This adjustment will require the removal or relocation of planned parking spaces. Alternatively, the below-ground parking level should be restricted to resident use only with assigned parking. With implementation of assigned parking, residents will be familiar with the parking garage and will not circulate to the dead-end drive aisles in search of available parking.

Typical engineering standards require garage ramps to have no greater than a 20 percent grade, and slopes over 10% requires transition slopes so that vehicles do not "bottom out". The project site plan



does not indicate the slope of the ramps providing access to the parking levels. Should the ramp be designed with a slope greater than 10%, the proposed ramp design should incorporate a transition slope based on typical engineering standards

Truck and Emergency Vehicle Access

The site plan indicates that fire trucks will have access to the entry drive aisle between the project driveway and approximately 150 feet south to the ground-floor parking level entrance. Firetrucks will not have access to the interior of the ground-floor parking level or the below-ground parking level. Other large vehicles, such as delivery trucks and garbage trucks, would also not have access to the parking garage.

According to the City of San Jose Zoning Regulations, the project is not required to provide an off-street loading space for the residential nor the commercial uses. However, a move-in loading space is provided at the southern end of the entry drive aisle, approximately 200 feet south of the project driveway. The loading space is shown to be 40 feet long and 10 feet wide, and will meet the City's minimum dimensions for off-street loading spaces. However, larger trucks may have difficulty backing out of the loading space and may require the use of either of the parking garage entrances to perform a three-point turn if they meet the ground-floor level's vertical clearance. Some trucks may need to back-in or back-out from the project driveway. Therefore, access to the move-in loading space should be restricted to smaller truck deliveries or personal vehicles. Larger trucks will need to perform loading activities along San Carlos Street. Ideally, the on-site loading space should be located along the east or west side of the drive aisle such that trucks are able to back-in to the loading area.

The site plan shows trash enclosures located within each of the ground-floor parking areas beneath the east and west towers. The parking levels, however, would not provide garbage truck access, requiring trash bins to be wheeled out of the parking garage for pickup. The City supports on-site pickup of trash. Therefore, trash bins should be wheeled out to a designated location on-site, adjacent to the entry drive aisle and accessible to garbage trucks for pickup. The designated pickup location should not inhibit vehicular on-site circulation along the drive aisle or parking garage.

Parking Supply

Vehicular Parking

The project as proposed would construct 173 multi-family residential units and 18,242 s.f. of commercial space. The required parking based on the City of San Jose off-street parking requirements (Section 20.90.060) is summarized in Table 8 below. Based on the City's parking requirements, the project as currently proposed, would be required to provide a total of 328 parking spaces before any reductions.

The project is proposing to provide a total of 189 parking spaces, which represents a 42% reduction in on-site parking spaces from the required baseline 328 parking spaces. A 20 percent reduction in required off-street vehicle parking spaces is allowed with a development permit, or a development exception if no development permit is required, for developments that meet the following conditions (Section 20.90.220.A.1):

 The structure or use is located within two thousand feet of a proposed or an existing rail station or bus rapid transit station, or an area designated as a neighborhood business district, or as an urban village, or as an area subject to an area development policy in the city's General Plan, or the use is listed in Section 20.90.220.G; and



Table 8
Vehicle Parking Requirement

Proposed Project		City of San Jose	General Required	Urban Village Required		
Land Use	Size	Land Use		Parking Ratio	Parking	Parking ³
Residential	17 units	Multiple dwelling residential	1.25	spaces per studio unit	21	16
Residential	83 units	Multiple dwelling residential	1.25	spaces per one-bedroom unit	104	83
Residential	70 units	Multiple dwelling residential	1.70	spaces per two-bedroom unit	119	95
Residential	3 units	Single-Family residential	2.00	spaces per unit	6	5
Residential Sub-Total	173 units				250	199
Retail	15,506 s.f. ²	Retail sales, goods, and merchandise	1.00	space per 200 s.f. of floor area	78	63
Total					328	262
Notes:						

¹City of San Jose Zoning Ordinance: Parking Spaces Required by Land Use

2. The structure or use provides bicycle parking spaces in conformance with the City's Zoning Code requirements.

The project site is within the West San Carlos Urban Village and the project proposes to provide bicycle parking that will exceed the City's bicycle parking requirements. Therefore, the vehicle parking requirement would be reduced by 20% to 262 vehicle parking spaces.

The project on-site parking will require an additional 22% reduction in on-site parking spaces. Therefore, the project will need to submit and have approved a TDM plan for a total parking reduction of 42 percent. The TDM plan will need to include at least three TDM measures specified in Subsections c and d of Section 20.90.220.A.1. It should also be noted that the proposed reduction in off-street parking for the project will be consistent with the West San Carlos Urban Village Plan which encourages all developments within the plan area to strive for the City's maximum 50 percent reduction in required off-street parking spaces.

Per the 2016 California Building Code (CBC) Table 11B-208.2, six ADA accessible spaces are required for projects with 151 to 200 parking spaces. Of the required accessible parking spaces, one van accessible space is required. The site plans indicate eight accessible spaces within the ground-floor parking level.

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 173 residential units at a rate of one bicycle parking space per four residential units. For the proposed 18,242 s.f. of commercial use, the rate is one bicycle parking space per 3,000 s.f. of floor area (Table 20-190). This equates to a total requirement of 44 bicycle parking spaces for the residential use and 6 parking spaces for the commercial use. Of the required residential bicycle parking, City standards require that at least 60 percent be secured long-term bicycle spaces and at most 40 percent be short-term bicycle spaces. Of the required commercial bicycle parking, City standards require that at least 80 percent be short-term bicycle spaces and at most 20 percent be secured long-term bicycle spaces. The City's definition of short-term and long-term bicycle parking is described below. The required parking based on the City of San Jose bicycle parking requirements is summarized in Table 9 below.



²Floor area = 85% of gross square feet

³Includes 20% allowable reduction of parking requirement in an Urban Village.

Table 9
Bicycle Parking Requirement

Propose	ed Project	City of San Jose	Req	king		
Land Use	Size	Land Use	Parking Ratio	Short Term	Long Term	Total
Residential	173 units	Multiple dwelling residential	1.00 space per 4 residential units	17	27	44
Retail	15,506 s.f.	Retail sales, goods, and merchandise	1.00 space per 3,000 s.f. of floor area	5	1	6
Total				22	28	50

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 project site plan shows bicycle parking would be provided within a room located between the ground-floor commercial space and parking area. The bicycle storage room is accessible from the San Carlos Street frontage via a walkway that runs along the east side of the entry drive aisle and along the north side of the parking area. Per the site plan, a total of 65 spaces are provided within the storage room and an additional 8 bicycles spaces are provided within the ground-floor parking area. The 73 total bicycle parking spaces proposed on-site will exceed the City's requirement for on-site bicycle parking and will encourage non-vehicular modes of travel to and from the site.

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 proposed project site is located within the West San Carlos Urban Village Boundary and fronts San Carlos Street, which has been designated as a Grand Boulevard by the Envision San José 2040 General Plan. Sites within an Urban Village and located along a Grand Boulevard must incorporate



additional urban design and architectural elements that will facilitate a building with pedestrian orientated design and activate the pedestrian public right-of-way.

The Envision 2040 General Plan identifies goals and policies that are dedicated to the enhancement of the transportation infrastructure, including public transit and pedestrian/bike facilities. The Transportation Policies contained in the General Plan create incentives for non-auto modes of travel while reducing the use of single-occupant automobile travel as generally described below:

- Through the entitlement process for new development, fund needed transportation improvements for all transportation modes, giving first consideration to improvement of bicycling walking, and transit facilities.
- Give priority to the funding of multimodal projects to provide the most benefit to all users of the transportation system.
- Encourage the use of non-automobile travel modes to reduce vehicle miles traveled (VMT)
- Consider the impact on the overall transportation system when evaluating the impacts of new developments.
- Increase substantially the proportion of travel modes other than single-occupant vehicles.

The City's General Plan identifies both walk and bicycle commute mode split targets as 15 percent or more by the year 2040. This level of pedestrian and bicycle mode share is a reasonable goal for the project, particularly if bus services (including BRT) are utilized in combination with bicycle commuting.

In addition, the West San Carlos Urban Village Plan policies listed below provide for the enhancement of the pedestrian and bicycle environment and greater connectivity to the overall network.

Policy CS-1.1: Plan, design, and construct new transportation improvement projects to ensure safe, attractive, and well-maintained facilities for motorists, transit riders, bicyclists, pedestrians, and people of all abilities.

- Policy CS-1.2: Encourage street design standards that balance mobility for all transportation modes.
- **Policy CS-2.1:** Support right-of-way design and pedestrian amenities that make it easier to access transit services and encourage transit use as a viable alternative to driving.
- **Policy CS-2.2:** Coordinate with VTA to implement the Stevens Creek high-capacity urban transit project including two high-capacity urban transit stations on West San Carlos Street.
- **Policy CS-3.1:** Expand the bicycle network by adding Class II and Class III facilities within the Urban Village as per the San José Bike Plan.
- **Policy CS-3.2:** Examine the feasibility of providing a bicycle route and traffic calming installations along MacArthur Avenue.
- Policy CS-3.3: Implement safety improvements to existing bicycle routes in the Urban Village.
- **Policy CS-3.4:** Enhance bicycle safety and environment by utilizing the most advanced technology (such as bicycle-friendly signal detection) and including bicycle parking at transit stops.
- **Policy CS-4.1:** Create a pedestrian-friendly boulevard along West San Carlos Street and improve access to schools, parks, neighborhood services, and transit stops.
- **Policy CS-4.2:** Consider multi-modal users in all pedestrian improvement projects and include safety elements such as lighted crosswalks and RRFB signals.



Policy CS-4.3: Improve the streetscape environment with crosswalks, wide Americans with Disabilities Act (ADA) accessible sidewalks, and amenities that enrich the pedestrian experience, such as landscape planters, broad canopy shade trees, improved lighting, and benches.

Policy CS-4.4: Provide 20-foot minimum sidewalk width along West San Carlos Street in all future development projects. Where the sidewalk in front of a development project falls short, the project must make up the difference so that the entire 20 feet is publicly-accessible and functions as a sidewalk.

Policy CS-4.5: All other streets should provide a 12- to 15-foot sidewalk width. Allow exceptions only in the case of economic hardship on shallow lots or constrained sites.

Pedestrian Facilities

Pedestrian facilities in the study area consist of sidewalks, crosswalks, and pedestrian signals at signalized intersections (see Chapter 2 for details).

Pedestrian generators in the project vicinity include commercial areas and bus stops along the San Carlos Street corridor. The project site is within the service boundaries of Trace Elementary School, Herbert Hoover Middle School, and Lincoln High School, all of which are located on Dana Avenue approximately ½-mile to ¾-mile from the project site. Existing sidewalks along San Carlos Street and Dana Avenue provide a pedestrian connection between the project site and pedestrian destinations in the project vicinity.

The project proposes to extend the existing 10-foot wide sidewalk along the north project frontage by 8 feet to a total width of 18 feet. However, the West San Carlos Urban Village Plan (Policy CS-4.4) requires new developments to provide a 20-foot wide sidewalk along San Carlos Street. Additionally, the plan recommends the installation of paseos which function as pedestrian- and bike-only circulation paths. The Plan identifies a "Potential Paseo between Buena Vista Avenue and Meridian Avenue, along the south project frontage. The "Potential Paseo" category is used to designate lands that can be publicly- or privately owned that are intended to be programmed for active or passive linear open space. An approximately 30-foot wide paseo is proposed along the south project frontage, which would accommodate the future Paseo identified in the Plan. The paseo will be required to be built to a design as approved by the City. The City will require an Irrevocable Offer of Dedication for Public Accessibility to be recorded against the property encompassing the paseo. In the interim, while the paseo is landlocked from the public right-of-way, it will remain private.

Bicycle Facilities

There are several bike facilities in the immediate vicinity of the project site (see Chapter 2 for details).

The bikeways within the vicinity of the project site would remain unchanged under project conditions.

The project would be directly served by a bike lane along its north project frontage on San Carlos Street, that runs between Leigh Avenue and Lincoln Avenue. A bike route also is located along Dana Avenue, between San Carlos Street and Brooklyn Avenue (near Trace Elementary School).

As previously described, the City's General Plan identifies a bicycle commute mode split target of 15 percent or more by the year 2040. This calculates to approximately 9 and 14 new bicycle trips during the AM and PM peak hours, respectively. This level of bicycle mode share is a reasonable goal for the project.

Bicycle and Pedestrian Facility Improvements

The Envision 2040 General Plan identifies the following goals in regard to bicycling and pedestrians:



- Provide a continuous pedestrian and bicycle system to enhance connectivity throughout the City by completing missing segments.
- Build pedestrian and bicycle improvements at the same time as improvements for vehicular circulation.
- Give priority to pedestrian improvement projects that improve pedestrian safety, improve pedestrian access to and within the Urban Villages and other growth areas.

The planned improvements discussed below are intended to reduce the identified project impacts to the roadway system by providing the project site with viable connections to surrounding pedestrian/bike and transit facilities and provide for a balanced transportation system as outlined in the Envision 2040 General Plan goals and policies. However, the full implementation of the improvements are beyond the means of the proposed project given that they may require right-of-way from adjacent properties.

The San Jose Bike Plan 2020 indicates that a variety of bicycle facilities are planned in the study area, some of which would benefit the project and adhere to the goals of the Envision 2040 General Plan. Of the planned facilities, the following are relevant to the project.

Class II bike lanes are planned for:

- Leigh Avenue, between San Carlos Street and Stokes Street
- Parkmoor Avenue, between Bascom Avenue and Meridian Avenue

Class III bike routes are planned for:

- Shasta Avenue, between San Carlos Street and Park Avenue
- Race Street, between San Carlos Street and Park Avenue

The West San Carlos Urban Village Plan includes a Streetscape Prioritization Plan (Appendix A of the Urban Village Plan) that identifies five streetscape improvement projects, some of which would benefit the project and adhere to the goals of the Envision 2040 General Plan. Of the planned facilities, a proposed mid-block crosswalk across San Carlos Street at Muller Place is most relevant to the project. The improvement includes:

- A pedestrian refuge island in the existing median surrounded by new planting, with a control for the rapid flashing beacon
- Curb extensions with ADA curb ramps on either end of the mid-block crosswalk.

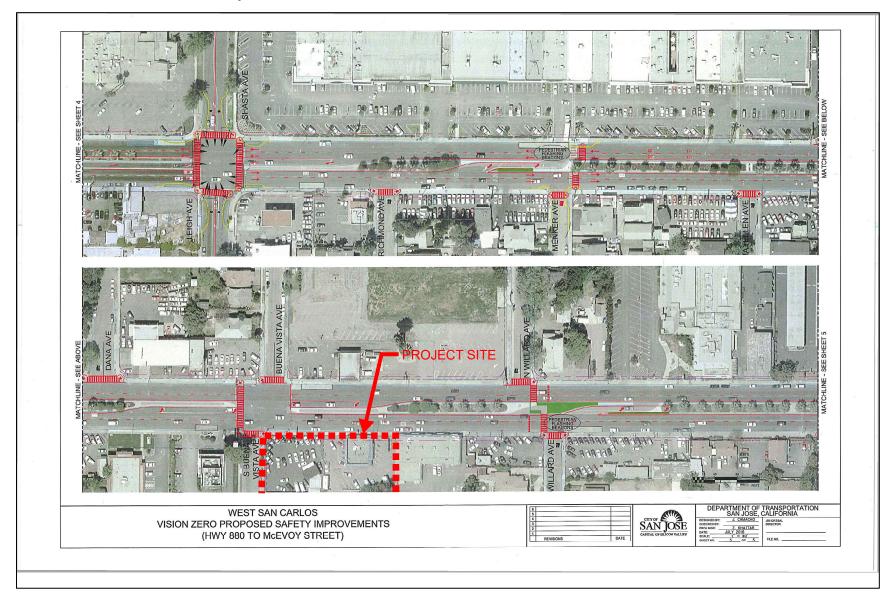
San Carlos Street Vision Zero Improvements

There currently are no marked crosswalks across unsignalized (stop-controlled) intersections along San Carlos Street, including its intersections with Willard Avenue and Dana Avenue. However, there are proposed pedestrian safety improvements for the San Carlos Street corridor as part of the City's Vision Zero program. The plan line provided by the City (Figure 22) indicates the following improvements:

- Installation of new marked crosswalks with longitudinal striping across unsignalized intersections along San Carlos Street, including intersections with Willard Avenue, Dana Street, and Richmond Avenue
- Upgrade of existing standard white crosswalks to crosswalks with longitudinal striping at signalized intersections along San Carlos Street, including intersections with Buena Vista Avenue and Shasta Avenue/Leigh Avenue
- Installation of curb extensions at all corners of the intersection of San Carlos Street and Shasta Avenue/Leigh Avenue; includes narrowing the north and south approaches and removal of leftturn pockets



Figure 22 San Carlos Street Pedestrian Improvements Plan Line





- Installation of curb extensions and pedestrian flashing beacons along the south and east approaches of the intersection of San Carlos Street and Menker Avenue
- Installation of a new crosswalk with pedestrian flashing beacons across San Carlos Street at its intersection with Willard Avenue; will reduce the length of the median left-turn pocket
- Upgrade of existing curb ramps to be ADA-compatible

Although all of the identified improvements would benefit pedestrian access and mobility in within the area surrounding the project site, the improvements at Willlard Avenue, Buena Vista Avenue, and Dana Avenue would likely have the greatest benefit to pedestrian circulation in the immediate vicinity of the site. In particular, the new crosswalk across San Carlos Street at Willard Avenue may provide a faster route to the westbound bus stop located on the north side of San Carlos Street compared to the shortest route currently possible using existing facilities. At the intersection of Buena Vista Avenue and San Carlos Street, there is no marked crosswalk across the east leg; therefore, access between the bus stop and the project site currently requires pedestrians to use the south, west, and north legs of the intersection. With the proposed crosswalk at Willard Avenue, pedestrians will only need to activate one crossing phase to reach the north side of San Carlos Street. It also should be noted that the West San Carlos Urban Village Plan, described above, proposes a pedestrian mid-block crossing at Muller Place. The project will benefit from either of the proposed crosswalks across San Carlos Street at Willard Avenue or at Muller Place.

In lieu of the above improvements, the City has indicated that the project will be required to install a crosswalk along the east leg of the San Carlos Street and Buena Vista Avenue intersection via a signal modification. Additionally, the City is requesting that an existing bus stop located at the southwest corner of the intersection be moved to the southeast corner of the intersection, along the north project frontage. The proposed changes would provide the most direct walking routes between the project site and transit stops.

Transit Services

The project site is primarily served by two VTA bus routes (Frequent Route 23 and Rapid Route 523). The nearest bus stops to the project site serve Frequent Route 23 and are located along both sides of San Carlos Street (near Buena Vista Avenue), approximately 100 feet from the project site. The nearest bus stop serving Rapid Route 523 is located at the intersection of Meridian Avenue and San Carlos Street, approximately ¼-mile from the project site.

Additionally, the Diridon Transit Center is located approximately 1.36-mile north and east of the project site, along Cahill Street. The Diridon Transit Center provides connections between local and regional bus routes, light rail lines, and commuter rail lines.

The new transit trips generated by the project are not expected to create demand in excess of the transit service that is currently provided.

Transit Facility Improvements

The Envision 2040 General Plan identifies the following goals in regard to public transit:

- Pursue development of BRT, bus, shuttle, and fixed guideway services on designated streets and connections to major destinations.
- Ensure that roadways designated as Grand Boulevards adequately accommodate transit vehicle circulation and transit stops. Prioritize bus mobility along San Carlos Street/Stevens Creek Boulevard.



San Carlos Street has been designated as a Grand Boulevard within the Envision 2040 General Plan. Grand Boulevards are intended to serve as major transportation corridors with priority given to public transit. Given that the project fronts San Carlos Street, the project shall be required to implement the following Grand Boulevard design principles:

- Provide a minimum 20 feet sidewalk width along its frontage on San Carlos Street
- Minimize driveway cuts to minimize transit delay
- Provide enhanced shelters for transit services

Freeway Segment Evaluation

The City is still required to conform to the requirements of the Valley Transit Authority (VTA) which establishes a uniform program for evaluating the transportation impacts of land use decisions on the designated CMP Roadway System. The VTA's Congestion Management Program (CMP) has yet to adopt and implement guidelines and standards for the evaluation of the CMP roadway system using VMT. Therefore, the effects of the proposed project on freeway segments in the vicinity of the project area following the current methodologies as outlined in the *VTA Transportation Impact Analysis Guidelines*, was completed. However, this analysis is presented for informational purposes only.

Per CMP technical guidelines, freeway segment level of service analysis shall be conducted on all segments to which the project is projected to add one percent or more to the segment capacity. Since the project is not projected to add one percent to any freeway segments in the area, freeway analysis for the CMP was not required. The percentage of traffic projected to be added by the project to freeway segments in the project area is summarized in Table 10.

Trip Reduction (TDM Program)

In order to be granted a reduction in required off-street parking per the West San Carlos Urban Village Plan, the project will be required to establish a TDM program that will reduce the parking demand for the project by 22%. The TDM program should encourage multimodal travel and use of the extensive bus service and pedestrian/bicycle facilities in the immediate project area to the maximum extent possible. The applicant/property owner should manage the TDM program to ensure tenant employee participation. The project will be required to submit and have approved by the City its TDM program for reduction in off-street parking.

The project TDM program may include, but would not be limited to, the following, or alternative equivalent, elements to reduce vehicle trips:

- Smart Pass or Clipper Card for all employees, providing free rides on Santa Clara County's local transit agency, the Santa Clara Valley Transportation Authority (VTA)
- 25% Transit Subsidy for transit agencies other than the VTA, including Caltrain, ACE, Capitol Corridor, BART, MUNI, and other
- Monthly Vanpool Subsidy
- Commuter Tax Benefits through WageWorks offering pre-tax deduction per month for transit and pre-tax deduction per month for parking
- Free "Last Mile" Shuttles to local train systems (e.g. Caltrain, Amtrak, ACE)
- Free WiFi Commuter Buses direct from areas like San Francisco and the TriValley area
- Internal Carpool Matching Program utilizing zip code matching
- Regional Carpool Matching Program through 511



Table 10 Freeway Segment Capacity

						Existing	Capacity	У			Project Tr	ip		
					Mixed-Flow Lane		HOV Lane			Mixed-F	low Lane	HOV	/ Lane	
				Peak	# of	Capacity	# of	Capacity	Total		% of		% of	
#	Freeway	y Segment	Direction	Hour	Lanes ¹	(vph)	Lanes ¹	(vph)	Volume	Volume	Capacity	Volume	Capacity	
1	SR 17	from Hamilton Avenue to I-280	NB	AM	3	6,900			1	1	0.01			
			NB	PM	3	6,900			3	3	0.04			
2	I-880	from I-280 to Stevens Creek Boulevard	NB	AM	3	6,900			2	2	0.03			
			NB	PM	3	6,900			2	2	0.03			
3	I-880	from Stevens Creek Boulevard to North Bascom Avenue	NB	AM	3	6,900			2	2	0.03			
			NB	PM	3	6,900			2	2	0.03			
4	I-280	from Winchester Boulevard to I-880	EB	AM	3	6,900	1	1,650	1	1	0.01	0	0.00	
			EB	PM	3	6,900	1	1,650	3	2	0.03	1	0.06	
5	I-280	from I-880 to Meridian Avenue	EB	AM	3	6,900	1	1,650	3	3	0.04	0	0.00	
			EB	PM	3	6,900	1	1,650	8	5	0.07	3	0.18	
6	I-280	from Meridian Avenue to I-880	WB	AM	3	6,900	1	1,650	6	4	0.06	2	0.12	
			WB	PM	3	6,900	1	1,650	6	5	0.07	1	0.06	
7	I-280	from I-880 to Winchester Boulevard	WB	AM	3	6,900	1	1,650	2	1	0.01	1	0.06	
			WB	PM	3	6,900	1	1,650	2	2	0.03	0	0.00	
8	I-880	from North Bascom Avenue to Stevens Creek Boulevard	SB	AM	3	6,900			1	1	0.01			
			SB	PM	3	6,900			3	3	0.04			
9	I-880	from Stevens Creek Boulevard to I-280	SB	AM	3	6,900			1	1	0.01			
			SB	PM	3	6,900			3	3	0.04			
10	SR 17	from I-280 to Hamilton Avenue	SB	AM	3	6,900			2	2	0.03			
			SB	PM	3	6,900			2	2	0.03			

¹ Source: Santa Clara Valley Transportation Authority Congestion Management Program Monitoring Study, 2016.



- Personalized Commute Assistance offered by a Commute Coordinator
- Preferred parking for Carpools and Vanpools located near entrances to every building
- Bicycle Lockers and/or Bicycle Racks near entrances to every building
- Showers for cyclists and pedestrians, offering clean towel service, complimentary toiletries, hair dryers, and ironing boards
- Intranet Site featuring transit, bike, ridesharing and telework information
- New Hire Orientation presentations focusing on commute alternatives from Day 1
- Centrally-Located Kiosks with transit schedules, bike and transit maps, and other commute alternative information
- *Periodic Events* which connect employees with local transit agencies and transportation organizations (e.g. Spare the Air Fair, Bike to Work Day)
- Onsite amenities which allow employees to complete errands without a car, such as bicycle repair, dry cleaning, oil changes, carwash, haircuts, dental services, cafeteria, coffee bars, fitness center, massage services, mail and shipping services, convenience store, ATM, gift store.



5. Conclusions

The transportation analysis of the project was evaluated following the standards and methodologies set forth in the City of San Jose's Transportation Analysis Policy (Council Policy 5-1), the City of San Jose's *Transportation Analysis Handbook 2018*, the Santa Clara Valley Transportation Authority (VTA) Congestion Management Program's *Transportation Impact Guidelines* (October 2014), and by the California Environmental Quality Act (CEQA).

CEQA VMT Analysis

CEQA Transportation Analysis Exemption Criteria

The City of San Jose *Transportation Analysis Handbook* identifies screening criteria that determines whether a CEQA transportation analysis would be required for development projects. The criteria are based on the type of project, characteristics, and/or location. If a project meets the City's screening criteria, the project is expected to result in less-than-significant VMT impacts and a detailed CEQA VMT analysis is not required.

The project site is located within a planned Growth Area (West San Carlos Urban Village) with low VMT per capita as identified by the City of San Jose. San Carlos Street, located along the north project frontage, is a high-quality transit corridor with VTA bus service headways of less than 15 minutes during peak commute periods. The proposed 21,164 s.f. of retail space is less than the 100,000 s.f. retail threshold screening criterion for local-serving retail. Therefore, both the residential and commercial land use components of the project are anticipated to result in less-than-significant VMT impacts and a detailed CEQA transportation analysis that evaluates the project's effects on VMT is not required. However, for informational purposes, a VMT evaluation for the project was completed.

Project-Level VMT Impact Analysis

The results of the VMT evaluation, using the City's VMT Evaluation Tool, indicate that the proposed project is projected to generate VMT per capita (7.21) that is below the established threshold. Therefore, the proposed project would not result in an impact on the transportation system based on the City's VMT impact criteria.

Cumulative (GP Consistency) Evaluation

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 per the City's *Transportation Analysis Handbook*.

The project site is located within the West San Carlos Urban Village. Urban villages are defined as walkable, bicycle-friendly, transit-oriented, mixed use settings that provide both housing and jobs, thus supporting the policies and goals of the General Plan. The project is consistent with the General Plan and West San Carlos Urban Village goals and policies for the following reasons:

- The proposed residential uses for the project site are consistent with the Urban Village land use designation per the West San Carlos Urban Village plan.
- The project frontage along San Carlos Street will be consistent with planned streetscape design features West San Carlos Urban Village Plan.
- The project site is within walking distance (less than 100 feet) of bus stops on San Carlos Street.

Therefore, based on the project description, the proposed project would be consistent with the *Urban Village Planning Concepts* and the *Envision San José 2040 General Plan*. Thus, the project would be considered as 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

The intersection operations analysis is intended to quantify the operations of intersections and to identify potential negative effects due to the addition of project traffic. However, a potential adverse effect on a study intersection operation is not considered a CEQA impact metric.

The LTA includes the analysis of AM and PM peak-hour traffic conditions for four signalized intersections and one unsignalized intersection, following the standards and methodology set forth by the City of San Jose.

Trip Generation

After applying the ITE trip rates, appropriate trip reductions, and existing site trip credits, it is estimated that the project would generate an additional 993 daily vehicle trips, with 63 trips (21 inbound and 42 outbound) occurring during the AM peak hour and 91 trips (52 inbound and 39 outbound) occurring during the PM peak hour.

Future Intersection Operation Conditions

The operations analysis shows that all of the study intersections are projected to operate at acceptable levels of service, based on the City of San Jose intersection operations standard of LOS D, under background conditions, background plus project conditions, and cumulative conditions during both the AM and PM peak hours.

Site Access and On-Site Circulation

Site access was evaluated to determine the adequacy of the site's access points with regard to the following: traffic volume, delays, vehicle queues, geometric design, and corner sight distance. On-site vehicular circulation was reviewed in accordance with generally accepted traffic engineering standards and transportation planning principles.



Recommended Site Access and On-Site Circulation Improvements

- On-site drive aisles are shown to be 24 to 26 feet wide. All on-site drive aisles are shown to
 provide two-way access and must therefore provide a minimum 26-foot width to meet City
 standards.
- The site plan should be adjusted to provide looped drive aisles within the parking levels or provide adequate turn-around space for U-turning vehicles adjacent to all dead-end drive aisles. This adjustment will require the removal or relocation of planned parking spaces. Alternatively, the below-ground parking level should be restricted to resident use only with assigned parking. With implementation of assigned parking, residents will be familiar with the parking garage and will not circulate to the dead-end drive aisles in search of available parking.
- Access to the move-in loading space should be restricted to smaller truck deliveries or personal vehicles. Larger trucks will need to perform loading activities along San Carlos Street. Ideally, the on-site loading space should be located along the east or west side of the drive aisle such that trucks are able to back-in to the loading area.
- The City supports on-site pickup of trash. Therefore, trash bins should be wheeled out to a
 designated location on-site, adjacent to the entry drive aisle and accessible to garbage trucks
 for pickup. The designated pickup location should not inhibit vehicular on-site circulation along
 the drive aisle or parking garage.

Parking Supply

Vehicular Parking

Based on the City's parking requirements, the project would be required to provide a total of 328 parking spaces before any reductions. The project is proposing to provide a total of 189 parking spaces, which represents a 42% reduction in on-site parking spaces from the baseline 328 required parking spaces. However, the project site is within the West San Carlos Urban Village and the project proposes to provide bicycle parking that will exceed the City's bicycle parking requirements. Therefore, the vehicle parking requirement would be reduced by 20% to 262 vehicle parking spaces.

With the proposed 189 on-site parking spaces, the project on-site parking will require an additional 22% reduction in on-site parking spaces. Therefore, the project will need to submit and have approved a TDM plan.

Bicycle Parking

The project site plan shows bicycle parking would be provided within a room located between the ground-floor commercial space and parking area. The bicycle storage room is accessible from the San Carlos Street frontage via a walkway that runs along the east side of the entry drive aisle and along the north side of the parking area. Per the site plan, a total of 65 spaces are provided within the storage room and an additional 8 bicycles spaces are provided within the ground-floor parking area. The 73 total bicycle parking spaces proposed on-site will exceed the City's requirement for on-site bicycle parking and will encourage non-vehicular modes of travel to and from the site.

Pedestrian, Bicycle, and Transit Analysis

Pedestrian Facilities

Pedestrian generators in the project vicinity include commercial areas and bus stops along the San Carlos Street corridor. The project site is within the service boundaries of Trace Elementary School, Herbert Hoover Middle School, and Lincoln High School, all of which are located on Dana Avenue approximately ½-mile to ¾-mile from the project site. Existing sidewalks along San Carlos Street and



Dana Avenue provide a pedestrian connection between the project site and pedestrian destinations in the project vicinity.

The project proposes to extend the existing 10-foot wide sidewalk along the north project frontage by 8 feet to a total width of 18 feet. However, the West San Carlos Urban Village Plan (Policy CS-4.4) requires new developments to provide a 20-foot wide sidewalk along San Carlos Street. Additionally, the plan recommends the installation of paseos which function as pedestrian- and bike-only circulation paths. The Plan identifies a "Potential Paseo" between Buena Vista Avenue and Meridian Avenue, along the south project frontage. The "Potential Paseo" category is used to designate lands that can be publicly- or privately owned that are intended to be programmed for active or passive linear open space. An approximately 30-foot wide paseo is proposed along the south project frontage, which would accommodate the future Paseo identified in the Plan. The paseo will be required to be built to a design as approved by the City. The City will require an Irrevocable Offer of Dedication for Public Accessibility to be recorded against the property encompassing the paseo. In the interim, while the paseo is landlocked from the public right-of-way, it will remain private.

The West San Carlos Urban Village Plan includes a Streetscape Prioritization Plan (Appendix A of the Urban Village Plan) that identifies five streetscape improvement projects, some of which would benefit the project and adhere to the goals of the Envision 2040 General Plan. Of the planned facilities, a proposed mid-block crosswalk across San Carlos Street at Muller Place is most relevant to the project. The improvement includes:

- A pedestrian refuge island in the existing median surrounded by new planting, with a control for the rapid flashing beacon
- Curb extensions with ADA curb ramps on either end of the mid-block crosswalk.

The City has indicated that the project will be required to install a crosswalk along the east leg of the San Carlos Street and Buena Vista Avenue intersection via a signal modification. Additionally, the City is requesting that an existing bus stop located at the southwest corner of the intersection be moved to the southeast corner of the intersection, along the north project frontage. The proposed changes would provide the most direct walking routes between the project site and transit stops.

Bicycle Facilities

The bikeways within the vicinity of the project site would remain unchanged under project conditions. The nearest bike facility is a bike route located along Dana Avenue, between San Carlos Street and Brooklyn Avenue (near Trace Elementary School). A bike route also is located along Scott Street to Bascom Avenue, approximately 0.25-mile from the project site via Buena Vista Avenue.

The San Jose Bike Plan 2020 indicates that a variety of bicycle facilities are planned in the study area, some of which would benefit the project and adhere to the goals of the Envision 2040 General Plan. Of the planned facilities, the following are relevant to the project.

Class II bike lanes are planned for:

- Leigh Avenue, between San Carlos Street and Stokes Street
- Parkmoor Avenue, between Bascom Avenue and Meridian Avenue

Class III bike routes are planned for:

- Shasta Avenue, between San Carlos Street and Park Avenue
- Race Street, between San Carlos Street and Park Avenue



Transit Services

The project site is adequately served by the existing VTA transit services. The project site is primarily served by two VTA bus routes (Frequent Route 23 and Rapid Route 523). The nearest bus stops to the project site serve Frequent Route 23 and are located along both sides of San Carlos Street (near Buena Vista Avenue), approximately 100 feet from the project site. The nearest bus stop serving Rapid Route 523 is located at the intersection of Meridian Avenue and San Carlos Street, approximately ¼-mile from the project site. Additionally, the Diridon Transit Center is located approximately 1.36-mile north and east of the project site, along Cahill Street. The Diridon Transit Center provides connections between local and regional bus routes, light rail lines, and commuter rail lines. The new transit trips generated by the project are not expected to create demand in excess of the transit service that is currently provided.

Trip Reduction (TDM Program)

In order to be granted a reduction in required off-street parking per the West San Carlos Urban Village Plan, the project will be required to establish a TDM program that will reduce the parking demand for the project by 22%. The TDM program should encourage multimodal travel and use of the extensive bus service and pedestrian/bicycle facilities in the immediate project area to the maximum extent possible. The applicant/property owner should manage the TDM program to ensure tenant employee participation. The project will be required to submit and have approved by the City its TDM program for reduction in off-street parking.



1530-1544 W. San Carlos Street Mixed-Use Development TA Technical Appendices

Appendix ASan Jose VMT Evaluation Tool Output Sheet

CITY OF SAN JOSE VEHICLE MILES TRAVELED EVALUATION TOOL SUMMARY REPORT

PROJECT:

Name: 1530-1544 W San Carlos Street Mixed-Use Develt Tool Version: 2/29/2019 Location: 1530-1544 W San Carlos Street, San Jose, CA Date: 7/12/2019

Parcel: 27718019 Parcel Type: Urban Low Transit
Proposed Parking Spaces Vehicles: 199 Bicycles: 0

19.6 KSF

0 KSF

LAND USE:

Retail: Industrial:

Residential: Percent of All Residential Units 0 DU 0 % Affordable Single Family Extremely Low Income (< 30% MFI) Multi Family 174 DU Very Low Income (> 30% MFI, $\leq 50\%$ MFI) 0 % Affordable Subtotal 174 DU 0 % Affordable Low Income (> 50% MFI, < 80% MFI) Office: 0 KSF

VMT REDUCTION STRATEGIES

Tier 1 - Project Characteristics

Increase Residential Density 14 15 **Increase Development Diversity** Existing Activity Mix Index 0.53 With Project Activity Mix Index 0.51 Integrate Affordable and Below Market Rate 0 % 0 % Very Low Income BMR units 0 % **Increase Employment Density** 23 23

Tier 2 - Multimodal Infrastructure

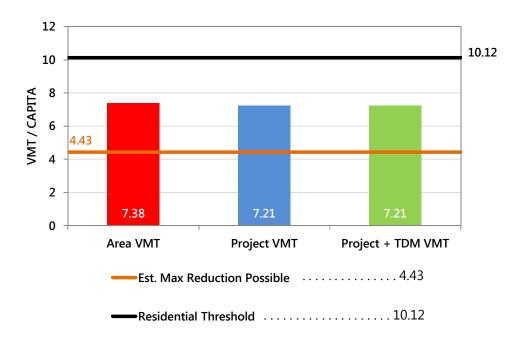
Tier 3 - Parking

Tier 4 - TDM Programs

CITY OF SAN JOSE VEHICLE MILES TRAVELED EVALUATION TOOL SUMMARY REPORT

RESIDENTIAL ONLY

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



Appendix B Traffic Counts

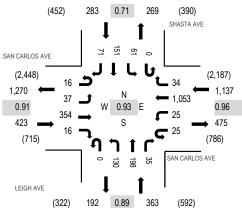


Location: 1 LEIGH AVE & SAN CARLOS AVE AM

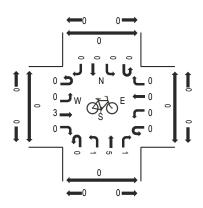
Date: Tuesday, March 19, 2019 **Peak Hour:** 07:45 AM - 08:45 AM

Peak 15-Minutes: 07:45 AM - 08:00 AM

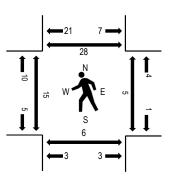




Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts

	Interval	SA	N CAR Eastb	LOS A' ound	VE		I CARL Westb	.OS AVI ound	E		LEIGH Northb			(SHAST Southl	A AVE			Rolling	Ped	destriar	n Crossii	ngs
	Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru I	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	Hour	West	East	South	North
-	7:00 AM	2	2	40	7	2	3	239	3	0	20	11	5	0	4	20	11	369	1,889	2	1	1	1
	7:15 AM	2	3	48	4	4	1	264	3	0	28	14	3	0	10	17	12	413	2,111	1	0	3	5
	7:30 AM	1	5	68	4	4	5	296	2	0	29	41	7	0	8	31	10	511	2,194	5	5	4	11
	7:45 AM	4	7	69	3	5	4	284	14	0	36	63	7	0	18	60	22	596	2,206	7	3	2	22
	8:00 AM	6	11	98	8	4	5	277	10	0	34	55	2	0	21	41	19	591	2,057	4	0	4	3
	8:15 AM	3	12	87	1	10	9	224	4	0	31	58	13	0	10	27	7	496		1	2	0	2
	8:30 AM	3	7	100	4	6	7	268	6	0	29	22	13	0	12	23	23	523		3	0	0	1
	8:45 AM	3	10	91	2	3	12	208	1	0	37	26	8	0	6	24	16	447		2	0	5	0

		East	bound			West	bound			Northb	ound			South	bound		
Vehicle Type	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	0	1	0	0	0	3	0	0	1	0	0	0	0	0	0	5
Bicycles on Road	0	0	3	0	0	0	0	0	0	1	5	1	0	0	0	0	10
Lights	16	35	336	16	25	25	1,020	33	0	126	192	33	0	59	151	70	2,137
Mediums	0	2	14	0	0	0	30	1	0	2	1	1	0	2	0	1	54
Total	16	37	354	16	25	25	1.053	34	0	130	198	35	0	61	151	71	2 206

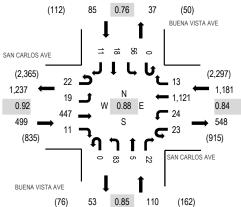


Location: 2 BUENA VISTA AVE & SAN CARLOS AVE AM

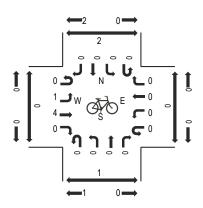
Date: Tuesday, March 19, 2019 **Peak Hour:** 07:45 AM - 08:45 AM

Peak 15-Minutes: 07:45 AM - 08:00 AM

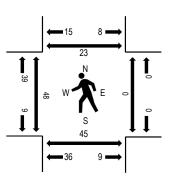
Peak Hour - All Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts

		SAI	N CAR	LOS A	VE	SAN	I CARL	OS AVI	Ξ	BUI	ENA VIS	STA AV	/E	BU	ENA VI	STA A	VE						
	Interval		Eastb	ound			Westb	ound			Northb	ound			South	oound			Rolling	Ped	lestriar	Crossi	ngs
	Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru F	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	Hour	West	East	South	North
_	7:00 AM	1	2	51	6	6	0	270	0	0	8	0	2	0	2	1	1	350	1,695	4	0	2	6
	7:15 AM	2	2	60	2	12	2	276	2	0	7	0	4	0	2	2	2	375	1,793	1	0	4	4
	7:30 AM	3	0	81	0	4	1	318	3	0	11	2	4	0	6	4	2	439	1,861	33	1	17	14
	7:45 AM	8	3	97	2	4	6	366	3	0	28	0	3	0	10	1	0	531	1,875	24	0	23	10
	8:00 AM	5	3	121	3	8	4	244	4	0	23	3	5	0	18	5	2	448	1,711	14	0	11	7
	8:15 AM	4	9	100	4	5	10	253	4	0	26	1	6	0	10	6	5	443		4	0	1	3
	8:30 AM	5	4	129	2	6	4	258	2	0	6	1	8	0	18	6	4	453		6	0	10	3
	8:45 AM	3	0	119	4	7	1	212	2	0	9	0	5	0	2	0	3	367		3	0	4	3

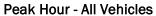
		East	bound			West	bound			Northb	ound			South	bound		
Vehicle Type	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	1	4
Bicycles on Road	0	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Lights	22	18	421	11	23	23	1,089	13	0	83	3	22	0	56	18	9	1,811
Mediums	0	0	22	0	0	1	29	0	0	0	2	0	0	0	0	1	55
Total	22	19	447	11	23	24	1,121	13	0	83	5	22	0	56	18	11	1,875

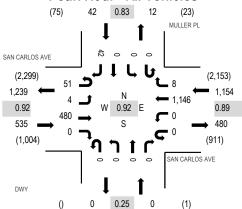


Location: 3 DWY & SAN CARLOS AVE AM

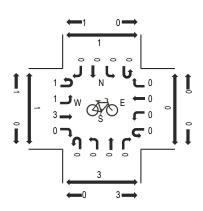
Date: Tuesday, March 19, 2019 **Peak Hour:** 07:30 AM - 08:30 AM

Peak 15-Minutes: 07:45 AM - 08:00 AM

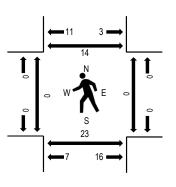




Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts

Interval	SAN CARLOS AVE Eastbound					I CARL Westbe	OS AVE	Ξ		DW Northb				MULLE Southb				Rolling	Ped	lestriar	n Crossir	ngs
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru F	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	Hour	West	East	South	North
7:00 AM	5	0	61	0	0	0	249	3	0	0	0	0	0	0	0	6	324	1,633	0	0	3	0
7:15 AM	12	0	79	0	0	0	280	0	0	0	0	0	0	0	0	6	377	1,722	0	0	4	1
7:30 AM	12	1	104	0	0	0	329	3	0	0	0	0	0	0	0	12	461	1,731	0	0	6	8
7:45 AM	11	2	108	0	0	0	338	2	0	0	0	0	0	0	0	10	471	1,701	0	0	6	2
8:00 AM	11	0	152	0	0	0	240	2	0	0	0	0	0	0	0	8	413	1,600	0	0	8	1
8:15 AM	17	1	116	0	0	0	239	1	0	0	0	0	0	0	0	12	386		0	0	3	3
8:30 AM	9	5	151	0	0	0	252	1	0	0	0	0	0	0	0	13	431		0	0	5	2
8:45 AM	8	0	139	0	0	0	212	2	0	0	0	1	0	0	0	8	370		0	0	3	2

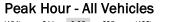
		East	bound			West	bound			Northb	ound			South	bound		
Vehicle Type	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	0	2	0	0	0	3	0	0	0	0	0	0	0	0	0	5
Bicycles on Road	1	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Lights	50	3	458	0	0	0	1,110	8	0	0	0	0	0	0	0	42	1,671
Mediums	0	0	17	0	0	0	33	0	0	0	0	0	0	0	0	0	50
Total	51	4	480	0	0	0	1,146	8	0	0	0	0	0	0	0	42	1,731

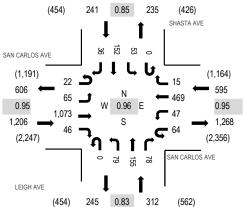


Location: 1 LEIGH AVE & SAN CARLOS AVE PM

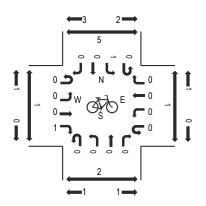
Date: Tuesday, March 19, 2019 **Peak Hour:** 05:00 PM - 06:00 PM

Peak 15-Minutes: 05:15 PM - 05:30 PM

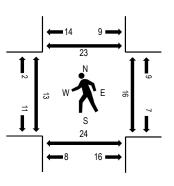




Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts

	SAI	N CAR	LOS A	VE	SAN	I CARL	OS AVE			LEIGH	AVE		(SHAST	A AVE							
Interval		Eastb	ound			Westb	ound			Northb	ound			Southl	oound			Rolling	Ped	lestriar	rossi	ngs
 Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru F	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	Hour	West	East	South	North
4:00 PM	11	11	210	11	11	12	121	4	0	14	34	13	0	13	26	13	504	2,073	2	2	5	5
4:15 PM	5	14	218	5	12	15	120	8	0	19	30	13	0	17	23	11	510	2,141	2	3	3	1
4:30 PM	3	14	255	14	20	7	93	7	0	21	21	17	0	11	33	9	525	2,243	0	2	4	1
4:45 PM	7	11	244	8	10	18	107	4	0	22	33	13	0	11	37	9	534	2,330	4	5	2	9
5:00 PM	4	9	255	14	13	16	119	3	0	17	45	16	0	12	40	9	572	2,354	8	1	5	7
5:15 PM	5	21	278	13	21	8	127	2	0	13	35	17	0	18	48	6	612		3	3	7	2
5:30 PM	3	22	274	15	21	10	116	3	0	27	46	21	0	14	32	8	612		1	2	3	7
5:45 PM	10	13	266	4	9	13	107	7	0	22	29	24	0	9	32	13	558		1	10	9	7

		Eas	tbound			Westh	ound			Northb	ound			South	bound		
Vehicle Type	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total
Articulated Trucks	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2
Bicycles on Road	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	2
Lights	21	64	1,056	45	64	47	457	15	0	78	154	77	0	52	152	36	2,318
Mediums	0	1	17	0	0	0	11	0	0	1	1	1	0	0	0	0	32
Total	22	65	1.073	46	64	47	469	15	0	79	155	78	0	53	152	36	2.354

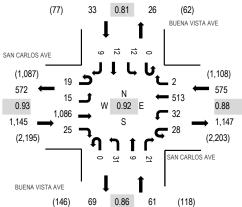


Location: 2 BUENA VISTA AVE & SAN CARLOS AVE PM

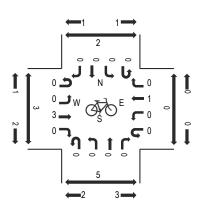
Date: Tuesday, March 19, 2019 **Peak Hour:** 04:45 PM - 05:45 PM

Peak 15-Minutes: 05:15 PM - 05:30 PM

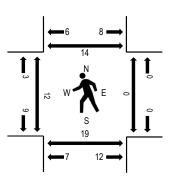




Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts

	SAI	LOS A	VE	SAN	I CARL	OS AVI	Ε	BU	ENA VI	STA A\	/E	BU	ENA VI	STA A	VE							
Interval		Eastb	ound			Westb	ound			Northb	ound			South	oound			Rolling	Ped	lestriar	n Crossi	ings
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru I	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	Hour	West	East	South	North
4:00 PM	5	5	211	4	9	7	122	2	0	6	3	7	0	6	3	1	391	1,707	16	0	12	7
4:15 PM	4	3	255	4	3	15	141	0	0	3	1	5	0	7	4	1	446	1,734	9	0	13	1
4:30 PM	4	5	270	6	6	7	91	5	0	4	1	8	0	5	3	3	418	1,783	13	0	6	11
4:45 PM	5	2	259	2	16	5	141	2	0	5	2	8	0	0	1	4	452	1,814	3	0	8	6
5:00 PM	3	3	256	9	3	5	114	0	0	8	3	6	0	6	1	1	418	1,791	3	0	1	4
5:15 PM	5	2	288	13	6	15	139	0	0	8	3	4	0	3	6	3	495		4	0	6	2
5:30 PM	6	8	283	1	3	7	119	0	0	10	1	3	0	3	4	1	449		2	0	4	2
5:45 PM	7	6	250	11	1	7	116	1	0	6	4	9	0	4	6	1	429		6	0	1	3

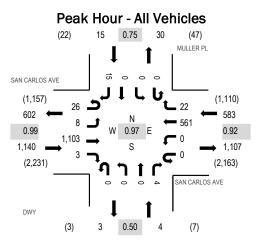
		East	tbound			West	oound			Northb	ound			South	bound		
Vehicle Type	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles on Road	0	0	3	0	0	0	1	0	0	0	0	0	0	0	0	0	4
Lights	19	15	1,066	25	28	32	500	2	0	31	9	21	0	12	12	9	1,781
Mediums	0	0	17	0	0	0	12	0	0	0	0	0	0	0	0	0	29
Total	19	15	1,086	25	28	32	513	2	0	31	9	21	0	12	12	9	1,814

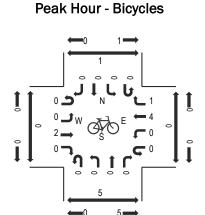


Location: 3 DWY & SAN CARLOS AVE PM

Date: Tuesday, March 19, 2019 **Peak Hour:** 04:45 PM - 05:45 PM

Peak 15-Minutes: 04:45 PM - 05:00 PM





10 = 11

Peak Hour - Pedestrians

Note: Total study counts contained in parentheses.

Traffic Counts

	SAI	N CAR	LOS A	VE						DW	Υ			MULLE	R PL							
Interval		Eastb	ound			Westb	ound			Northb	ound			South	ound			Rolling	Ped	estriar	n Crossi	ngs
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru f	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	Hour	West	East	South	North
4:00 PM	5	2	241	0	0	0	144	0	0	0	0	1	0	0	0	3	396	1,670	0	0	9	3
4:15 PM	9	2	261	0	0	0	149	3	0	0	0	0	0	0	0	1	425	1,710	0	0	3	3
4:30 PM	5	2	285	0	0	0	105	2	0	0	0	0	0	0	0	1	400	1,716	0	0	3	10
4:45 PM	7	2	275	1	0	0	153	6	0	0	0	0	0	0	0	5	449	1,742	0	0	11	4
5:00 PM	9	2	280	1	0	0	132	6	0	0	0	3	0	0	0	3	436	1,700	0	0	3	4
5:15 PM	6	2	277	0	0	0	138	5	0	0	0	1	0	0	0	2	431		0	0	6	2
5:30 PM	4	2	271	1	0	0	138	5	0	0	0	0	0	0	0	5	426		0	0	10	4
5:45 PM	7	6	266	0	0	0	124	0	0	0	0	2	0	0	0	2	407		0	0	2	5

		Eas	tbound			West	ound			North	ound			South	bound		
Vehicle Type	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Bicycles on Road	0	0	2	0	0	0	4	1	0	0	0	0	0	0	0	0	7
Lights	26	8	1,083	3	0	0	547	21	0	0	0	4	0	0	0	15	1,707
Mediums	0	0	18	0	0	0	9	0	0	0	0	0	0	0	0	0	27
Total	26	8	1,103	3	0	0	561	22	0	0	0	4	0	0	0	15	1,742

20384-SAN JOSE COUNTS 19RD02

DATE: 3/19/19

	1-WES	T DWY	2-EAS	T DWY	3-SOUTH	ACCESS
AM	IN	OUT	IN	OUT	IN	OUT
12:00	1	0	0	0	1	0
12:15	0	0	0	0	0	0
12:30	0	0	0	0	0	0
12:45	0	0	0	0	0	0
1:00	0	0	0	0	0	0
1:15	0	0	0	0	0	0
1:30	0	0	0	0	0	0
1:45	0	0	0	0	0	0
2:00	0	0	0	0	0	0
2:15	0	0	0	0	0	0
2:30	0	0	0	0	0	0
2:45	0	0	0	0	0	0
3:00	0	0	0	0	0	0
3:15	0	0	0	0	0	0
3:30	0	0	0	0	0	0
3:45	0	0	0	0	0	0
4:00	0	0	0	0	0	0
4:15	0	0	0	0	0	0
4:30	0	0	0	0	0	0
4:45	0	0	0	0	0	0
5:00	0	0	0	0	0	0
5:15	0	0	0	0	0	0
5:30	0	0	0	0	0	0
5:45	0	0	0	0	0	0
6:00	0	0	0	0	0	0
6:15	0	0	1	0	0	0
6:30	0	0	0	1	0	0
6:45	0	0	0	0	0	0
7:00	0	0	0	0	0	0
7:15	0	0	0	0	0	0
7:30	0	0	0	0	0	0
7:45	0	0	0	0	0	0
8:00	0	0	0	1	0	1
8:15	0	0	0	0	0	0
8:30	0	0	0	0	0	0
8:45	0	0	0	0	0	0
9:00	0	0	0	0	0	0
9:15	0	0	0	0	0	0
9:30	1	0	0	1	0	0
9:45	2	0	0	0	0	0
10:00	2	1	0	1	0	0
10:15	1	0	0	2 1	0	0
10:30						
10:45	2	0	0	1	0	1 0
11:00	3 1	0	0	1	0	0
11:15	1	0	1	4	0	0
11:30						
11:45	1	0	0	2	0	0

	1-WES	T DWY	2-EAS	T DWY	3-SOUTH	ACCESS
PM	IN	OUT	IN	OUT	IN	OUT
12:00	1	0	0	3	0	0
12:15	2	0	0	1	0	0
12:30	2	0	0	0	0	0
12:45	0	0	0	1	0	0
1:00	1	0	0	2	0	0
1:15	1	0	0	0	0	0
1:30	0	0	0	1	0	0
1:45	1	1	0	2	0	1
2:00	1	0	0	1	0	0
2:15	2	0	0	2	0	0
2:30	0	0	1	2	0	0
2:45	1	0	0	1	1	1
3:00	2	0	0	1	0	0
3:15	2	0	0	2	0	0
3:30	3	1	0	1	0	0
3:45	2	0	0	1	0	0
4:00	0	0	0	1	0	0
4:15	1	0	0	0	0	0
4:30	2	0	0	2	0	0
4:45	3	1	0	1	0	0
5:00	1	0	0	2	1	0
5:15	0	0	0	3	0	0
5:30	1	0	0	0	0	0
5:45	2	0	0	2	0	0
6:00	4	0	0	1	0	1
6:15	4	0	0	1	0	0
6:30	3	0	0	1	1	1
6:45	2	0	0	3	0	0
7:00	0	0	0	5	0	0
7:15	0	0	0	3	0	0
7:30	1	0	1	2	0	0
7:45	1	0	0	2	0	0
8:00	0	0	0	1	0	0
8:15	0	0	0	1	0	0
8:30	1	0	0	2	0	0
8:45	1 0	0	0	1	0	0
9:00 9:15	1	0	0	2	0	0
9:15	1	0	0	0	1	0
9:30	1	1	0	3	0	0
10:00 10:15	0	0	0	0	0	0
10:15	2	0	0	1	1	0
10:30	0	0	0	0	0	0
11:00	0	0	0	0	0	0
	0	0	0	0	0	0
11:15 11:30	0	0	0	0	0	0
11:45	0	0	0	0	0	0

Appendix C Approved Trips Inventory

Intersection of: LEIGH/SAN CARLOS											Page No: 1					
Traffix Node Number: 3641 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 WBF			
NSJ NORTH SAN JOSE		0	0	0	0	0	0	0	6	0	0	0	0			
	TOTAL:	0	0	0	0	0	0	0	6	0	0	0	0			
				LEFT	THRU	RIGHT	ı									
		NO	ORTH	0	0	0										
		E	AST	0	0	0										
		S	DUTH	0	0	0										
		WI	EST	0	6	0										

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Intersection of: LEIGH/SAN CARLOS											P	age No	o: 2
Traffix Node Number: 3641 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
NSJ NORTH SAN JOSE		0	0	0	3	8	1	0	0	0	0	2	0
	TOTAL:	0	0	0	3	8	1	0	0	0	0	2	0
				LEFT	THRU	RIGHT	•						
		NO	ORTH	3	8	1							
		E <i>A</i>	AST	0	2	0							
		SC	HTUC	0	0	0							
		WI	EST	0	0	0							

Intersection of: MERIDIAN/SAN CARLOS										Р	age No	ɔ: 1
Traffix Node Number: 3693	M09	M08	M07	M03	M02	M01	M12	M11	M10	M06	M05	MO
Permit No. / Description / Location	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WB:
DOWNTOWN DOWNTOWN STRATEGY PLAN 2000 DOWNTOWN CORE	27	38	10	2	9	3	3	28	3	7	43	3
NSJ NORTH SAN JOSE	13	19	5	0	0	0	0	0	0	0	0	C
PD14-012 (RES) FAIRFIELD RESIDENTIAL 800 W SAN CARLOS ST SAN JOSE CA 95126	0	0	2	0	0	0	0	1	0	1	3	0
PD14-012 (RET) FAIRFIELD RESIDENTIAL 800 W SAN CARLOS ST SAN JOSE CA 95126	0	0	0	0	0	0	0	1	0	0	0	0
PDC06-024 RACE STREET RESIDENTIAL RACE ST AND PARKMOOR AV	2	0	0	0	0	0	0	1	1	0	2	0
PDC08-061RES OHLONE S/W CORNER W. SAN CARLOS AND SUNOL	0	0	20	0	0	0	0	8	0	12	15	1
PDC08-061RET OHLONE S/W CORNER W.SAN CARLOS AND SUNOL	0	0	1	0	0	0	0	1	0	0	0	0
PDC12-009 SANTANA ROW STEVENS CREEK & WINCHESTER (SE/C)	3	0	0	0	0	3	1	3	1	0	16	0
PDC13-050 SANTANA ROW LOTS 9 & 17 SANTANA ROW PARCEL 9 & 17	4	0	0	0	0	4	0	3	0	0	21	0
PDC14-068 SANTANA WEST 3161 OLSEN DRIVE	13	0	0	0	0	13	2	7	2	0	62	0
PDC17-019 RACE STREET SENIOR HOUSING 253 RACE STREET	0	6	-3	0	1	0	2	-1	0	23	3	0

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Intersection of: MERIDIAN/SAN CARLOS											Р	age No): 2
Traffix Node Number: 3693 Permit No. / Description / Location		M09 NBL	M08 NBT	M07 NBR	M03 SBL		M01 SBR	M12 EBL	M11 EBT	M10 EBR	M06 WBL	M05 WBT	M04 WBR
PDC97-036 OFF SANTANA ROW STEVENS CREEK & WINCHESTER (SE/C)		1	0	0	0	0	1	0	1	0	0	5	0
PDC97-036 RES SANTANA ROW STEVENS CREEK & WINCHESTER (SE/C)		0	0	0	0	0	0	0	0	0	0	0	0
PDC97-036 RET SANTANA ROW STEVENS CREEK & WINCHESTER (SE/C)		0	0	0	0	0	0	0	0	0	0	1	0
	TOTAL:	63	63	35	2	10	24	8	53	7	43	171	4
				LEFT	THRU	RIGHT	1						
			ORTH	2	10	24							
			AST OUTH	43 63	171 63	4 35							
			EST	8	53	7							

Intersection of: MERIDIAN/SAN CARLOS										Р	age No	o: 3
Traffix Node Number: 3693 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	MO.
DOWNTOWN DOWNTOWN STRATEGY PLAN 2000 DOWNTOWN CORE	18	34	22	5	41	11	10	92	33	28	52	4
NSJ NORTH SAN JOSE	0	0	0	3	12	1	0	0	0	0	0	0
PD14-012 (RES) FAIRFIELD RESIDENTIAL 800 W SAN CARLOS ST SAN JOSE CA 95126	0	0	4	0	0	0	0	3	0	0	1	0
PD14-012 (RET) FAIRFIELD RESIDENTIAL 800 W SAN CARLOS ST SAN JOSE CA 95126	0	0	0	1	0	0	0	1	0	0	1	1
PDC06-024 RACE STREET RESIDENTIAL RACE ST AND PARKMOOR AV	1	0	0	0	0	0	0	3	2	0	1	0
PDC08-061RES OHLONE S/W CORNER W. SAN CARLOS AND SUNOL	0	0	36	1	0	0	0	15	0	б	8	0
PDC08-061RET OHLONE S/W CORNER W.SAN CARLOS AND SUNOL	0	0	3	0	0	0	0	3	0	0	3	0
PDC12-009 SANTANA ROW STEVENS CREEK & WINCHESTER (SE/C)	2	0	0	0	0	2	3	15	3	0	9	0
PDC13-050 SANTANA ROW LOTS 9 & 17 SANTANA ROW PARCEL 9 & 17	1	0	0	0	0	1	3	20	3	0	6	0
PDC14-068 SANTANA WEST 3161 OLSEN DRIVE	3	0	0	0	0	3	11	55	11	0	11	0
PDC17-019 RACE STREET SENIOR HOUSING 253 RACE STREET	0	17	-7	0	1	0	4	-3	0	9	1	0

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Intersection of: MERIDIAN/SAN CARLOS											Р	age No): 4
Traffix Node Number: 3693 Permit No. / Description / Location		M09 NBL	M08 NBT	M07 NBR	M03 SBL		M01 SBR	M12 EBL	M11 EBT	M10 EBR	M06 WBL	M05 WBT	M04 WBR
PDC97-036 OFF SANTANA ROW STEVENS CREEK & WINCHESTER (SE/C)		0	0	0	0	0	0	1	4	1	0	1	0
PDC97-036 RES SANTANA ROW STEVENS CREEK & WINCHESTER (SE/C)		0	0	0	0	0	0	0	0	0	0	0	0
PDC97-036 RET SANTANA ROW STEVENS CREEK & WINCHESTER (SE/C)		1	0	0	0	0	1	1	3	1	0	3	0
	TOTAL:	26	51	58	10	54	19	33	211	54	43	97	5
				LEFT	THRU	RIGHT	1						
		NO	ORTH	10	54	19							
			AST	43	97 51	5							
			OUTH EST	26 33	51 211	58 54							

Intersection of: RACE/SAN CARLOS										P	age No): 1
Traffix Node Number: 3748 Permit No. / Description / Location	M09 NBL	M08 NBT	M07 NBR		M02 SBT	M01 SBR		M11 EBT		M06 WBL	M05 WBT	
NSJ NORTH SAN JOSE	0	2	0	0	0	0	0	0	0	0	0	0
PD14-012 (RES) FAIRFIELD RESIDENTIAL 800 W SAN CARLOS ST SAN JOSE CA 95126	0	0	0	1	0	0	0	4	0	0	 5	 1
PD14-012 (RET) FAIRFIELD RESIDENTIAL 800 W SAN CARLOS ST SAN JOSE CA 95126	0	0	0	1	0	0	0	1	0	0	0	0
PDC06-024 RACE STREET RESIDENTIAL RACE ST AND PARKMOOR AV	2	9	0	0	5	0	0	0	1	0	0	0
PDC08-061RES OHLONE S/W CORNER W. SAN CARLOS AND SUNOL	1	8	0	4	3	0	0	29	0	3	27	 6
PDC08-061RET OHLONE S/W CORNER W.SAN CARLOS AND SUNOL	0	0	0	0	0	0	0	2	0	0	0	0
PDC14-068 SANTANA WEST 3161 OLSEN DRIVE	0	0	0	0	0	0	0	7	0	0	62	0
PDC17-019 RACE STREET SENIOR HOUSING 253 RACE STREET		-5	0	-1	-1	-2	-3	0	0	0	4	-2
נ	TOTAL: 6	14	0	5	7	-2	-3	43	1	3	98	5
			LEFT	THRU	RIGHT	ı						
		DRTH	5	7	-2							
		AST OUTH	3 6		5 0							
			-3		1							

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									P	age No	o: 2
M09 NBL	M08 NBT	M07 NBR				M12 EBL	M11 EBT	M10 EBR	M06 WBL		
0	0	0	1	3	3	0	0	0	0	0	0
0	0	0	1	0	0	0	8	0	0	2	<u>1</u>
0	0	0	1	0	0	0	2	0	0	2	1
1	5	0	0	9	0	0	0	2	0	0	0
0	4	1	7	3	0	0	54	0	1	14	3
0	0	0	0	0	0	0	6	0	0	3	0
0	0	0	0	0	0	0	55	0	0	11	0
	-10	0	 -5	-4	-9	 -9	0	0	0	12	 -6
TOTAL: 9	-1	1	5	11	-6	-9	125	2	1	44	-1
		LEFT			•						
ш.		_		_							
	NBL 0 0	NBL NBT 0 0 0 0 0 0 1 5 0 0 0 0 0 0 0 0 0 0	NBL NBT NBR 0 0 0 0 0 0 0 1 5 0 1 5 0 0 0 0 1 1 5 0 0 0 0 1 1 5 0 1 1 5 0 1 1 5 0 1 1 5 0 1 1 5 10 1 1 5 10 1 1 5 10 1 1 5 10 1 1 5 10 1 1 5 10	NBL NBT NBR SBL 0 0 0 1 0 0 0 1 1 5 0 0 0 4 1 7 0 0 0 0 0 0 0 0 1 5 1 1 1 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 <td>NBL NBT NBR SBL SBT 0 0 0 1 3 0 0 0 1 0 1 5 0 0 9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 1 0 0 0 0 0 1 0 0 0 0 0 1 0 0 0 0 0 1 <td< td=""><td> NBL NBT NBR SBL SBT SBR SBR</td><td> NBL NBT NBR SBL SBT SBR EBL </td><td>NBL NBL NBR SBL SBT SBR EBL EBT 0 0 0 1 3 3 0 0 0 0 0 1 0 0 0 0 1 5 0 0 9 0 0 0 0 4 1 7 3 0 0 54 0 0 0 0 0 0 0 0 54 0 0 0 0 0 0 0 0 55 8 -10 0 -5 -4 -9 -9 0 TOTAL: 9 -1 1 5 11 -6 -9 125 LEFT THRU RIGHT NORTH 5 11 -6 -9 125</td><td> NBL NBT NBR SBL SBT SBR EBL EBT EBR </td><td> M09 M08 M07 M03 M02 M01 M12 M11 M10 M06 M06 M01 M12 M11 M10 M06 M06 M01 M12 M11 M10 M06 M06</td><td> NBL NBT NBR SBL SBT SBR EBL EBT EBR WBL WBT </td></td<></td>	NBL NBT NBR SBL SBT 0 0 0 1 3 0 0 0 1 0 1 5 0 0 9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 1 0 0 0 0 0 1 0 0 0 0 0 1 0 0 0 0 0 1 <td< td=""><td> NBL NBT NBR SBL SBT SBR SBR</td><td> NBL NBT NBR SBL SBT SBR EBL </td><td>NBL NBL NBR SBL SBT SBR EBL EBT 0 0 0 1 3 3 0 0 0 0 0 1 0 0 0 0 1 5 0 0 9 0 0 0 0 4 1 7 3 0 0 54 0 0 0 0 0 0 0 0 54 0 0 0 0 0 0 0 0 55 8 -10 0 -5 -4 -9 -9 0 TOTAL: 9 -1 1 5 11 -6 -9 125 LEFT THRU RIGHT NORTH 5 11 -6 -9 125</td><td> NBL NBT NBR SBL SBT SBR EBL EBT EBR </td><td> M09 M08 M07 M03 M02 M01 M12 M11 M10 M06 M06 M01 M12 M11 M10 M06 M06 M01 M12 M11 M10 M06 M06</td><td> NBL NBT NBR SBL SBT SBR EBL EBT EBR WBL WBT </td></td<>	NBL NBT NBR SBL SBT SBR SBR	NBL NBT NBR SBL SBT SBR EBL	NBL NBL NBR SBL SBT SBR EBL EBT 0 0 0 1 3 3 0 0 0 0 0 1 0 0 0 0 1 5 0 0 9 0 0 0 0 4 1 7 3 0 0 54 0 0 0 0 0 0 0 0 54 0 0 0 0 0 0 0 0 55 8 -10 0 -5 -4 -9 -9 0 TOTAL: 9 -1 1 5 11 -6 -9 125 LEFT THRU RIGHT NORTH 5 11 -6 -9 125	NBL NBT NBR SBL SBT SBR EBL EBT EBR	M09 M08 M07 M03 M02 M01 M12 M11 M10 M06 M06 M01 M12 M11 M10 M06 M06 M01 M12 M11 M10 M06 M06	NBL NBT NBR SBL SBT SBR EBL EBT EBR WBL WBT

WEST

-9 125

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AM APPROVED TRIPS	03/05/2019
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Intersection of: BUENA VISTA/SAN CARLOS											Р	age No): 1
Traffix Node Number: 3976		М09	M08	M07	м03		M01	M12	M11	M10	M06	М05	M04
Permit No. / Description / Location		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
NSJ		0	0	0	0	0	0	0	0	0	0	0	0
NORTH SAN JOSE													
	TOTAL:	0	0	0	0	0	0	0	0	0	0	0	0
				LEFT	THRU	RIGHT							
		NO	ORTH	0	0	0							
		E <i>A</i>	AST	0	0	0							
		SC	NTU	0	0	0							
		WI	EST	0	0	0							

PM APPROVED TRIPS	03/05/2019
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Intersection of: BUENA VISTA/SAN CARLOS											P	age No): 2
Traffix Node Number: 3976		M09	M08	M07	M03		M01	M12	M11	M10	M06	M05	M04
Permit No. / Description / Location		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
NSJ NORTH SAN JOSE		0	0	0	0	0	0	0	0	0	0	2	0
	TOTAL:	0	0	0	0	0	0	0	0	0	0	2	0
				LEFT	THRU	RIGHT	ı						
		NO	ORTH	0	0	0							
		E	AST	0	2	0							
		S	DUTH	0	0	0							
		WI	EST	0	0	0							

Appendix D Volume Summary

1530 San Carlos Street AM Peak-Hour

Intersection Number: 1
Traffix Node Number: 3976

Intersection Name: Buena Vista Avenue and San Carlos Street

Peak Hour: AM
Count Date: 3/19/19

					М	ovement	S						
_	No	rth Appro	oach	Ea	st Appro	ach	Sou	th Appr	oach	We	st Appro	oach	
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	11	18	56	13	1121	47	22	5	83	11	443	40	1870
ATI	0	0	0	0	0	0	0	0	0	0	0	0	0
Background Conditions	11	18	56	13	1121	47	22	5	83	11	443	40	1870
Proposed Project Trips	0	0	2	0	15	8	0	0	0	0	10	0	35
Background Plus Project Conditions	11	18	58	13	1136	55	22	5	83	11	453	40	1905
259 Meridian Avenue	0	0	0	0	3	0	0	0	0	0	1	0	4
Cumulative Conditions	11	18	56	13	1124	47	22	5	83	11	444	40	1874
Cumulative Plus Project Conditions	11	18	58	13	1139	55	22	5	83	11	454	40	1909

Intersection Number: 2
Traffix Node Number: 2

Intersection Name: Muller Place and San Carlos Street (unsignalized)

Peak Hour: AM
Count Date: 3/19/19

					Mo	ovement	S						
_	No	rth Appro	oach	Ea	st Appro	ach	Sou	th Appr	oach	We	st Appro	oach	
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Tota
Existing Conditions	42	0	0	8	1146	0	0	0	0	0	477	53	1726
ATI	0	0	0	0	258	0	0	0	0	0	68	0	326
Background Conditions	42	0	0	8	1404	0	0	0	0	0	545	53	2052
Proposed Project Trips	0	0	0	0	9	0	0	0	0	0	27	15	51
Background Plus Project Conditions	42	0	0	8	1413	0	0	0	0	0	572	68	2103
259 Meridian Avenue	0	0	0	0	3	0	0	0	0	0	1	0	4
Cumulative Conditions	42	0	0	8	1407	0	0	0	0	0	546	53	2056
Cumulative Plus Project Conditions	42	0	0	8	1416	0	0	0	0	0	573	68	2107

1530 San Carlos Street AM Peak-Hour

Intersection Number:3Traffix Node Number:3693

Intersection Name: Meridian Avenue and San Carlos Street

Peak Hour: AM
Count Date: 5/18/17

					M	ovements	S						
_	No	rth Appr	oach	Ea	st Appro	ach	Sou	th Appr	oach	We	st Appro	oach	
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	24	191	116	69	870	170	186	473	293	120	400	55	2967
ATI	24	10	2	4	171	43	35	63	63	7	53	8	483
Background Conditions	48	201	118	73	1041	213	221	536	356	127	453	63	3450
Proposed Project Trips	0	0	0	0	8	0	0	0	1	15	13	0	37
Background Plus Project Conditions	48	201	118	73	1049	213	221	536	357	142	466	63	3487
259 Meridian Avenue	3	27	7	3	0	0	0	5	0	0	0	1	46
Cumulative Conditions	51	228	125	76	1041	213	221	541	356	127	453	64	3496
Cumulative Plus Project Conditions	51	228	125	76	1049	213	221	541	357	142	466	64	3533

Intersection Number: 4
Traffix Node Number: 3748

Intersection Name: Race Street and San Carlos Street

Peak Hour: AM
Count Date: 5/18/17

					M	ovement	S						
_	No	rth Appro	oach	Eas	st Appro	ach	Sou	th Appr	oach	We	st Appro	oach	
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	131	105	36	153	755	41	31	293	129	56	469	160	2359
ATI	-2	7	5	5	98	3	0	14	6	1	43	-3	177
Background Conditions	129	112	41	158	853	44	31	307	135	57	512	157	2536
Proposed Project Trips	2	0	0	0	4	0	0	0	2	0	8	4	20
Background Plus Project Conditions	131	112	41	158	857	44	31	307	137	57	520	161	2556
259 Meridian Avenue	0	0	0	0	3	0	0	0	0	0	7	0	10
Cumulative Conditions	129	112	41	158	856	44	31	307	135	57	519	157	2546
Cumulative Plus Project Conditions	131	112	41	158	860	44	31	307	137	57	527	161	2566

AM Peak-Hour 1530 San Carlos Street

Intersection Number: Traffix Node Number: 3641

Leigh Avenue/Shasta Avenue and San Carlos Street AM Intersection Name:

Peak Hour: Count Date: 3/19/19

Existing Conditions	71	151	61	34	1053	50	34	193	129	16	351	53	2196
Existing Conditions	/ 1	191	01	34	1000	50	34	193	129	10	331	55	2190
ATI	0	0	0	0	0	0	0	0	0	0	6	0	6
Background Conditions	71	151	61	34	1053	50	34	193	129	16	357	53	2202
Proposed Project Trips	0	0	0	0	8	2	4	0	0	0	4	0	18
Background Plus Project Conditions	71	151	61	34	1061	52	38	193	129	16	361	53	2220
259 Meridian Avenue	0	0	0	0	3	0	0	0	0	0	1	0	4
Cumulative Conditions	71	151	61	34	1056	50	34	193	129	16	358	53	2206
Cumulative Plus Project Conditions	71	151	61	34	1064	52	38	193	129	16	362	53	2224

1530 San Carlos Street PM Peak-Hour

Intersection Number: 1
Traffix Node Number: 3976

Intersection Name: Buena Vista Avenue and San Carlos Street

Peak Hour: PM Count Date: 3/19/19

					М	ovements	S						
_	No	rth Appro	oach	Eas	st Appro	ach	Sou	th Appr	oach	We	st Appro	ach	
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	9	12	12	2	512	60	21	9	31	25	1083	34	1810
ATI	0	0	0	0	2	0	0	0	0	0	0	0	2
Background Conditions	9	12	12	2	514	60	21	9	31	25	1083	34	1812
Proposed Project Trips	0	0	5	0	14	19	0	0	0	0	25	0	63
Background Plus Project Conditions	9	12	17	2	528	79	21	9	31	25	1108	34	1875
259 Meridian Avenue	0	0	0	0	2	0	0	0	0	0	3	0	5
Cumulative Conditions	9	12	12	2	516	60	21	9	31	25	1086	34	1817
Cumulative Plus Project Conditions	9	12	17	2	530	79	21	9	31	25	1111	34	1880

Intersection Number: 2
Traffix Node Number: 2

Intersection Name: Muller Place and San Carlos Street (unsignalized)

Peak Hour: PM Count Date: 3/19/19

					M	ovement	S						
_	No	rth Appro	oach	Eas	st Appro	ach	Sou	th Appr	oach	We	st Appro	ach	
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	15	0	0	21	557	0	0	0	0	0	1101	34	1728
ATI	0	0	0	0	142	0	0	0	0	0	298	0	440
Background Conditions	15	0	0	21	699	0	0	0	0	0	1399	34	2168
Proposed Project Trips	0	0	0	0	23	0	0	0	0	0	27	14	64
Background Plus Project Conditions	15	0	0	21	722	0	0	0	0	0	1426	48	2232
											1424		
259 Meridian Avenue	0	0	0	0	2	0	0	0	0	0	3	0	5
Cumulative Conditions	15	0	0	21	701	0	0	0	0	0	1402	34	2173
Cumulative Plus Project Conditions	15	0	0	21	724	0	0	0	0	0	1429	48	2237
											1427		

1530 San Carlos Street PM Peak-Hour

Intersection Number:3Traffix Node Number:3693

Intersection Name: Meridian Avenue and San Carlos Street

Peak Hour: PM Count Date: 5/18/17

					M	ovements	S						
_	No	rth Appro	oach	Eas	st Appro	ach	Sou	th Appr	oach	We	st Appro	ach	
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	29	456	159	39	434	256	183	280	125	152	948	77	3138
ATI	19	54	10	5	97	43	58	51	26	54	211	33	661
Background Conditions	48	510	169	44	531	299	241	331	151	206	1159	110	3799
Proposed Project Trips	0	0	0	0	20	0	0	0	3	14	12	0	49
Background Plus Project Conditions	48	510	169	44	551	299	241	331	154	220	1171	110	3848
259 Meridian Avenue	2	12	3	10	0	0	0	18	0	0	0	3	48
Cumulative Conditions	50	522	172	54	531	299	241	349	151	206	1159	113	3847
Cumulative Plus Project Conditions	50	522	172	54	551	299	241	349	154	220	1171	113	3896

Intersection Number: 4
Traffix Node Number: 3748

Intersection Name: Race Street and San Carlos Street

Peak Hour: PM Count Date: 5/18/17

	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	185	253	138	55	453	45	75	118	72	88	1045	148	2675
ATI	-6	11	5	-1	44	1	1	-1	9	2	125	-9	181
Background Conditions	179	264	143	54	497	46	76	117	81	90	1170	139	2856
Proposed Project Trips	5	0	0	0	11	0	0	0	4	0	8	4	32
Background Plus Project Conditions	184	264	143	54	508	46	76	117	85	90	1178	143	2888
259 Meridian Avenue	0	0	0	0	10	0	0	0	0	0	3	0	13
Cumulative Conditions	179	264	143	54	507	46	76	117	81	90	1173	139	2869
Cumulative Plus Project Conditions	184	264	143	54	518	46	76	117	85	90	1181	143	2901

1530 San Carlos Street PM Peak-Hour

Intersection Number: 5
Traffix Node Number: 3641

Intersection Name: Leigh Avenue/Shasta Avenue and San Carlos Street

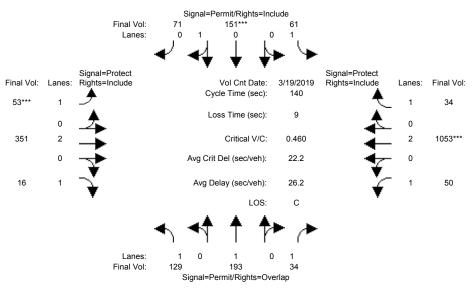
Peak Hour: PM
Count Date: 3/19/19

Existing Conditions	36	152	52	15	469	111	78	155	79	45	1073	87	2352
ATI	1	8	3	0	2	0	0	0	0	0	0	0	14
Background Conditions	37	160	55	15	471	111	78	155	79	45	1073	87	2366
Proposed Project Trips	0	0	0	0	8	2	11	0	0	0	11	0	32
Background Plus Project Conditions	37	160	55	15	479	113	89	155	79	45	1084	87	2398
259 Meridian Avenue	0	0	0	0	2	0	0	0	0	0	3	0	5
Cumulative Conditions		160	55	15	473	111	78	155	79	45	1076	87	2371
Cumulative Plus Project Conditions	37	160	55	15	481	113	89	155	79	45	1087	87	2403

Appendix EIntersection Level of Service Calculations

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

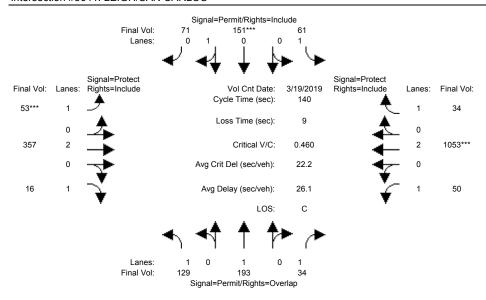
Intersection #3641: LEIGH/SAN CARLOS



Approach:	No	rth Bo	und	Soi	ıth Bo	und	Εa	ast Bo	und	We	est Bo	und
Movement:						- R				_	- T	
Min. Green:		10		10				 10		7		
Y+R:		4.0			4.0			4.0			4.0	
Volume Modul	e: >>	Count	Date:	19 Ma	ar 201	9 <<						
Base Vol:	129	193	34	61	151	71	53	351	16	50	1053	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:	129	193	34	61	151	71	53	351	16	50	1053	34
Added Vol:	0		0	0	0	0	0	0	0	0	0	0
ATI:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	129	193	34	61	151	71	53	351	16	50	1053	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:	129	193	34	61	151	71	53	351	16	50	1053	34
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	129	193	34	61	151	71	53	351	16	50	1053	34
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:						71		351		50		34
Saturation F												
Sat/Lane:	1900		1900		1900	1900		1900	1900		1900	1900
Adjustment:			0.92		0.95	0.95		1.00	0.92	0.92		0.92
Lanes:		1.00	1.00			0.32		2.00	1.00	1.00		1.00
Final Sat.:						576		3800	1750		3800	1750
Canadity Ana												
Capacity Ana Vol/Sat:		0.10		0 03	0.12	0.12	0 03	0 00	0.01	0 03	0.28	0.02
Crit Moves:	0.07	0.10	0.02	0.03	****	0.12	****	0.09	0.01	0.03	****	0.02
Green Time:	27 5	37 5	70.3	27 5	37.5	37.5	9.2	60 7	60.7	32 0	84.3	84.3
Volume/Cap:			0.04		0.46	0.46		0.21	0.02	0.12		0.03
Delay/Veh:			17.7	39.0		43.5		24.8	22.7		15.5	11.3
-			1.00		1.00	1.00		1.00	1.00	1.00		1.00
User DelAdj: AdjDel/Veh:				39.0		43.5		24.8	22.7	42.4		11.3
LOS by Move:			17.7	39.0 D	43.5 D		65.9 E		22.7 C	42.4 D		11.3 B
HCM2kAvgQ:	ם ב	ם 7	1	2	В 8		3		0	2	В 12	В 1
									U	2	12	Τ
Note: Queue	repor	rea is	ine n	umper	oi ca	ırs per	⊥ane	•				

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

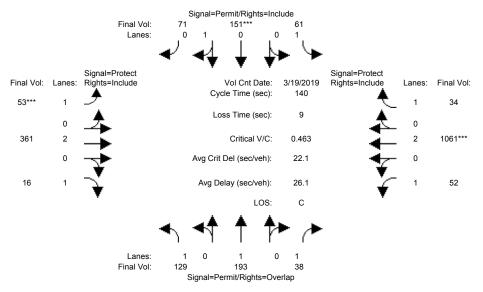
Intersection #3641: LEIGH/SAN CARLOS



Approach:	No	rth Bo	und	Soi	ath Bo	ound	Εá	ast Bo	und	West Bound			
Movement:		- T				- R		- T			- T		
Min. Green:	10	10			10		7	10	10	7	10	10	
Y+R:	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Volume Module													
Base Vol:	129	193	34	61	151	71	53	351	16	50	1053	34	
Growth Adj:			1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Initial Bse:		193	34	61	151	71	53	351	16		1053	34	
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
ATI:	0	0	0	0	0	0	0	6	0	0	0	0	
Initial Fut:			34	61	151	71	53	357	16		1053	34	
User Adj:		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	
	129	193	34	61	151	71	53	357	16		1053	34	
	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:		193	34	61	151	71	53	357	16		1053	34	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
_		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
FinalVolume:			34		151	71	53		16		1053	34	
Saturation F													
Sat/Lane:		1900				1900		1900	1900		1900	1900	
_		1.00		0.92		0.95		1.00	0.92		1.00	0.92	
		1.00	1.00			0.32	1.00		1.00		2.00	1.00	
Final Sat.:			1750			576		3800	1750		3800	1750	
Capacity Ana	-												
	0.07	0.10	0.02	0.03	0.12	0.12		0.09	0.01	0.03	0.28	0.02	
Crit Moves:					****		****				****		
		37.5	70.0	37.5		37.5		61.0	61.0		84.3	84.3	
		0.38	0.04	0.13		0.46		0.22	0.02		0.46	0.03	
Delay/Veh:			17.9	39.0		43.5		24.7	22.5		15.5	11.3	
User DelAdj:			1.00	1.00		1.00		1.00	1.00		1.00	1.00	
AdjDel/Veh:				39.0		43.5		24.7	22.5		15.5	11.3	
LOS by Move:			В	D	D	D	Ε		C	D		В	
HCM2kAvgQ:	5		1	2	8	8	-	-	0	2	12	1	
Note: Queue	repor	ted is	the n	umber	of ca	ars per	lane						

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

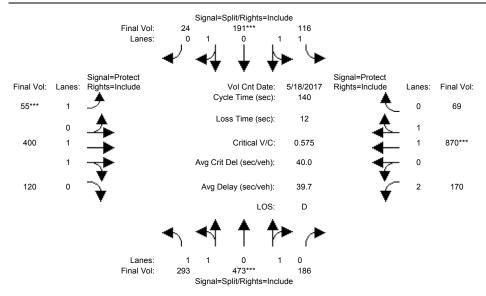
Intersection #3641: LEIGH/SAN CARLOS



Movement:	L -	т -	- R	L -	- T	- R	L -	- T	- R	West Bound L - T - R			
Min. Green: Y+R:	10 4.0	10 4.0	10	10 4.0	10 4.0	10 4.0	7 4.0	10 4.0	10 4.0	7 4.0	10 4.0	10 4.0	
Volume Module													
Base Vol:	129	193	34	61	151	71	53	351	16	50	1053	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:	129	193	34	61	151	71	53	351	16	50	1053	34	
Added Vol:	0	0	4	0	0	0	0	4	0	2	8	0	
ATI:	0	0	0	0	0	0	0	6	0	0	0	0	
Initial Fut:	129	193	38	61	151	71	53	361	16	52	1061	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:	129	193	38	61	151	71	53	361	16	52	1061	34	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	129	193	38	61	151	71	53	361	16	52	1061	34	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	129	193	38	61	151	71	53	361	16	52	1061	34	
Saturation F													
Sat/Lane:	1900		1900	1900		1900		1900	1900		1900	1900	
Adjustment:			0.92		0.95	0.95		1.00	0.92		1.00	0.92	
Lanes:	1.00		1.00		0.68	0.32		2.00	1.00		2.00	1.00	
Final Sat.:	1750		1750		1224			3800	1750		3800	1750	
Capacity Ana	-												
Vol/Sat:	0.07	0.10	0.02	0.03	0.12	0.12		0.10	0.01	0.03	0.28	0.02	
Crit Moves:					****		****				****		
	37.3		69.6		37.3	37.3		61.4	61.4		84.5	84.5	
	0.28		0.04		0.46	0.46		0.22	0.02		0.46	0.03	
Delay/Veh:	41.0		18.1		43.7	43.7		24.5	22.3		15.4	11.2	
User DelAdj:			1.00	1.00		1.00		1.00	1.00		1.00	1.00	
AdjDel/Veh:			18.1	39.1		43.7		24.5	22.3		15.4	11.2	
LOS by Move:		D	В	D	D	D	E	C	C	D	В	В	
HCM2kAvgQ:	5	7	1	2	8	8	3	-	0	2	12	1	
Note: Queue	report	ed is	the n	umber	oi ca	rs per	lane	•					

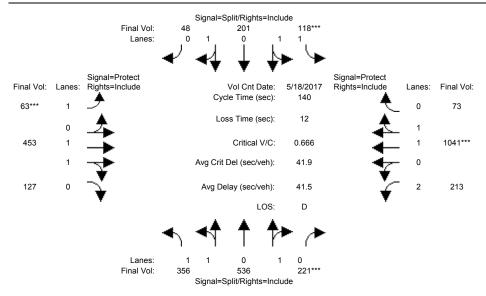
Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative) Existing (AM)

Intersection #3693: MERIDIAN/SAN CARLOS



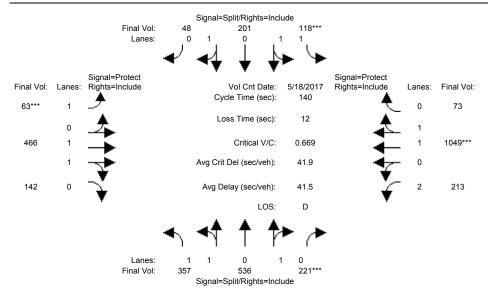
Approach:	No	rth Bo	und	Soi	ıth Bo	und	E	ast Bo	und	West Bound			
Movement:	L ·	- T -	- R	L -	- T	- R	L ·	- T	- R	L -	- T	- R	
Min. Green:		10			10			10			10	10	
Y+R:	4.0	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Volume Module									1.00	170	070	60	
Base Vol:	293	473	186		191	24	55		120	170	870	69	
Growth Adj:			1.00	1.00		1.00		1.00	1.00	1.00		1.00	
Initial Bse:		473	186	116	191	24	55	400	120	170	870	69	
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
ATI:	0	0	0	0	0	0	0	0	0	0	0	0	
Initial Fut:			186	116	191	24	55	400	120	170	870	69	
User Adj:		1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	
_	1.00		1.00	1.00		1.00		1.00	1.00	1.00		1.00	
PHF Volume:	293	473	186	116	191	24	55	400	120	170	870	69	
	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:		473	186	116	191	24	55	400	120	170	870	69	
PCE Adj:	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	
FinalVolume:			186	116		24	55		120	170	870	69 l	
Saturation F													
Saturation F. Sat/Lane:		1900	1900	1900	1900	1900	1 9 0 0	1900	1900	1900	1900	1900	
		0.98		0.92		0.95		0.98	0.95	0.83		0.95	
Lanes:		1.42	0.58		1.71	0.22			0.47	2.00		0.15	
Final Sat.:			1044			388			854	3150		272	
Capacity Anal	lvsis	Module	e:			1			'	1			
Vol/Sat:	0.17	0.18	0.18	0.06	0.06	0.06	0.03	0.14	0.14	0.05	0.25	0.25	
Crit Moves:		****			****		****				****		
Green Time:	43.4	43.4	43.4	15.1	15.1	15.1	7.7	50.2	50.2	19.3	61.8	61.8	
Volume/Cap:	0.54	0.57	0.57	0.57	0.57	0.57	0.57	0.39	0.39	0.39	0.57	0.57	
Delay/Veh:	40.4	41.0	41.0	60.8	60.8	60.8	72.8	33.7	33.7	55.6	29.7	29.7	
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:			41.0	60.8	60.8	60.8	72.8	33.7	33.7	55.6	29.7	29.7	
LOS by Move:	D	D	D	E	E	E	E	С	С	E	С	С	
HCM2kAvgQ:	11	12	12	6	6	6	3	8	8	4	15	15	
Note: Queue	repor	ted is	the n	umber	of ca	rs per	lane						

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



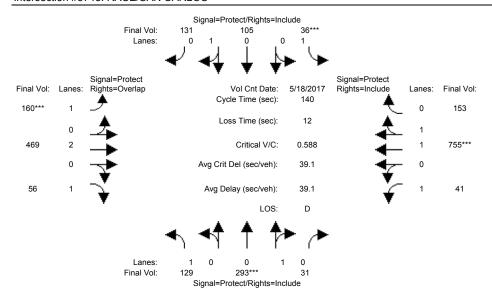
Approach:	No	rth Bo	und	Soi	ıth Bo	und	E	ast Bo	und	We	est Bo	und
Movement:		- T ·				- R					- T	
Min. Green:		10		10				10		7		10
Y+R:	4.0	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Volume Module									100	1.00	0.00	
Base Vol:	293	473	186		191	24		400	120	170	870	69
Growth Adj:			1.00		1.00	1.00		1.00	1.00	1.00		1.00
Initial Bse:		473	186	116	191	24	55	400	120	170	870	69
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	63	63	35	2	10	24	8	53	7	43	171	4
Initial Fut:		536	221	118	201	48	63	453	127		1041	73
User Adj:		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
	356	536	221	118	201	48	63	453	127		1041	73
	0		0	0	0	0	0	0	0	0	0	0
Reduced Vol:		536	221	118	201	48	63	453	127		1041	73
PCE Adj:	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
FinalVolume:			221		201	48	63	453	127		1041	73
Saturation F						4000				4000		4000
Sat/Lane:		1900	1900		1900	1900		1900	1900	1900		1900
_	0.92		0.95	0.92		0.95		0.98	0.95	0.83		0.95
Lanes:		1.40	0.60			0.40		1.55	0.45		1.87	0.13
Final Sat.:			1080			713			810		3457	242
Capacity Anal	-			0 07	0 07	0 07	0 04	0 1 0	0 1 0	0 07	0 20	0 20
Vol/Sat:	0.20	0.20	0.20	****	0.07	0.07	****		0.16	0.07	****	0.30
Crit Moves:	40.0	40.0			140	1.4.0			40 5	01 0		60.0
Green Time:			43.0		14.2			49.5	49.5		63.3	63.3
Volume/Cap:			0.67	0.67		0.67		0.44	0.44		0.67	0.67
Delay/Veh:			43.3		63.7	63.7		34.9	34.9	54.6		31.1
User DelAdj:			1.00	1.00		1.00		1.00	1.00	1.00		1.00
AdjDel/Veh:			43.3		63.7	63.7		34.9	34.9	54.6		31.1
LOS by Move:			D	E	E	E	F		C	D	С	С
HCM2kAvgQ:	15		15	6	6	6	4		10	5	19	19
Note: Queue	repor	ted is	the n	umber	of ca	rs per	lane	•				

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



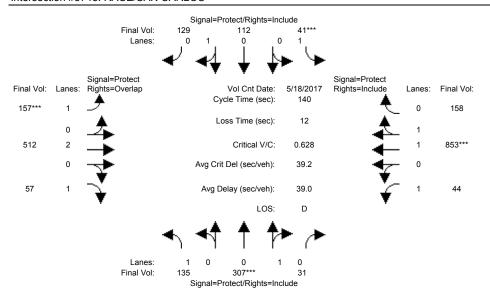
Movement:	L ·	- T	- R	L -	- T	- R	L -	- Т	- R		- R
Min. Green: Y+R:	10 4.0	10 4.0	10 4.0	10 4.0	10 4.0	10	7 4.0	10 4.0	10 4.0	7 10 4.0 4.0	10 4.0
Volume Module											
Base Vol:	293	473	186	116		24	55		120	170 870	69
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00 1.00	1.00
Initial Bse:	293	473	186	116	191	24	55	400	120	170 870	69
Added Vol:	1	0	0	0	0	0	0	13	15	0 8	0
ATI:	63	63	35	2	10	24	8	53	7	43 171	4
Initial Fut:	357	536	221	118	201	48	63	466	142	213 1049	73
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:		536	221	118	201	48	63	466	142	213 1049	73
Reduct Vol:	0	0	0	0	0	0	0	0	0	0 0	0
Reduced Vol:	357	536	221	118	201	48	63	466	142	213 1049	73
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:	357	536	221	118	201	48	63	466	142	213 1049	73
	1										
Saturation F	low M	odule:									
Sat/Lane:		1900	1900		1900	1900		1900	1900	1900 1900	1900
Adjustment:			0.95		0.98	0.95		0.98	0.95	0.83 0.98	0.95
	1.00		0.60		1.60	0.40		1.52	0.48	2.00 1.87	
Final Sat.:			1080			713		2835	864	3150 3459	241
Capacity Ana	-										
Vol/Sat:	0.20	0.20	0.20		0.07	0.07		0.16	0.16	0.07 0.30	0.30
Crit Moves:			****	****			****			***	
Green Time:			42.9		14.1		7.5		50.3	20.7 63.5	63.5
Volume/Cap:			0.67		0.67	0.67		0.46	0.46	0.46 0.67	0.67
Delay/Veh:			43.4		63.8	63.8		34.6	34.6	55.2 31.1	31.1
User DelAdj:			1.00		1.00	1.00		1.00	1.00	1.00 1.00	1.00
AdjDel/Veh:			43.4		63.8	63.8		34.6	34.6	55.2 31.1	31.1
LOS by Move:		D	D	Ε	Ε	E	F	С	С	E C	C
HCM2kAvgQ:	15	15	15	6	6	6	4		10	5 19	19
Note: Queue	repor	ted is	the n	umber	of ca	rs per	lane	•			

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



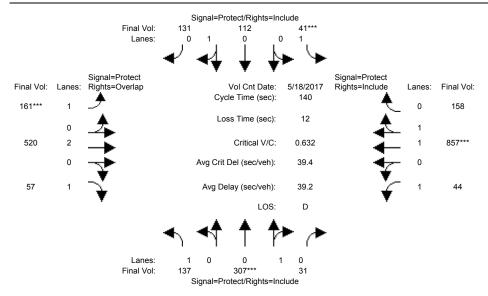
Approach:	No	rth Bo	und	Soi	ıth Bo	und	Ea	ast Bo	und	We	est Bo	und
Movement:						- R					- T	
Min. Green:		10		7				10		7		10
Y+R:	4.0		4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0
Volume Module										4.4		1.50
Base Vol:	129	293	31		105	131		469	56	41	755	153
_		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Initial Bse:		293	31	36	105	131	160	469	56	41	755	153
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	0		0	0	0	0	0	0	0	0	0	0
Initial Fut:			31	36	105	131	160	469	56	41	755	153
User Adj:		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
_	1.00		1.00	1.00		1.00		1.00	1.00		1.00	1.00
	129	293	31	36	105	131	160	469	56	41	755	153
	0		0	0	0	0	0	0	0	0	0	0
Reduced Vol:		293	31	36	105	131	160	469	56	41	755	153
PCE Adj:		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
FinalVolume:			31		105	131	160		56	41	755	153
Saturation F						4000			4000			4000
Sat/Lane:		1900	1900		1900	1900		1900	1900		1900	1900
_		0.95		0.92		0.95		1.00	0.92		0.98	0.95
Lanes:		0.90	0.10	1.00		0.56		2.00	1.00		1.65	0.35
Final Sat.:			172		801	999		3800	1750		3076	623
	'											
Capacity Anal	-		e: 0.18	0 00	0.13	0 10	0 00	0.12	0.03	0 00	0.25	0.25
Vol/Sat:		****	0.18		0.13	0.13	****		0.03	0.02	U.∠3 ****	0.25
			40 1			21 5			70.0	00 7		-7 -
Green Time:		42.1		7.0		31.5		56.1	73.8		57.5	57.5
Volume/Cap:			0.60	0.41		0.58		0.31	0.06		0.60	0.60
Delay/Veh:			43.6	67.6		50.6		28.8	16.2		32.9	32.9
User DelAdj:			1.00	1.00		1.00		1.00	1.00		1.00	1.00
AdjDel/Veh:				67.6		50.6		28.8	16.2		32.9	32.9
LOS by Move:			D	E	D	D	E		В	D	C	C
	6		13	. 2	10	10			1	2	16	16
Note: Queue	repor	ted is	the n	umber	of ca	rs per	lane	•				

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



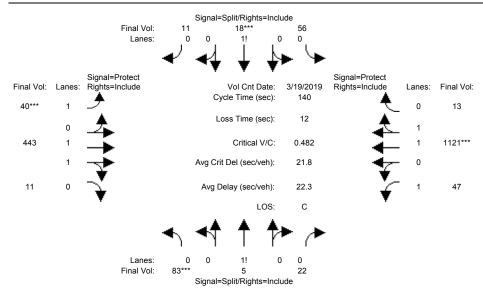
Approach:	No	rth Bo	und	Soi	ıth Bo	und	Εá	ast Bo	und	We	est Bo	und
Movement:											- T	
						-				-		
Min. Green:		10			10			10			10	10
Y+R:	4.0				4.0	4.0		4.0	4.0		4.0	4.0
Volume Module									F. 6	4.7		1.50
Base Vol:	129		31		105	131		469	56	41	755	153
Growth Adj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00
Initial Bse:		293	31	36	105	131	160	469	56	41	755	153
Added Vol:	0	0	-	0	0	0	0	0	0	0	0	0
ATI:	6		0	5	7	-2	-3		1	3	98	5
Initial Fut:				41	112	129	157	512	57	44	853	158
	1.00		1.00		1.00	1.00		1.00	1.00		1.00	1.00
	1.00		1.00		1.00	1.00		1.00	1.00		1.00	1.00
	135	307	31	41	112	129	157	512	57	44	853	158
	0		0	0	0	0	0	0	0	0	0	0
Reduced Vol:		307	31	41	112	129	157	512	57	44	853	158
_	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
FinalVolume:			31		112	129	157		57	44	853	158
	1											
Saturation F						4000						4000
Sat/Lane:		1900			1900	1900		1900	1900		1900	1900
Adjustment:				0.92		0.95		1.00	0.92		0.98	0.95
		0.91	0.09		0.46	0.54		2.00	1.00		1.68	0.32
Final Sat.:			165			963		3800	1750		3121	578
Capacity Anal	-		e: 0.19	0 00	0.13	0 10	0 00	0.13	0.03	0 02	0.27	0.27
Vol/Sat:		****	0.19	****	0.13	0.13	****	0.13	0.03	0.03	U.∠/ ****	0.27
			41 0		20 6	20 6		F0 0	75 0	01 (CO 0
		41.3		7.0		30.6		58.2	75.8		60.0	60.0
Volume/Cap:			0.64		0.61	0.61		0.32	0.06		0.64	0.64
Delay/Veh:			45.5		52.2	52.2		27.8	15.2		32.3	32.3
User DelAdj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00
AdjDel/Veh:				68.6		52.2		27.8	15.2		32.3	32.3
LOS by Move:			D	E	D	D	Ε		В	D	C	C
	7		14	, 2	10	10			1	2	18	18
Note: Queue	repor	ted is	the n	umber	of ca	rs per	lane	•				

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



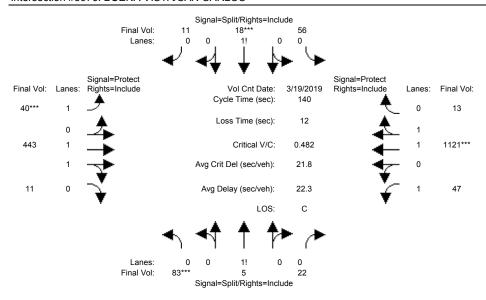
Approach: Movement:	L ·	- T	- R	L -	- T	- R	L -	- Т	- R		- R
Min. Green: Y+R:	7 4.0	10 4.0	10	7 4.0	10 4.0	10	7 4.0	10 4.0	10 4.0	7 1 4.0 4.	0 10 0 4.0
Volume Module											
Base Vol:	129	293	31	36	105	131	160	469	56	41 75	5 153
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00 1.0	0 1.00
Initial Bse:	129	293	31	36	105	131	160	469	56	41 75	5 153
Added Vol:	2	0	0	0	0	2	4		0	0 .	4 0
ATI:	6	14	0	5	7	-2	-3		1	3 9	3 5
Initial Fut:	137	307	31	41	112	131	161	520	57	44 85	
		1.00	1.00		1.00	1.00		1.00	1.00	1.00 1.0	
PHF Adj:		1.00	1.00	1.00		1.00		1.00	1.00	1.00 1.0	
PHF Volume:	137	307	31	41	112	131	161	520	57	44 85	
	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:		307	31	41	112	131	161	520	57	44 85	
_		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00 1.0	0 1.00
_	1.00		1.00		1.00	1.00		1.00	1.00	1.00 1.0	
FinalVolume:			31	41	112	131	161	520	57	44 85	
Saturation Fi											
Saturation F. Sat/Lane:		1900	1900	1900	1000	1900	1 0 0 0	1900	1900	1900 190	0 1900
Adjustment:			0.95	0.92		0.95		1.00	0.92	0.92 0.9	
		0.91	0.09		0.46	0.54		2.00	1.00	1.00 1.6	
Final Sat.:			165			970		3800	1750	1750 312	
Capacity Anal						'			,		'
Vol/Sat:	0.08	0.19	0.19	0.02	0.14	0.14	0.09	0.14	0.03	0.03 0.2	7 0.27
Crit Moves:		****		****			****			***	*
Green Time:	17.6	41.0	41.0	7.0	30.4	30.4	20.1	58.6	76.2	21.4 59.	9 59.9
Volume/Cap:	0.62	0.64	0.64	0.47	0.62	0.62	0.64	0.33	0.06	0.16 0.6	4 0.64
Delay/Veh:	63.4	45.8	45.8	68.6	52.7	52.7	62.1	27.5	15.0	51.8 32.	5 32.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00 1.0	0 1.00
AdjDel/Veh:	63.4	45.8	45.8	68.6	52.7	52.7	62.1	27.5	15.0	51.8 32.	5 32.5
LOS by Move:			D	E	D	D	E	С	В	D	
-	7		14	2	11	11	7		1	2 1	8 18
Note: Queue	repor	ted is	the n	umber	of ca	rs per	lane	•			

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



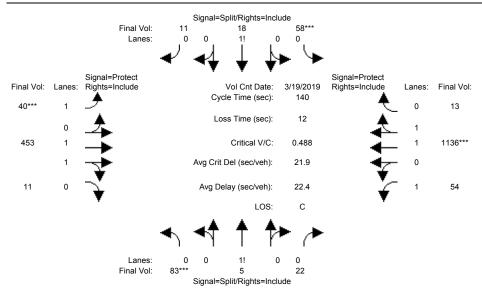
Approach: Movement:	L ·	- T ·	- R	L -	- T	und - R	L ·	- Т	- R	L -	- T	- R
Min. Green: Y+R:	10 4.0	10 4.0	10 4.0	10	10 4.0	10 4.0	7 4.0	10 4.0	10 4.0	7 4.0	10 4.0	10 4.0
Volume Module												
Base Vol:	83	5	22	56	18	11	40	443	11	47	1121	13
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	83	5	22	56	18	11	40	443	11	47	1121	13
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	83	5	22	56	18	11	40	443	11	47	1121	13
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:		5	22	56	18	11	40	443	11	47	1121	13
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	83	5	22	56	18	11	40	443	11	47	1121	13
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:	83	5	22	56	18	11	40	443	11	47	1121	13
Saturation F	low Mo	odule:										
Sat/Lane:		1900	1900	1900	1900	1900	1900	1900	1900		1900	1900
Adjustment:			0.92		0.92	0.92	0.92	0.97	0.95	0.92	0.97	0.95
Lanes:	0.75		0.20		0.21	0.13		1.95	0.05		1.98	0.02
Final Sat.:	1320	80	350		371	226			90		3658	42
Capacity Ana	_											
Vol/Sat:		0.06	0.06	0.05		0.05		0.12	0.12	0.03	0.31	0.31
CIIC MOVES.	****				****		****				****	
Green Time:		18.2	18.2		14.1		7.0		68.0		88.7	88.7
Volume/Cap:			0.48		0.48	0.48		0.25	0.25		0.48	0.48
Delay/Veh:	58.2		58.2		61.6	61.6		21.2	21.2		13.7	13.7
User DelAdj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00
AdjDel/Veh:			58.2		61.6	61.6		21.2	21.2		13.7	13.7
LOS by Move:		E	E	E	E	E	E	С	С	D	В	В
HCM2kAvgQ:	5		5	4	4	4	2	-	6	2	13	13
Note: Queue	repor	ted is	the n	umber	of ca	rs per	lane	•				

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



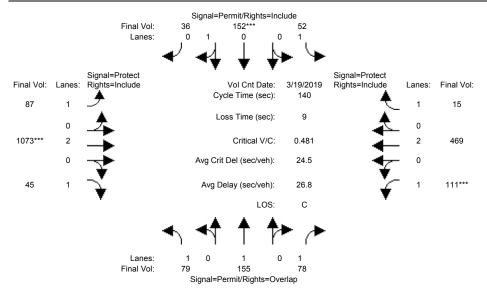
Approach:	No	rth Bo	und	Soi	ath Bo	und	Εä	ast Bo	und	We	est Bo	und
Movement:											- T	
										•		
Min. Green:		10		10				10			10	
Y+R:	4.0	4.0			4.0	4.0		4.0			4.0	4.0
Volume Module Base Vol:	e: // 83	5	22	19 Ma	ar 201 18	.9 <<	40	443	11	17	1121	13
Growth Adj:		-	1.00	1.00		1.00		1.00	1.00		1.00	1.00
Initial Bse:		5	22	56	18	11	40	443	11		1121	13
Added Vol:	0	0	0	0	0	0	0.	0	0	0	0	0
ATI:	0	-	0	0	0	0	0	0	0	0	0	0
Initial Fut:		5	22	56	18	11	40	443	11		1121	13
User Adj:			1.00	1.00		1.00		1.00	1.00		1.00	1.00
PHF Adi:		1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00
PHF Volume:		5	22	56	18	11	40	443	11		1121	13
	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:		5	22	56	18	11	40	443	11		1121	13
		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
_	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	83	5	22	56	18	11	40	443	11	47	1121	13
Saturation F	low M	odule:										
Sat/Lane:	1900	1900				1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.97	0.95	0.92	0.97	0.95
Lanes:	0.75		0.20		0.21	0.13	1.00	1.95	0.05	1.00	1.98	0.02
Final Sat.:			350			226			90		3658	42
Capacity Ana	-											
Vol/Sat:		0.06	0.06	0.05		0.05		0.12	0.12	0.03	0.31	0.31
Crit Moves:		400			****		****				****	
				14.1			7.0		68.0		88.7	88.7
Volume/Cap:			0.48	0.48		0.48		0.25	0.25		0.48	0.48
Delay/Veh:				61.6		61.6		21.2	21.2		13.7	13.7
User DelAdj:			1.00	1.00		1.00		1.00	1.00		1.00	1.00
AdjDel/Veh:				61.6		61.6		21.2	21.2		13.7	13.7
LOS by Move:		E 5	E	E 4	E 4	E 4	E		C 6	D		B 12
HCM2kAvgQ:			5	_	_	=			ь	2	13	13
Note: Queue	repor	tea is	the n	umber	oi ca	ars per	Iane	•				

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



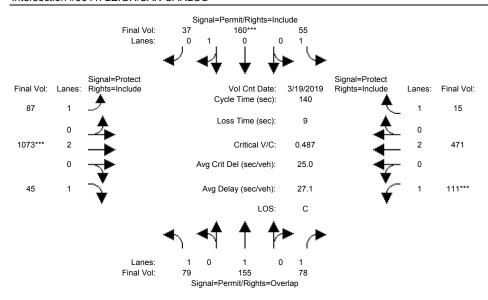
Approach:	No	rth Bo	und	Soi	ıth Bo	und	Ea	ast Bo	und	W	est Bo	und
Movement:		- T ·				- R					- T	
				•						•		
Min. Green:		10		10				10			10	10
Y+R:	4.0		4.0		4.0	4.0		4.0			4.0	4.0
Volume Module												
Base Vol:	e: // 83	5	22	19 Ma	ar 201 18	11	40	443	11	17	1121	13
Growth Adj:		-	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Initial Bse:		5	22	56	18	11	40	443	11		1121	13
Added Vol:	0	0	0	2	0	0	0	10	0	7	15	0
ATI:	0	-	0	0	0	0	0	0	0	0	0	0
Initial Fut:		5	22	58	18	11	40	453	11		1136	13
User Adj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00
PHF Adi:	1.00		1.00	1.00		1.00		1.00	1.00		1.00	1.00
_	83	5	22	58	18	11	40	453	11		1136	13
	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:			22	58	18	11	40	453	11	54	1136	13
		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:	83	5	22	58	18	11	40	453	11	54	1136	13
Saturation F	low M	odule:										
Sat/Lane:		1900			1900	1900		1900	1900	1900	1900	1900
Adjustment:		0.92		0.92		0.92	0.92	0.97	0.95	0.92	0.97	0.95
Lanes:		0.05	0.20		0.21	0.12	1.00	1.95	0.05	1.00	1.98	0.02
Final Sat.:	1320		350		362	221			88		3658	42
Capacity Ana	-											
Vol/Sat:			0.06	0.05 ****	0.05	0.05	0.02 ****	0.13	0.13	0.03	0.31	0.31
Crit Moves:	****	100	100		1 4 0	1 4 0		60 F	60 F	0	****	00 0
Green Time:		18.0	18.0		14.2		7.0		68.5		88.8	88.8
Volume/Cap:			0.49		0.49	0.49		0.26	0.26		0.49	0.49
Delay/Veh:			58.4		61.6	61.6		21.0	21.0		13.7	13.7
User DelAdj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00
AdjDel/Veh:			58.4			61.6		21.0	21.0		13.7	13.7
LOS by Move:			E 5	E 4	E 4	E 4	E 2		C 6	D 2		В 13
HCM2kAvgQ:				_	_	=	_	-	б	2	13	13
Note: Queue	repor	tea is	ine n	umber	or ca	rs per	⊥ane	•				

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



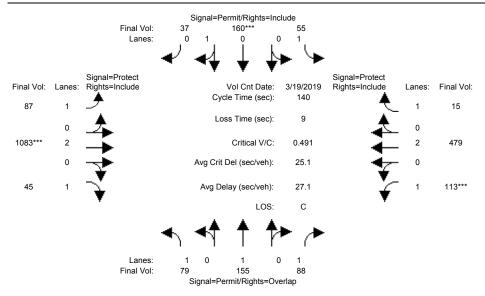
Approach:	No	rth Bo	und	Soi	ıth Bo	und	Ea	ast Bo	und	We	est Bo	und
Movement:		- T ·				- R					- T	
Min. Green:		10		10				10			10	10
Y+R:	4.0		4.0		4.0	4.0		4.0			4.0	4.0
	-											
Volume Modul			Date: 78	19 Ma		.9 <<	0.7	1072	4.5	111	4.00	1 -
Base Vol: Growth Adj:	79		1.00		152 1.00	1.00		1073	45 1.00	111	469	15 1.00
Initial Bse:		155	78	52	152	36		1073	45	111	469	15
Added Vol:	0		0	0	132	0	0	1073	0	111	409	1.2
ATI:	0		0	0	0	0	0	0	0	0	0	0
Initial Fut:			78	52	152	36		1073	45	111	469	15
User Adj:		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
_	79		78	52	152	36		1073	45	111	469	15
· · · · · · ·	0		0	0	0	0	0	0	0	0		0
Reduced Vol:			78	52	152	36		1073	45	111	469	15
PCE Adj:	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
FinalVolume:			78	52		36		1073	45	111	469	15
Saturation F.	low M	odule:										
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.95	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	1.00	1.00	1.00	0.81	0.19	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1750	1900	1750	1750	1455	345	1750	3800	1750	1750	3800	1750
	-											
Capacity Ana	-											
Vol/Sat:	0.05	0.08	0.04	0.03	0.10	0.10	0.05	0.28	0.03		0.12	0.01
Crit Moves:					****			****		****		
Green Time:			48.8	30.4		30.4		82.2	82.2		71.6	71.6
Volume/Cap:			0.13		0.48	0.48		0.48	0.04		0.24	0.02
Delay/Veh:			31.2	44.4		48.9		16.8	12.3		19.1	16.9
User DelAdj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00
AdjDel/Veh:				44.4		48.9		16.8	12.3		19.1	16.9
LOS by Move:			C	D	D	D	D		В	E		В
HCM2kAvgQ:		6	2	, 2	8	8	3		1	5	5	0
Note: Queue	repor	ted is	the n	umber	oi ca	rs per	lane	•				

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



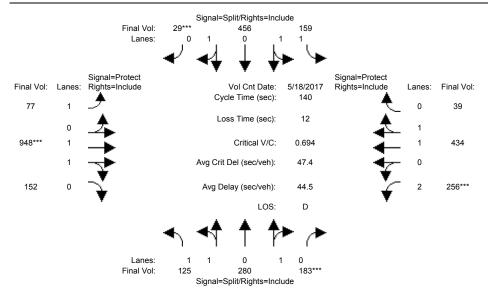
Approach:	No	rth Bo	und	Soi	ıth Bo	und	Ea	ast Bo	und	We	est Bo	und
Movement:		- T ·				- R					- T	
Min. Green:		10			10			10		7		10
Y+R:	4.0		4.0		4.0	4.0		4.0			4.0	4.0
	-											
Volume Modul			Date: 78	19 Ma		.9 <<	0.7	1072	45	111	1.00	1 -
Base Vol: Growth Adj:	79		1.00		152 1.00	1.00		1073	1.00	111	469	15 1.00
Initial Bse:		155	78	52	152	36		1073	45	111	469	1.00
Added Vol:	0		0	0	132	0	0	1073	0	111	409	1.2
ATI:	0		0	3	8	1	0	0	0	0	2	0
Initial Fut:			78	55	160	37		1073	45	111	471	15
User Adj:		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
_	79		78	55	160	37		1073	45	111	471	15
· · · · · · · ·	0		0	0	0	0	0	0	0	0	4/1	0
Reduced Vol:			78	55	160			1073	45	111	471	15
PCE Adj:			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
FinalVolume:			78	55	160	37		1073	45	111	471	15
Saturation F	low M	odule:				,	•					
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.95	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:		1.00	1.00	1.00	0.81	0.19	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1750	1900	1750	1750	1462	338	1750	3800	1750	1750	3800	1750
Capacity Ana	lysis	Modul	e:									
Vol/Sat:	0.05	0.08	0.04	0.03	0.11	0.11	0.05	0.28	0.03		0.12	0.01
Crit Moves:					****			****		****		
Green Time:			49.7		31.5	31.5		81.3	81.3		70.9	70.9
Volume/Cap:			0.13		0.49	0.49		0.49	0.04	0.49		0.02
Delay/Veh:			30.5	43.6	48.1	48.1		17.3	12.7	58.2	19.5	17.2
User DelAdj:			1.00		1.00	1.00		1.00	1.00	1.00		1.00
AdjDel/Veh:				43.6	48.1	48.1		17.3	12.7		19.5	17.2
LOS by Move:			С	D	D	D	D		В	Ε	В	В
HCM2kAvgQ:		6	2	2	8	8	3		1	5	5	0
Note: Queue	repor	ted is	the n	umber	of ca	rs per	lane	•				

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



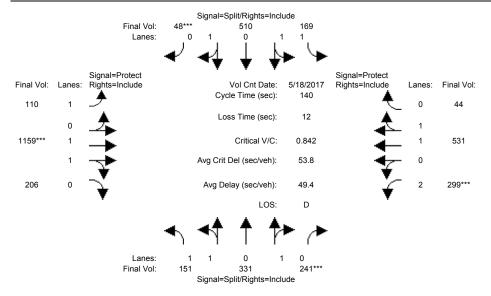
Approach: Movement:	L ·	- T ·	- R	L -	- Т	und - R	L -	- Т	- R	L -	T	- R
Min. Green: Y+R:	10 4.0	10 4.0	10 4.0	10 4.0	10 4.0	10	7 4.0	10 4.0	10 4.0	7 4.0	10 4.0	10
Volume Module												
Base Vol:	79	155	78	52	152	36	87	1073	45	111	469	15
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	79	155	78	52	152	36	87	1073	45	111	469	15
Added Vol:	0	0	10	0	0	0	0	10	0	2	8	0
ATI:	0	0	0	3	8	1	0	0	0	0	2	0
Initial Fut:	79	155	88	55	160	37	87	1083	45	113	479	15
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	79	155	88	55	160	37	87	1083	45	113	479	15
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	79	155	88	55	160	37	87	1083	45	113	479	15
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:	79	155	88	55	160	37	87	1083	45	113	479	15
Saturation F.	low Mo	odule:										
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900		1900
Adjustment:	0.92	1.00	0.92	0.92	0.95	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	1.00	1.00	1.00	0.81	0.19	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:		1900	1750		1462			3800	1750	1750		1750
Capacity Ana	_											
Vol/Sat:	0.05	0.08	0.05	0.03	0.11	0.11	0.05	0.28	0.03	0.06	0.13	0.01
Crit Moves:					****			****		****		
	31.2		49.7		31.2	31.2		81.3	81.3	18.4		71.4
	0.20		0.14		0.49	0.49		0.49	0.04	0.49		0.02
Delay/Veh:	44.5	46.5	30.8	43.8	48.4	48.4	47.2	17.4	12.6	58.1	19.3	16.9
User DelAdj:			1.00		1.00	1.00		1.00	1.00	1.00		1.00
AdjDel/Veh:		46.5	30.8	43.8	48.4	48.4	47.2	17.4	12.6	58.1	19.3	16.9
LOS by Move:		D	С	D	D	D	D	В	В	E	В	В
HCM2kAvgQ:	3		3	2	8	8	3		1	5	6	0
Note: Queue	repor	ted is	the n	umber	of ca	rs per	lane	•				

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



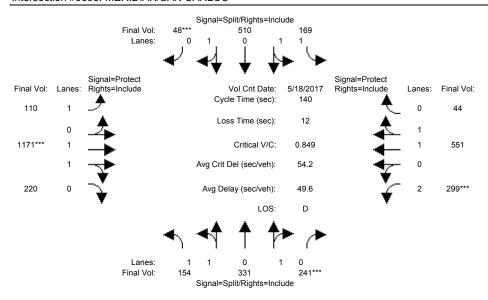
Approach:	No	rth Bo	und	Soi	ath Bo	und	E	ast Bo	und	We	est Bo	und
Movement:		- T ·				- R					- T	
Min. Green:		10			10			10			10	10
Y+R:	4.0	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Volume Module												
Base Vol:	125	280	183	159		29	77		152	256	434	39
Growth Adj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00
Initial Bse:		280	183	159	456	29	77	948	152	256	434	39
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	0		0	0	0	0	0	0	0	0	0	0
Initial Fut:			183	159	456	29	77	948	152	256	434	39
User Adj:		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
	125	280	183	159	456	29	77	948	152	256	434	39
	0		0	0	0	0	0	0	0	0	-	0
Reduced Vol:		280	183	159	456	29	77	948	152	256	434	39
PCE Adj:	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
FinalVolume:			183		456	29	77		152	256		39
Saturation F.						4000						
Sat/Lane:		1900	1900		1900	1900		1900	1900		1900	1900
Adjustment:				0.92		0.95		0.98	0.95		0.98	0.95
Lanes:		1.19	0.81		1.88	0.12			0.28		1.83	0.17
Final Sat.:			1462			221			511		3395	305
Capacity Ana. Vol/Sat:	-		e: 0.13	0 00	0.13	0.13	0 04	0.30	0.30	0 00	0.13	0.13
	0.07	0.13	****	0.09	0.13	V.13 ****	0.04	****	0.30	****	0.13	0.13
Crit Moves:	25 2	25.2		06.4	06.4				F0 0		F4 0	F4 0
Green Time:		25.2	25.2		26.4	26.4		59.9	59.9		54.9	54.9
Volume/Cap:				0.48		0.69		0.69	0.69		0.33	0.33
Delay/Veh:		56.3	56.3		55.3	55.3		33.9	33.9		29.8	29.8
User DelAdj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00
AdjDel/Veh:			56.3	50.9		55.3		33.9	33.9		29.8	29.8
LOS by Move:			E	D	E	E	D		C	E		C
HCM2kAvgQ:	5		11	, 7	11	11	3		20	6	7	7
Note: Queue	repor	ted is	the n	umber	of ca	rs per	lane	•				

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



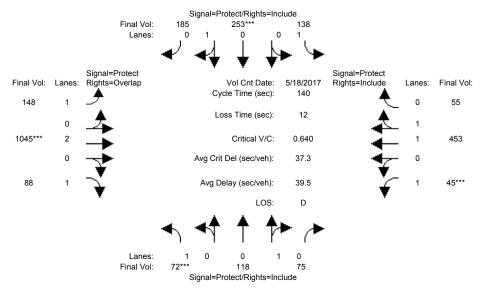
Approach:	No	rth Bo	und	Soi	ıth Bo	und	Ea	ast Bo	und	We	est Bo	und
Movement:		- T ·				- R					- T	
										•		
Min. Green:		10			10			10		7		10
Y+R:	4.0	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Volume Modul									1.50	0.5.6	404	2.0
Base Vol:	125	280	183	159		29	77		152	256	434	39
Growth Adj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00
Initial Bse:		280	183	159	456	29	77	948	152	256	434	39
Added Vol:	0	0	0	0	0	0	0		0	0	0	0
ATI:	26	51	58	10	54	19	33	211	54	43	97	5
Initial Fut:		331	241	169	510	48		1159	206	299	531	44
User Adj:			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
PHF Volume:		331	241	169	510	48		1159	206	299	531	44
	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:		331	241	169	0 = 0	48		1159	206	299	531	44
PCE Adj:	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
FinalVolume:			241		510	48		1159	206		531	44
Saturation F.						4000						
Sat/Lane:		1900	1900			1900		1900	1900		1900	1900
Adjustment:				0.92		0.95		0.98	0.95		0.98	0.95
Lanes:		1.13	0.87	1.00		0.18			0.31		1.84	0.16
Final Sat.:			1558		3381				558		3417	283
Capacity Ana.	-			0 10	0 1 5	0 1 5	0 00	0 27	0 27	0 00	0 10	0 16
Vol/Sat:		0.15	0.15	0.10	0.15	0.15		0.37	0.37	****	0.16	0.16
Crit Moves:		05 5		0 = 1	0 = 1		000		61.4		F	F F 0
Green Time:			25.7		25.1	25.1		61.4	61.4		55.0	55.0
Volume/Cap:				0.54		0.84		0.84	0.84		0.40	0.40
Delay/Veh:		62.7	62.7	52.6		63.0		39.1	39.1		30.8	30.8
User DelAdj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00
AdjDel/Veh:			62.7	52.6		63.0		39.1	39.1		30.8	30.8
LOS by Move:			E	D	E	E	D		D	E		C
	7		15	. 8	14	14	5		28	8	9	9
Note: Queue	repor	ted is	the n	umber	of ca	rs per	lane	•				

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



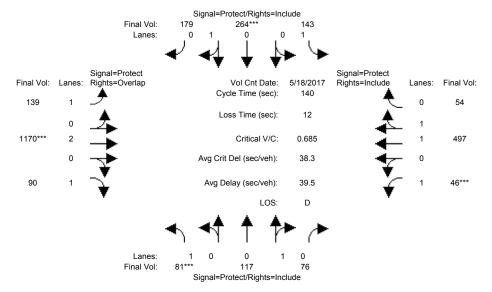
Approach:	No	rth Bo	und	Soi	ath Bo	und	E	ast Bo	und	We	est Bo	und
Movement:		- T ·				- R					- T	
							-					
Min. Green:		10		10				10		7		10
Y+R:	4.0	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Volume Module									1.50	0.5.6	101	2.0
Base Vol:	125	280	183	159		29	77		152	256	434	39
Growth Adj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00
Initial Bse:		280	183	159	456	29	77	948	152	256	434	39
Added Vol:	3	0	0	0	0	0	0		14	0	20	0
ATI:	26	51	58	10	54	19	33	211	54	43	97	5
Initial Fut:		331	241	169	510	48		1171	220	299		44
			1.00		1.00	1.00		1.00	1.00		1.00	1.00
	1.00		1.00		1.00	1.00		1.00	1.00		1.00	1.00
PHF Volume:		331	241	169	510	48		1171	220	299	551	44
	0		0	0	0	0	0	0	0	0	-	0
Reduced Vol:		331	241	169	0 = 0	48		1171	220	299		44
PCE Adj:	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
FinalVolume:			241		510	48		1171	220		551	44
Saturation F						4000	4000					4000
Sat/Lane:		1900			1900	1900		1900	1900		1900	1900
Adjustment:				0.92		0.95		0.98	0.95		0.98	0.95
Lanes:		1.13	0.87		1.82	0.18		1.67	0.33		1.85	0.15
Final Sat.:			1558		3381			3114	585		3426	274
Capacity Anal	-			0 10	0 1 5	0 1 5	0 00	0 20	0 20	0 00	0 10	0 16
Vol/Sat:	0.09	0.15	0.15	0.10	0.15	0.15		0.38	0.38	****	0.16	0.16
Crit Moves:	05 5	05.5		0.4.0	0.4.0		01.0		60.0		0	F.F. 0
Green Time:			25.5		24.9	24.9		62.0	62.0		55.8	55.8
Volume/Cap:				0.54		0.85		0.85	0.85		0.40	0.40
Delay/Veh:			63.4	52.9		63.8		39.2	39.2		30.3	30.3
User DelAdj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00
AdjDel/Veh:			63.4	52.9		63.8		39.2	39.2		30.3	30.3
LOS by Move:			E	D	Ε	E	D		D	E		C
	7		15	. 8	14	14	5		29	8	9	9
Note: Queue	repor	ted is	the n	umber	of ca	rs per	lane	•				

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



Approach: Movement:	L ·	- T	- R	L -	- T	- R	L -	- Т	- R	L - T	- R
Min. Green: Y+R:	7 4.0	10 4.0	10 4.0	7 4.0	10 4.0	10 4.0	7 4.0	10 4.0	10 4.0	7 10 4.0 4.0	10 4.0
Volume Module											
Base Vol:	72	118	75	138	253	185	148	1045	88	45 453	55
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00 1.00	1.00
Initial Bse:	72	118	75	138	253	185	148	1045	88	45 453	55
Added Vol:	0	0	0	0	0	0	0	0	0	0 0	0
ATI:	0	0	0	0	0	0	0	0	0	0 0	0
Initial Fut:	72	118	75	138	253	185	148	1045	88	45 453	55
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00 1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00 1.00	1.00
PHF Volume:	72	118	75	138	253	185	148	1045	88	45 453	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0 0	0
Reduced Vol:	72	118	75	138	253	185	148	1045	88	45 453	55
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
FinalVolume:			75	138	253	185		1045	88	45 453	
Saturation Fl											
Sat/Lane:		1900	1900	1900		1900		1900	1900	1900 1900	
Adjustment:			0.95		0.95	0.95		1.00	0.92	0.92 0.98	
		0.61	0.39		0.58	0.42		2.00	1.00	1.00 1.78	
Final Sat.:			699			760		3800	1750	1750 3299	
Capacity Anal	_			0 00	0 04	0 0 4	0 00	0 00	0 05	0 00 0 14	0 1 4
Vol/Sat:		0.11	0.11	0.08	0.24	0.24	0.08	0.28	0.05	0.03 0.14	0.14
Crit Moves:		25 5	25 5	0.6 1		F0 6	05 0		60.4		41 1
Green Time:			35.5		52.6	52.6		59.5		7.0 41.1	
Volume/Cap:			0.42		0.65	0.65		0.65	0.10	0.51 0.47	
Delay/Veh:			44.4	51.2		38.2		32.9	19.3	70.0 40.8	
User DelAdj:			1.00	1.00		1.00		1.00	1.00	1.00 1.00	
AdjDel/Veh:			44.4	51.Z	38.2	38.2		32.9	19.3	70.0 40.8	
LOS by Move:		_	D 7	D 6	D 17	D 17	D 6	C 17	В	E D	_
							-		2	<i>ა</i> 9	9
Note: Queue	repor	tea IS	the n	unber	or ca	ırs per	Tane	•			

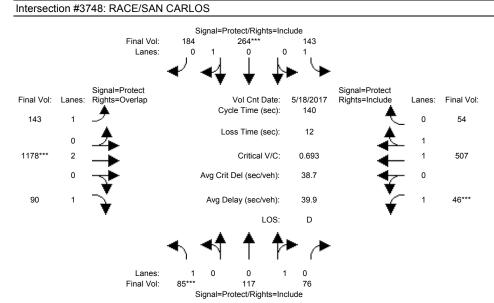
Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative) Background (PM)



Approach: Movement:	L ·	- T ·	- R	L -	- T	und - R	L -	- T	- R	L -	Т	- R
Min. Green: Y+R:		10		7	10 4.0	10	7	10 4.0	10	7	10 4.0	10
Volume Module												
Base Vol:	72	118	75	138	253	185		1045	88	45	453	55
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	72	118	75	138	253	185	148	1045	88	45	453	55
Added Vol:	0		0	0	0	0	0	0	0	0	0	0
ATI:	9		1	5			-9	125	2	1	44	-1
Initial Fut:			76	143	264		139		90	46	497	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	1.00	1.00		1.00
	81	117	76	143	264	179		1170	90	46	497	54
	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:			76	143	264	179		1170	90	46	497	54
PCE Adj:			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
FinalVolume:		117	76		264	179		1170	90	46	497	54 l
Saturation Fl												
Saturation F. Sat/Lane:			1900	1000	1900	1900	1000	1900	1900	1900	1000	1900
Adjustment:			0.95	0.92		0.95		1.00	0.92	0.92		0.95
_	1.00		0.39			0.40		2.00	1.00	1.00		0.20
Final Sat.:		1091				727		3800	1750	1750		363
Capacity Anal						,				'		
Vol/Sat:	0.05	0.11	0.11	0.08	0.25	0.25	0.08	0.31	0.05	0.03	0.15	0.15
Crit Moves:	****				****			****		****		
Green Time:	9.3	33.4	33.4	25.5	49.6	49.6	24.0	62.1	71.4	7.0	45.0	45.0
Volume/Cap:	0.69	0.45	0.45	0.45	0.69	0.69	0.46	0.69	0.10	0.53	0.46	0.46
Delay/Veh:	80.6	46.2	46.2	52.0	42.0	42.0	53.3	32.6	17.8	70.7	38.1	38.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:			46.2	52.0	42.0	42.0	53.3	32.6	17.8	70.7	38.1	38.1
LOS by Move:			D	D	D	D	D	С	В	E	D	D
- 5~:	5		8	6	18	18	5		2	3	10	10
Note: Queue	repor	ted is	the n	umber	of ca	rs per	lane	•				

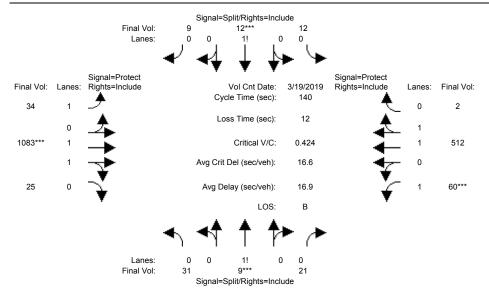
Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative) Background + P (PM)

Background +



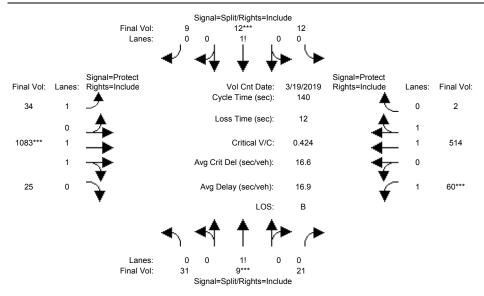
Approach:	No	rth Bo	und	Soi	ıth Bo	und	Ea	ast Bo	und	West	Bour	ıd
Movement:	L ·	- T ·	- R	L -	- T	- R	L -	- T	- R	L -	T -	R
Min. Green:		10						10		7		
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0 4	1.0	4.0
Volume Module	e: >>	Count	Date:	18 Ma	ay 201	.7 << 5	:30-5	:45				
Base Vol:	72	118	75	138	253	185			88	45 4	153	55
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00 1.	.00 1	.00
Initial Bse:	72	118	75	138	253	185	148	1045	88	45 4	153	55
Added Vol:	4	0	0	0	0	5		8	0	0	10	0
ATI:	9	-1	1	5	11	-6	-9	125	2	1	44	-1
Initial Fut:	85	117	76	143	264	184	143	1178	90	46 5	507	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:	85	117	76	143	264	184	143	1178	90	46 5	507	54
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	85	117	76	143	264	184	143	1178	90	46 5	507	54
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00 1.	.00 1	.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00 1.	.00 1	.00
FinalVolume:				143			143			46 5		54
Saturation Fi												
,			1900		1900			1900	1900			.900
Adjustment:				0.92		0.95		1.00	0.92	0.92 0.		.95
Lanes:			0.39			0.41		2.00	1.00	1.00 1.		.20
Final Sat.:						739		3800	1750	1750 33		356
Capacity Anal				0 00	0.05	0.25	0 00	0 21	0 0 5	0 02 0	1 = 0	1 1 5
Vol/Sat:	****	0.11	0.11	0.08	U.∠⊃ ****	0.25	0.08	U.31	0.05	0.03 0.	.15 (.15
Crit Moves:		22.6	22 6	25 6		10 6	041				. 7 /	1 7
Green Time:				25.6		49.6		61.7	71.4	7.0 44		4.7
Volume/Cap:				0.45		0.70		0.70	0.10	0.53 0.		.48
Delay/Veh:			46.0	51.9		42.4		33.1	17.8	70.7 38		88.6
User DelAdj:			1.00	1.00		1.00		1.00	1.00	1.00 1.		.00
AdjDel/Veh:				51.9		42.4		33.1	17.8	70.7 38		88.6
LOS by Move:	F	D		D			D		В			D
HCM2kAvgQ:		8	-	. 6		18	6		2	3	10	10
Note: Queue	repor	ted is	the n	umber	of ca	rs per	lane	•				

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



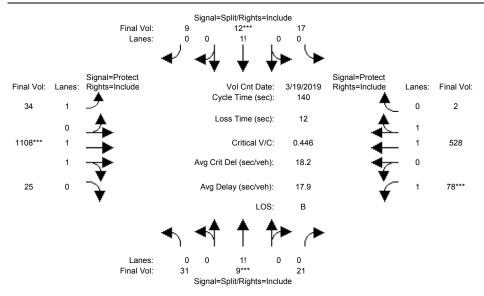
Approach: Movement:	L ·	- T ·	- R	L -	- T	und - R	L -	- T	- R	L -	- T	- R
Min. Green: Y+R:	10	10 4.0	10	10 4.0	10 4.0	10	7 4.0	10 4.0	10 4.0	7 4.0	10 4.0	10 4.0
Volume Module												
Base Vol:	31	9	21	12	12	9	34	1083	25	60	512	2
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	31	9	21	12	12	9	34	1083	25	60	512	2
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	31	9	21	12	12	9	34	1083	25	60	512	2
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:		9	21	12	12	9	34	1083	25	60	512	2
	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	31	9	21	12	12	9	34	1083	25	60	512	2
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:		9	21	12	12	9		1083	25	60	512	2
	1											
Saturation F												
Sat/Lane:		1900	1900		1900	1900		1900	1900		1900	1900
Adjustment:			0.92	0.92		0.92		0.97	0.95		0.97	0.95
Lanes:		0.15	0.34		0.36	0.27		1.95	0.05		1.99	0.01
Final Sat.:			602		636	477			83		3686	14
Capacity Anal	-			0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 14	0 14
Vol/Sat:		0.03 ****	0.03	0.02	U.U∠ ****	0.02	0.02	0.30	0.30	****	0.14	0.14
Crit Moves:			11 0			100	20 2		05 0		70 (70 6
		11.2	11.2		10.0	10.0		95.9	95.9		78.6	78.6
Volume/Cap:			0.44		0.26	0.26		0.44	0.44		0.25	0.25
Delay/Veh:			63.6		62.6	62.6		10.1	10.1		15.7	15.7
User DelAdj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00
AdjDel/Veh:				62.6		62.6		10.1	10.1	63.8 E	15.7	15.7
LOS by Move:	E 3		E 3	E 2	E 2	E 2	D 1	В 11	В 11	£ 3	B 6	B 6
<pre>HCM2kAvgQ: Note: Queue :</pre>							_		ТТ	3	0	0
Note: Queue .	rebor	tea IS	the fi	unber	or ca	rs ber	тапе	•				

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



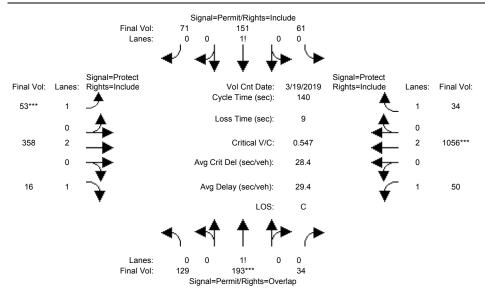
Approach:	No	rth Bo	und	Soi	ath Bo	und	Εá	ast Bo	und	We	est Bo	und
Movement:												
Min. Green:		10		10					10		10	
Y+R:	4.0					4.0			4.0		4.0	4.0
Volume Module							2.4	1000	٥٦	60	F10	0
Base Vol:	31	9	21	12	12		34		25	60	512	2
Growth Adj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00
Initial Bse:		9	21	12	12	9		1083	25	60	512	2
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	0		0	0	0	0	0	0	0	0		0
Initial Fut:		9	21	12	12	9		1083	25	60	514	2
User Adj:				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
PHF Volume:		9	21	12	12	9		1083	25	60	514	2
Reduct Vol:		0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:		9	21	12	12	_		1083	25	60		2
PCE Adj:			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
FinalVolume:		9	21	12	12	9		1083	25	60		2
	1											
Saturation F												
		1900				1900		1900	1900		1900	1900
_				0.92		0.92		0.97	0.95		0.97	
		0.15		0.37				1.95	0.05		1.99	
Final Sat.:				636		477			83		3686	14
Capacity Ana	-											
Vol/Sat:			0.03	0.02		0.02	0.02	0.30	0.30		0.14	0.14
		****			****			****		****		
				10.0		10.0		95.9	95.9		78.6	78.6
Volume/Cap:				0.26		0.26		0.44	0.44		0.25	0.25
Delay/Veh:				62.6		62.6		10.1	10.1		15.7	15.7
User DelAdj:			1.00	1.00		1.00		1.00	1.00		1.00	1.00
AdjDel/Veh:			63.6			62.6		10.1	10.1		15.7	15.7
LOS by Move:				E		E	D		В	E		В
		3	3	2	_	2	1		11	3	6	6
Note: Queue	repor	ted is	the n	umber	of ca	ars per	lane	•				

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



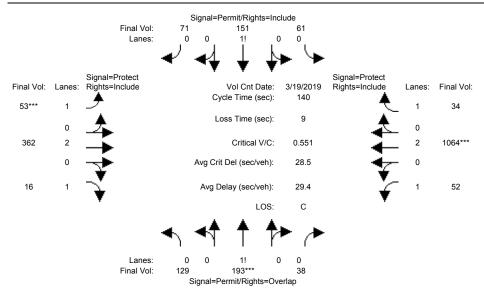
Approach:	No	rth Bo	und	Soi	ıth Bo	und	Εá	ast Bo	und	We	est Bo	und
Movement:											- T	
Min. Green:		10		10				10		7		
Y+R:	4.0		4.0			4.0		4.0			4.0	4.0
Volume Module							2.4	1000	٥٦	60	E 1 0	0
Base Vol:	31	9	21	12	12	9		1083	25	60	512	2
Growth Adj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00
Initial Bse:		9	21	12	12	9		1083	25	60	512	2
Added Vol:	0	-	0	5	0	0	0	25	0	18	14	0
ATI:	0		0	0	0	0	0	0	0	0	2	0
Initial Fut:		9	21	17	12	9		1108	25	78	528	2
User Adj:			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
PHF Volume:		9	21	17	12	9		1108	25	78	528	2
	0		0	0	0	0	0	0	0	0	0	0
Reduced Vol:		9	21	17	12	9		1108	25	78	528	2
PCE Adj:			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
FinalVolume:			21	17	12	9		1108	25	78	528	2
	1											
Saturation F				4000		4000						4000
Sat/Lane:		1900		1900		1900		1900	1900		1900	1900
Adjustment:				0.92		0.92		0.97	0.95		0.97	0.95
Lanes:		0.15		0.45			1.00		0.05		1.99	0.01
Final Sat.:			602	783		414			82		3686	14
Capacity Anal Vol/Sat:	-			0.02	0 00	0.02	0 00	0.31	0.31	0 04	0.14	0.14
		****	0.03	0.02	U.U∠ ****	0.02	0.02	V.31	0.31	****	0.14	0.14
			10 7	100		100	07.0				70 (70 6
Green Time:				10.0		10.0		93.7	93.7		79.6	79.6
Volume/Cap:			0.46	0.30		0.30		0.46	0.46		0.25	0.25
Delay/Veh:				63.1		63.1		11.2	11.2		15.3	15.3
User DelAdj:			1.00	1.00		1.00		1.00	1.00		1.00	1.00
AdjDel/Veh:			64.4			63.1		11.2	11.2		15.3	15.3
LOS by Move:				E	E	E	D	В	В	E	В	В
		3	3	2	2	2	1		12	4	6	6
Note: Queue	repor	ted is	the n	umber	of ca	rs per	lane	•				

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



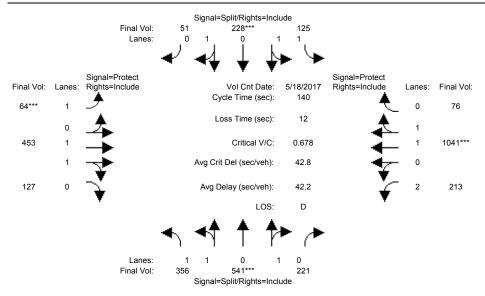
Approach: Movement:	L - T	- R	L -	- T	- R	L -	- T	- R	West Bo	- R
Min. Green: Y+R:	10 10 4.0 4.0	10	10 4.0	10 4.0	10	7 4.0	10 4.0	10 4.0	7 10 4.0 4.0	10
Volume Module		t Date:								
Base Vol:	129 193	34	61	151	71	53	351	16	50 1053	34
Growth Adj:	1.00 1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00 1.00	1.00
Initial Bse:	129 193	34	61	151	71	53	351	16	50 1053	34
Added Vol:	0 0	0	0	0	0	0	0	0	0 0	0
ATI:	0 0	0	0	0	0	0	7	0	0 3	0
Initial Fut:	129 193	34	61	151	71	53	358	16	50 1056	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:		34	61	151	71	53	358	16	50 1056	34
Reduct Vol:	0 0	0	0	0	0	0	0	0	0 0	0
Reduced Vol:	129 193	34	61	151	71	53	358	16	50 1056	34
PCE Adj:	1.00 1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00 1.00	1.00
MLF Adj:	1.00 1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00 1.00	1.00
FinalVolume:	129 193	34	61	151	71	53	358	16	50 1056	34
Saturation F	low Module	:								
Sat/Lane:	1900 1900	1900	1900	1900	1900	1900	1900	1900	1900 1900	1900
Adjustment:	0.92 0.92	0.92	0.92	0.92	0.92	0.92	1.00	0.92	0.92 1.00	0.92
Lanes:	0.36 0.54			0.53	0.25	1.00	2.00	1.00	1.00 2.00	1.00
Final Sat.:				934	439		3800	1750	1750 3800	1750
Capacity Ana	-									
Vol/Sat:		0.20	0.16	0.16	0.16		0.09	0.01	0.03 0.28	0.02
	****					****			****	
Green Time:				52.1	52.1		51.6	51.6	27.4 71.2	71.2
Volume/Cap:				0.43	0.43		0.26	0.02	0.15 0.55	0.04
Delay/Veh:	35.6 35.6	16.7	33.4	33.4	33.4	70.8	30.9	28.2	46.8 23.8	17.3
User DelAdj:				1.00	1.00		1.00	1.00	1.00 1.00	1.00
AdjDel/Veh:				33.4	33.4	70.8	30.9	28.2	46.8 23.8	17.3
LOS by Move:		В	С	С	С	E	С	С	D C	В
HCM2kAvgQ:	13 13	9	10	10	10	3		0	2 15	1
Note: Queue	reported i	s the nu	mber	of ca	rs per	lane	•			

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



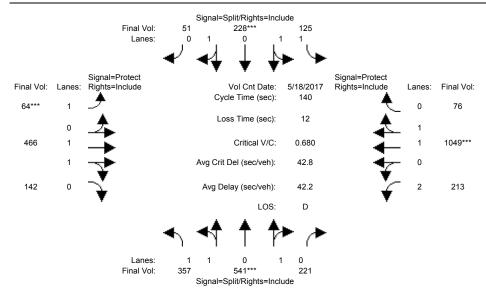
Approach: Movement:		- R	L -	- T	- R	L ·	- T	- R	L -	- Т	- R
Min. Green: Y+R:	10 10 4.0 4.0	10	10 4.0	10 4.0	10 4.0	7 4.0	10 4.0	10 4.0	7 4.0	10 4.0	10 4.0
Volume Module											
Base Vol:	129 193	3 4	61	151	71	53	351	16	50	1053	34
Growth Adj:	1.00 1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	129 193	3 4	61	151	71	53	351	16	50	1053	34
Added Vol:	0 () 4	0	0	0	0	4	0	2	8	0
ATI:	0 (0	0	0	0	0	7	0	0	3	0
Initial Fut:	129 193	38	61	151	71	53	362	16	52	1064	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:		38	61	151	71	53	362	16	52	1064	34
Reduct Vol:	0 (0	0	0	0	0	0	0	0	0	0
Reduced Vol:	129 193	38	61	151	71	53	362	16	52	1064	34
PCE Adj:	1.00 1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00 1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	129 193	38	61	151	71	53	362	16	52	1064	34
	1										
Saturation F											
Sat/Lane:	1900 1900			1900	1900		1900	1900		1900	1900
Adjustment:				0.92	0.92		1.00	0.92		1.00	0.92
Lanes:	0.36 0.54			0.53	0.25		2.00	1.00		2.00	1.00
Final Sat.:					439		3800	1750		3800	1750
Capacity Ana	-										
Vol/Sat:			0.16	0.16	0.16		0.10	0.01	0.03	0.28	0.02
	***					****				****	
Green Time:				52.2	52.2		51.7	51.7		71.1	71.1
Volume/Cap:			0.43		0.43		0.26	0.02	0.15		0.04
Delay/Veh:	35.7 35.7			33.3	33.3		30.9	28.1		23.9	17.3
User DelAdj:				1.00	1.00		1.00	1.00	1.00		1.00
AdjDel/Veh:				33.3	33.3		30.9	28.1		23.9	17.3
LOS by Move:			C	C	C	E	С	C	D	C	В
HCM2kAvgQ:			10	10	10	3		0	2	15	1
Note: Queue	reported :	s the n	number	oi ca	rs per	⊥ane	•				

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



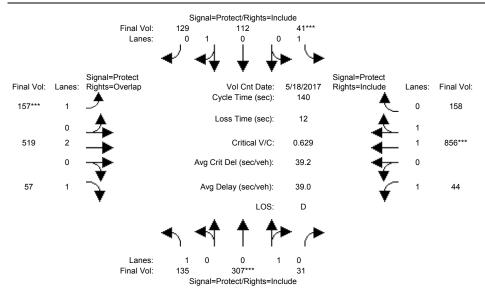
Movement:	L ·	- T	- R	L -	- Т	und - R	L ·	- Т	- R	L -	- Т	- R
Min. Green: Y+R:	10 4.0	10 4.0	10 4.0	10 4.0	10 4.0	10 4.0	7 4.0	10 4.0	10 4.0	7 4.0	10 4.0	10 4.0
Volume Modul												
Base Vol:	293	473	186	116	191	24		400	120	170	870	69
Growth Adj:		1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00
Initial Bse:		473	186	116	191	24	55	400	120	170	870	69
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	63	68	35	9	37	27	9	53	7	43	171	7
Initial Fut:	356	541	221	125	228	51	64	453	127	213	1041	76
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
	356	541	221	125	228	51	64	453	127	213	1041	76
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	356	541	221	125	228	51	64	453	127	213	1041	76
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
FinalVolume:			221	125	228	51	64	453	127		1041	76
Saturation F. Sat/Lane:		1900	1900	1000	1900	1900	1 0 0 0	1900	1900	1900	1000	1900
Adjustment:			0.95		0.98	0.95		0.98	0.95	0.83		0.95
Lanes:		1.40	0.60		1.62	0.38		1.55	0.45	2.00		0.93
Final Sat.:		2626	1073			676		2889	810		3448	252
Capacity Ana				'		1	1		'	1		'
Vol/Sat:	0.20	0.21	0.21	0.07	0.08	0.08	0.04	0.16	0.16	0.07	0.30	0.30
Crit Moves:		****			****		****				****	
Green Time:	42.5	42.5	42.5	15.6	15.6	15.6	7.6	48.8	48.8	21.1	62.3	62.3
Volume/Cap:	0.67	0.68	0.68	0.64	0.68	0.68	0.68	0.45	0.45	0.45	0.68	0.68
Delay/Veh:	43.7	43.9	43.9	61.8	62.9	62.9	83.1	35.5	35.5	54.9	32.0	32.0
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:	43.7	43.9	43.9	61.8	62.9	62.9	83.1	35.5	35.5	54.9	32.0	32.0
LOS by Move:		D	D	E	E	E	F	D	D	D	С	C
HCM2kAvgQ:	15		15	7	7	7	4		10	5	19	19
Note: Queue	repor	ted is	the n	umber	of ca	rs per	lane	•				

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



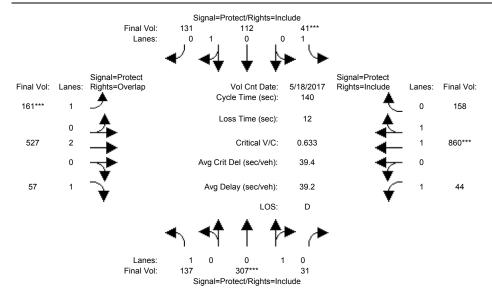
Approach: Movement:	L ·	- Т	- R	L -	- Т	- R	L ·	- Т	- R		T	- R
Min. Green: Y+R:	10 4.0	10 4.0	10 4.0	10 4.0	10 4.0	10	7 4.0	10 4.0	10 4.0	7 4.0	10 4.0	10 4.0
Volume Module												
Base Vol:	293	473	186	116	191	24	55		120	170	870	69
Growth Adj:		1.00	1.00		1.00	1.00		1.00	1.00	1.00 1		1.00
Initial Bse:		473	186	116	191	24	55	400	120	170	870	69
Added Vol:	1	0	0	0	0	0	0	13	15	0	8	0
ATI:	63	68	35	9		27	9	53	7	43	171	7
Initial Fut:	357	541	221	125	228	51	64	466	142	213 1	1049	76
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00 1	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	1.00	1.00
PHF Volume:	357	541	221	125	228	51	64	466	142	213 1	1049	76
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	357	541	221	125	228	51	64	466	142	213 1	1049	76
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00 1	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	1.00	1.00
FinalVolume:			221	125	228	51	64	466	142	213 1	L049	76
	1											
Saturation F												
Sat/Lane:		1900	1900		1900	1900		1900	1900	1900 1		1900
Adjustment:			0.95		0.98	0.95		0.98	0.95	0.83 (0.95
Lanes:		1.40	0.60		1.62	0.38		1.52	0.48	2.00 1		0.14
Final Sat.:		2626	1073			676		2835	864	3150 3		250
Capacity Ana												
Vol/Sat:	-	0.21	0.21	0.07	0.08	0.08	0.04	0.16	0.16	0.07	0.30	0.30
Crit Moves:		****	0.21	0.07	****	0.00	****	0.10	0.10		****	0.00
Green Time:			42.4	15.5	15.5	15.5	7.5	49.7	49.7	20.4 6	62.6	62.6
Volume/Cap:			0.68		0.68	0.68		0.46	0.46	0.46		0.68
Delay/Veh:			44.0	61.9	63.1	63.1	83.4	35.1	35.1	55.5 3	31.9	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	1.00	1.00
AdjDel/Veh:	43.9	44.0	44.0	61.9	63.1	63.1	83.4	35.1	35.1	55.5 3	31.9	31.9
LOS by Move:	D	D	D	E	E	E	F	D	D	E	С	С
HCM2kAvgQ:	15		15	7		7	4		10	5	19	19
Note: Queue	repor	ted is	the n	umber	of ca	rs per	lane					

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



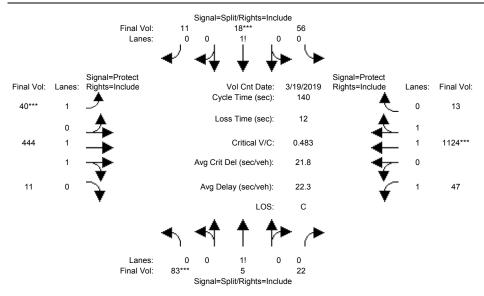
Movement:	L ·	- T	- R	South Bound . L - T - R -				- Т	- R	L - T - R		
Min. Green: Y+R:	7 4.0	10 4.0	10 4.0	7 4.0	10 4.0	10 4.0	7 4.0	10 4.0	10 4.0	7 4.0	10 4.0	10 4.0
Volume Module												
Base Vol:	129	293	31	36	105	131		469	56	41	755	153
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	129	293	31	36	105	131	160	469	56	41	755	153
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	6	14	0	5	7	-2	-3	50	1	3	101	5
Initial Fut:	135	307	31	41	112	129	157	519	57	44	856	158
User Adj:		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
PHF Volume:	135	307	31	41	112	129	157	519	57	44	856	158
	0		0	0	0	0	0	0	0	0	0	0
Reduced Vol:		307	31	41	112	129	157	519	57	44	856	158
PCE Adj:	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
FinalVolume:			31	41	112	129	157	519	57	44	856	158
Saturation F												
Saturation r.		1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:			0.95		0.95	0.95		1.00	0.92	0.92		0.95
Lanes:		0.91	0.09		0.46	0.54		2.00	1.00	1.00		0.32
Final Sat.:			165		837	963		3800	1750	1750		576
Capacity Ana	lysis	Modul	e:									
Vol/Sat:		0.19	0.19	0.02	0.13	0.13	0.09	0.14	0.03	0.03 (ე.27	0.27
Crit Moves:		****		****			****			,	****	
Green Time:	17.6	41.2	41.2	7.0	30.6	30.6	19.7	58.4	76.0	21.4	60.1	60.1
Volume/Cap:			0.64		0.61	0.61		0.33	0.06	0.16		0.64
Delay/Veh:		45.5	45.5		52.2	52.2		27.6	15.1	51.8		32.3
User DelAdj:			1.00		1.00	1.00		1.00	1.00	1.00		1.00
AdjDel/Veh:			45.5		52.2	52.2		27.6	15.1	51.8		32.3
LOS by Move:		D	D	Ε	D	D	E	C	В	D	С	С
	7		14	. 2	10	10	7		1	2	18	18
Note: Queue	repor	ted is	the n	umber	of ca	rs per	lane	•				

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



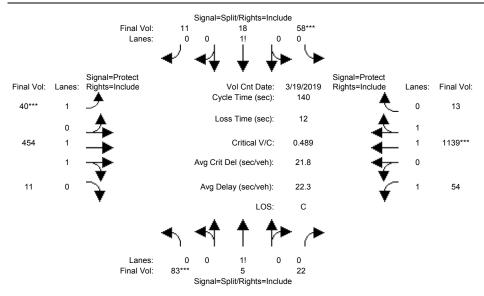
Movement:	L ·	- T	- R	South Bound East Bound L - T - R L - T - F					- R	L - T - R			
Min. Green: Y+R:	7 4.0	10 4.0	10	7 4.0	10 4.0	10	7 4.0	10 4.0	10 4.0	7 4.0	10 4.0	10 4.0	
Volume Module													
Base Vol:	129	293	31	36		131		469	56	41	755	153	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	129	293	31	36	105	131	160	469	56	41	755	153	
Added Vol:	2	0	0	0	0	2	4	8	0	0	4	0	
ATI:	6	14	0	5	7	-2	-3	50	1	3	101	5	
Initial Fut:	137	307	31	41	112	131	161	527	57	44	860	158	
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:	137	307	31	41	112	131	161	527	57	44	860	158	
	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	137	307	31	41	112	131	161	527	57	44	860	158	
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	
FinalVolume:			31	41	112	131	161	527	57	44	860	158	
Saturation Fi		1900	1000	1000	1900	1900	1 0 0 0	1900	1000	1000	1000	1900	
Adjustment:			1900		0.95	0.95		1.00	1900 0.92		1900	0.95	
Lanes:		0.95	0.95		0.46	0.54		2.00	1.00		1.68	0.95	
Final Sat.:			165			970		3800	1750		3125	574	
rillai sat													
Capacity Anal				'		1	1		'	1		'	
Vol/Sat:	0.08	0.19	0.19	0.02	0.14	0.14	0.09	0.14	0.03	0.03	0.28	0.28	
Crit Moves:		****		****			****				****		
Green Time:	17.6	40.9	40.9	7.0	30.3	30.3	20.1	58.8	76.4	21.2	60.0	60.0	
Volume/Cap:	0.62	0.64	0.64	0.47	0.62	0.62	0.64	0.33	0.06	0.17	0.64	0.64	
Delay/Veh:	63.5	45.8	45.8	68.6	52.8	52.8	62.2	27.4	14.9	52.0	32.4	32.4	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	63.5	45.8	45.8	68.6	52.8	52.8	62.2	27.4	14.9	52.0	32.4	32.4	
LOS by Move:	E	D	D	E	D	D	E	С	В	D	С	С	
	7		14	2	11	11	7		1	2	18	18	
Note: Queue	repor	ted is	the n	umber	of ca	rs per	lane	•					

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



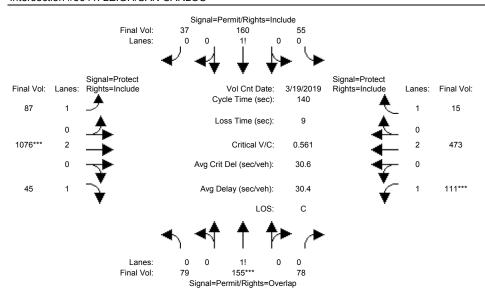
Approach: Movement:	L ·	- T ·	- R	L -	- T	und - R	L ·	- Т	- R	L -	- T	- R
Min. Green: Y+R:	10 4.0	10 4.0	10 4.0	10 4.0	10 4.0	10 4.0	7 4.0	10 4.0	10 4.0	7 4.0	10 4.0	10 4.0
Volume Module												
Base Vol:	83	5	22	56	18	11	40	443	11	47	1121	13
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	83	5	22	56	18	11	40	443	11	47	1121	13
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	0	0	0	0	0	0	0	1	0	0	3	0
Initial Fut:	83	5	22	56	18	11	40	444	11	47	1124	13
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:		5	22	56	18	11	40	444	11	47	1124	13
	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	83	5	22	56	18	11	40	444	11	47	1124	13
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:	83	5	22	56	18	11	40	444	11	47	1124	13
Saturation F												
Sat/Lane:		1900	1900		1900	1900		1900	1900		1900	1900
Adjustment:			0.92		0.92	0.92		0.97	0.95		0.97	0.95
Lanes:	0.75		0.20		0.21	0.13		1.95	0.05		1.98	0.02
Final Sat.:	1320	80	350		371	226			89		3658	42
Capacity Anal Vol/Sat:	_			0.05	0 0 5	0 0 5	0 00	0.12	0.12	0 02	0.31	0.31
	****	0.06	0.00	0.05	****	0.05	****	0.12	0.12	0.03	****	0.31
CIIC MOVES.		18.2	18.2	14 0	14.0	14.0	7.0	60 1	68.1	27 7	88.8	88.8
Volume/Cap:			0.48		0.48	0.48		0.25	0.25		0.48	0.48
Delay/Veh:	58.2		58.2		61.7	61.7		21.1	21.1		13.7	13.7
User DelAdi:			1.00		1.00	1.00		1.00	1.00		1.00	1.00
AdiDel/Veh:			58.2		61.7	61.7		21.1	21.1		13.7	13.7
LOS by Move:		50.2 E	50.2 E	O1.7	E	O1.7 E	E	C C	C	70.5	13.7	13.7
HCM2kAvqQ:	5	_	5	4	4	4	2	-	6	2	_	13
Note: Queue				_			_	-	J	_		-5
~	. I					. 1						

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



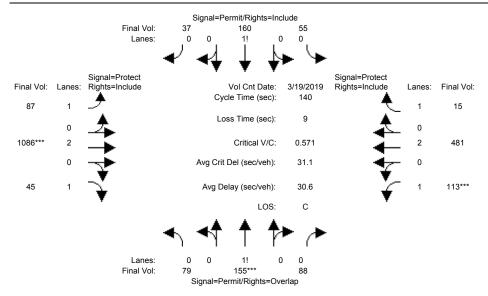
Approach:				Soi	ıth Bo	und	East Bound					
Movement:		- T ·				- R					- T	
				•						•		
Min. Green:		10		10				10			10	10
Y+R:	4.0		4.0		4.0	4.0		4.0			4.0	4.0
Volume Module												
Base Vol:	e: // 83	5	22	19 Ma	ar 201 18	11	40	443	11	17	1121	13
Growth Adj:		-	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Initial Bse:		5	22	56	18	11	40	443	11		1121	13
Added Vol:	0	0	0	2	0	0	0	10	0	7	15	0
ATI:	0	-	0	0	0	0	0	1	0	0	3	0
Initial Fut:		5	22	58	18	11	40	454	11		1139	13
User Adj:			1.00	1.00		1.00		1.00	1.00		1.00	1.00
PHF Adi:	1.00		1.00	1.00		1.00		1.00	1.00		1.00	1.00
_	83	5	22	58	18	11	40	454	11		1139	13
	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:			22	58	18	11	40	454	11	54	1139	13
		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:	83	5	22	58	18	11	40	454	11	54	1139	13
Saturation F												
Sat/Lane:		1900		1900		1900		1900	1900	1900	1900	1900
Adjustment:		0.92		0.92		0.92	0.92	0.97	0.95	0.92	0.97	0.95
Lanes:	0.75		0.20		0.21	0.12		1.95	0.05		1.98	0.02
Final Sat.:	1320		350		362	221			88		3658	42
Capacity Anal	-			0 05	0 0 5	0 0 5	0 00	0 10	0 10	0 00	0 01	0 01
Vol/Sat:	U.U6 ****		0.06	U.U5 ****	0.05	0.05	U.UZ ****	0.13	0.13	0.03	0.31	0.31
Crit Moves:		17 0	17 0		1.4.0	140		60 6	60.6	07.0		00 0
Green Time:		17.9	17.9		14.2		7.0		68.6		88.9	88.9
Volume/Cap:			0.49		0.49	0.49		0.26	0.26		0.49	0.49
Delay/Veh: User DelAdj:			58.5		61.6	61.6		20.9	20.9		13.7	13.7
AdiDel/Veh:			1.00 58.5	1.00		1.00 61.6		1.00	1.00		1.00 13.7	1.00 13.7
LOS by Move:			58.5 E	01.0 E	01.0 E	01.0	00.4 E		20.9 C	47.0 D		13.7 B
HCM2kAvqQ:		<u>E</u> 5	<u>н</u> 5	<u>E</u>	£ 4	<u> </u>	£ 2			Д 2		13
Note: Queue				_	_	=	_	-	O	۷	13	13
Note. Queue .	rehor	rea is	CHE II	unibel	OT Ca	ra her	тапе	•				

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



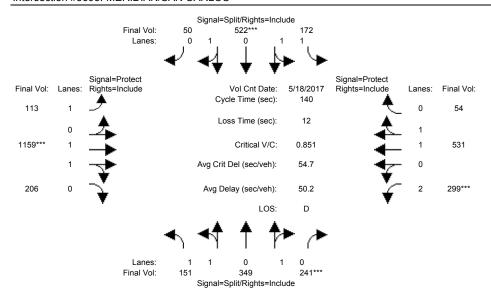
Approach:	No	rth Bo	und	Soi	ıth Bo	ound	East Bound					
Movement:												
Min. Green:		10								7		
Y+R:						4.0			4.0		4.0	4.0
Volume Module												
Base Vol:		155	78	52			87		45	111		15
Growth Adj:			1.00	1.00		1.00		1.00	1.00		1.00	1.00
Initial Bse:		155	78	52	152	36		1073	45	111	469	15
Added Vol:	0	0		0	0	0	0	0	0	0	0	0
ATI:	0		0	3	8	1	0	3	0	0	4	0
Initial Fut:	79	155	78	55	160	37	87		45	111	473	15
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
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:		155	78	55	160	37	87	1076	45	111	473	15
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	79	155	78	55	160	37	87	1076	45	111	473	15
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:	79	155	78	55	160	37	87	1076	45	111	473	15
Saturation F	low Mo	odule:										
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	0.25	0.50	0.25	0.22	0.63	0.15	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	443	869	438	382	1111	257	1750	3800	1750	1750	3800	1750
Capacity Ana	lysis	Modul	e:									
Vol/Sat:			0.18	0.14	0.14	0.14	0.05	0.28	0.03	0.06	0.12	0.01
Crit Moves:		****						****		****		
Green Time:	44.5	44.5	60.3	44.5	44.5	44.5	24.8	70.7	70.7	15.8	61.7	61.7
Volume/Cap:	0.56	0.56	0.41	0.45	0.45	0.45	0.28	0.56	0.05	0.56	0.28	0.02
Delay/Veh:	40.9	40.9	28.0	38.6	38.6	38.6	50.4	24.3	17.6	62.4	25.1	22.1
User DelAdj:			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdiDel/Veh:				38.6	38.6	38.6	50.4	24.3	17.6	62.4	25.1	22.1
LOS by Move:			С	D	D		D		В	E		С
_	12		10	9	9	9	4	16	1	6	6	0
Note: Queue :				umber			lane					
~	-	_				-	_					

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



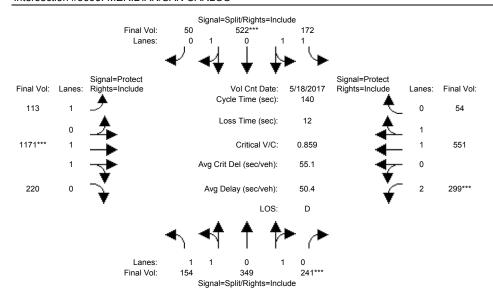
Approach: Movement:	L ·	- T ·	- R	L -	- T	- R	L ·	- Т	- R	West B	- R
Min. Green: Y+R:	10	10 4.0	10	10 4.0	10 4.0	10	7 4.0	10 4.0	10 4.0	7 10 4.0 4.0	10 4.0
Volume Module											
Base Vol:	79	155	78	52	152	36	87	1073	45	111 469	15
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00 1.00	1.00
Initial Bse:	79	155	78	52	152	36	87	1073	45	111 469	15
Added Vol:	0	0	10	0	0	0	0	10	0	2 8	0
ATI:	0	0	0	3	8	1	0	3	0	0 4	0
Initial Fut:	79	155	88	55	160	37	87	1086	45	113 481	15
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00 1.00	1.00
PHF Adj:	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00 1.00	1.00
PHF Volume:	79	155	88	55	160	37	87	1086	45	113 481	15
Reduct Vol:	0	0	0	0	0	0	0	0	0	0 0	0
Reduced Vol:	79	155	88	55	160	37	87	1086	45	113 481	15
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:	79	155	88	55	160	37	87	1086	45	113 481	15
	1										
Saturation F											
Sat/Lane:		1900	1900		1900	1900		1900	1900	1900 1900	
Adjustment:			0.92		0.92	0.92		1.00	0.92	0.92 1.00	
Lanes:		0.48	0.27		0.63	0.15		2.00	1.00	1.00 2.00	
Final Sat.:			478		1111			3800	1750	1750 3800	
Capacity Anal	_			0 1 4	0 1 4	0 1 4	0 0 5	0 00	0 00	0 06 0 10	0 01
			0.18	0.14	0.14	0.14	0.05	0.29	0.03	0.06 0.13	0.01
Crit Moves:		****	60.0	4 = 4	45 4	4 = 4	04.0		E0 1		61 6
Green Time:			60.9		45.1	45.1		70.1	70.1	15.8 61.6	
Volume/Cap:			0.42		0.45	0.45		0.57	0.05	0.57 0.29	
Delay/Veh:			27.7		38.1	38.1		24.9	18.0	62.8 25.2	22.2
User DelAdj:			1.00		1.00	1.00		1.00	1.00	1.00 1.00	
AdjDel/Veh:			27.7		38.1	38.1		24.9	18.0	62.8 25.2	22.2
LOS by Move:		D 13	C 10	D 9	D 9	D 9	D 4	C 16	В	E C 6 6	C 0
HCM2kAvgQ:							_		1	0 6	0
Note: Queue	repor	tea is	ine n	umper	or ca	rs per	ıane	•			

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



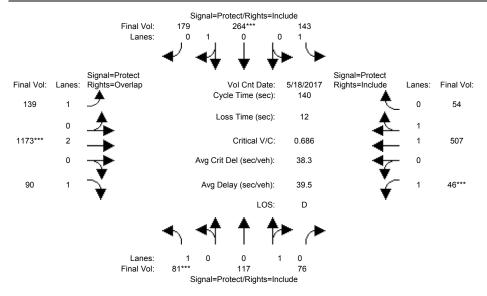
Approach:				Soi	ıth Bo	ound East Bound			und				
Movement:	L ·	- T ·	- R	L -	- T	- R	L -	- T	- R	L -	- T	- R	
										•			
Min. Green:		10		10				10		7		10	
Y+R:	4.0		4.0		4.0	4.0		4.0			4.0	4.0	
Volume Modul									1.50	0.5.6	404	2.0	
Base Vol:	125	280	183	159		29	77		152	256	434	39	
Growth Adj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Initial Bse:		280	183	159	456	29	77	948	152	256	434	39	
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
ATI:	26	69	58	13	66	21	36	211	54	43	97	15	
Initial Fut:		349	241	172	522	50		1159	206	299	531	54	
User Adj:			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	
PHF Volume:		349	241	172	522	50		1159	206	299	531	54	
	0		0	0	0	0	0	0	0	0	-	0	
Reduced Vol:			241	172	522	50		1159	206	299		54	
PCE Adj:	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	
FinalVolume:			241		522	50		1159	206		531	54	
Saturation F.						4000				4000			
Sat/Lane:		1900	1900		1900	1900		1900	1900		1900	1900	
Adjustment:				0.92		0.95		0.98	0.95		0.98	0.95	
Lanes:		1.16	0.84		1.82	0.18			0.31		1.81	0.19	
Final Sat.:			1511			323			558		3358	342	
Capacity Ana.	-			0 10	0 1 5	0 1 5	0 00	0 27	0 27	0 00	0 10	0 10	
Vol/Sat:		0.16	0.16	0.10	0.15	0.15	0.06	0.37	0.37	****	0.16	0.16	
Crit Moves:		0.6.0				0.5.4	00 1		60 =		E 4 0	F 4 0	
Green Time:			26.2		25.4			60.7	60.7		54.2	54.2	
Volume/Cap:			0.85	0.54		0.85		0.85	0.85		0.41	0.41	
Delay/Veh:			63.0	52.4		63.4		40.2	40.2		31.4	31.4	
User DelAdj:			1.00	1.00		1.00		1.00	1.00		1.00	1.00	
AdjDel/Veh:			63.0	52.4		63.4		40.2	40.2		31.4	31.4	
LOS by Move:			E	D	E	E	D		D	E		C	
	6		15	8	15	15	5		29	8	9	9	
Note: Queue	repor	ted is	the n	umber	of ca	rs per	lane	•					

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



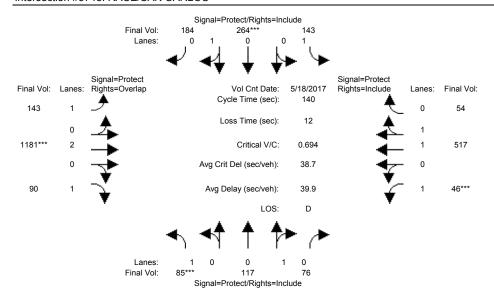
Movement: L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R Min. Green: 10 10 10 10 10 10 7 10 10 7 10 10 10 10 10 10 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.
Min. Green: 10 10 10 10 10 10 7 10 10 7 10 10 Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Volume Module: >> Count Date: 18 May 2017 << 5:15-6:15 Base Vol: 125 280 183 159 456 29 77 948 152 256 434 39
Base Vol: 125 280 183 159 456 29 77 948 152 256 434 39
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
Initial Bse: 125 280 183 159 456 29 77 948 152 256 434 39
Added Vol: 3 0 0 0 0 0 12 14 0 20 0
ATI: 26 69 58 13 66 21 36 211 54 43 97 15
Initial Fut: 154 349 241 172 522 50 113 1171 220 299 551 54
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
Finalvolume: 154 349 241 1/2 522 50 113 11/1 220 299 551 54
Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 190
Adjustment: 0.92 0.99 0.95 0.92 0.98 0.95 0.92 0.98 0.95 0.95 0.83 0.98 0.95
Lanes: 1.00 1.16 0.84 1.00 1.82 0.18 1.00 1.67 0.33 2.00 1.82 0.18
Final Sat.: 1750 2188 1511 1750 3376 323 1750 3114 585 3150 3370 330
Capacity Analysis Module:
Vol/Sat: 0.09 0.16 0.16 0.10 0.15 0.06 0.38 0.38 0.09 0.16 0.16
Crit Moves: **** **** **** ****
Green Time: 26.0 26.0 26.0 25.2 25.2 25.2 21.7 61.3 61.3 15.5 55.0 55.0
Volume/Cap: 0.47 0.86 0.86 0.55 0.86 0.86 0.42 0.86 0.86 0.86 0.42 0.42
Delay/Veh: 51.1 63.8 63.8 52.7 64.3 64.3 54.4 40.3 40.3 80.0 31.0 31.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
AdjDel/Veh: 51.1 63.8 63.8 52.7 64.3 64.3 54.4 40.3 40.3 80.0 31.0 31.0
LOS by Move: D E E D E E D D E C C
HCM2kAvgQ: 7 15 15 8 15 15 5 30 30 8 9 9
Note: Queue reported is the number of cars per lane.

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



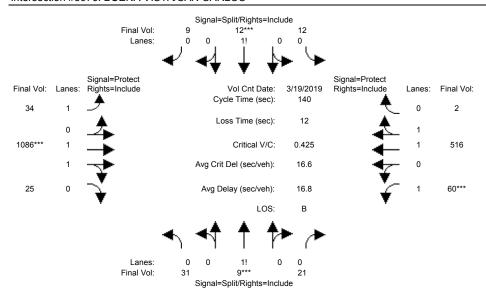
Approach:				Soi	ıth Bo	und	East Bound					
Movement:											- T	
Min. Green:		10		7				10		7		10
Y+R:	4.0				4.0			4.0			4.0	4.0
Volume Module									0.0	4.5	4.5.0	
Base Vol:	72		75		253	185		1045	88	45	453	55
Growth Adj:			1.00		1.00	1.00		1.00	1.00	1.00		1.00
Initial Bse:		118	75	138	253	185		1045	88	45	453	55
Added Vol:	0		0	0	0	0	0	0	0	0	0	0
ATI:	9		1	5	11	-6	-9		2	1	54	-1
Initial Fut:			76	143	264	179		1173	90	46	507	54
User Adj:			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
	81	117	76	143	264	179		1173	90	46	507	54
	0		0	0	0	0	0	0	0	0	0	0
Reduced Vol:			76	143	264	179		1173	90	46	507	54
PCE Adj:			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
FinalVolume:			76		264	179		1173	90	46		54
Saturation F												
Sat/Lane:		1900			1900	1900		1900	1900		1900	1900
Adjustment:				0.92		0.95		1.00	0.92		0.98	0.95
Lanes:		0.61	0.39			0.40		2.00	1.00		1.80	0.20
Final Sat.:					1073			3800	1750		3344	356
Capacity Anal	-			0 00	0 0 5	0 0 5	0 00	0 01	0 0 5	0 00	0 1 5	0 1 5
Vol/Sat:				0.08	0.25	0.25	0.08	0.31	0.05	0.03	0.15	0.15
Crit Moves:	****											
				25.5		49.5		62.1	71.5	7.0		45.4
Volume/Cap:			0.45	0.45		0.70		0.70	0.10	0.53		0.47
Delay/Veh:			46.2	52.0		42.1		32.6	17.7	70.7		38.0
User DelAdj:			1.00	1.00		1.00		1.00	1.00		1.00	1.00
AdjDel/Veh:				52.0		42.1		32.6	17.7		38.0	38.0
LOS by Move:			D	D	D	D	D		В	E	D	D
		8	8	6	18	18	5		2	3	10	10
Note: Queue	repor	ted is	the n	umber	of ca	rs per	lane					

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



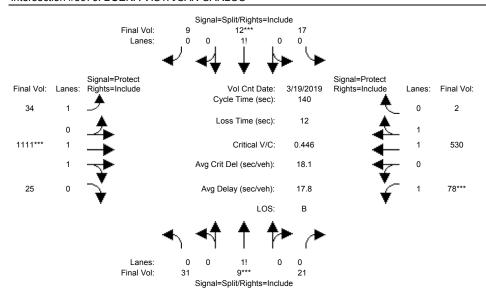
Approach:				Soi	ıth Bo	Bound East Bound							
Movement:											- T		
										-			
Min. Green:		10			10			10		7		10	
Y+R:					4.0			4.0			4.0	4.0	
Volume Module	e: >> 72		Date: 75		ay 201 253	185			0.0	4 -	450		
Base Vol:	. –		1.00		1.00	1.00		1045	88	45	453	55 1.00	
Growth Adj:			75	138	253	185		1.00 1045	1.00	45	1.00 453	55	
Initial Bse:	4	118 0	0	138	253	185	148	1045	0	45	10	0	
		-1	1	5	11	-6	-9	128	2	1	54	-1	
ATI: Initial Fut:			76	143		184		1181	90	46	517	-ı 54	
			1.00		1.00	1.00		1.00	1.00		1.00	1.00	
User Adj: PHF Adj:	1.00		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
_	85	117	76	143	264	184		1181	90	46	517	54	
	0		0	143	204	104	143	1101	0	0		0	
Reduced Vol:			76	143	264	184		1181	90	46	517	54	
	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	
FinalVolume:			76		264	184		1181	90	46	517	54	
Saturation F			'	1		,	1		1	1		'	
Sat/Lane:		1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:				0.92		0.95		1.00	0.92		0.98	0.95	
Lanes:			0.39			0.41		2.00	1.00		1.81	0.19	
Final Sat.:					1061			3800	1750		3350	350	
Capacity Anal	lysis	Modul	e:										
Vol/Sat:	0.05	0.11	0.11	0.08	0.25	0.25	0.08	0.31	0.05	0.03	0.15	0.15	
Crit Moves:	****				****			****		****			
Green Time:	9.7	33.6	33.6	25.6	49.5	49.5	23.8	61.8	71.5	7.0	45.0	45.0	
Volume/Cap:	0.70	0.45	0.45	0.45	0.70	0.70	0.48	0.70	0.10	0.53	0.48	0.48	
Delay/Veh:			46.0	51.9	42.5	42.5	53.7	33.0	17.7	70.7	38.4	38.4	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	80.9	46.0	46.0	51.9	42.5	42.5	53.7	33.0	17.7	70.7	38.4	38.4	
LOS by Move:			D	D	D	D	D		В	E	D	D	
HCM2kAvgQ:		8	8	6	18	18	6		2	3	10	10	
Note: Queue	repor	ted is	the n	umber	of ca	rs per	lane	•					

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



Approach:	No	rth Bo	und	Soi	ath Bo	und	Εá	ast Bo	und	West Bound			
Movement:													
Min. Green:		10		10					10		10		
Y+R:	4.0					4.0			4.0			4.0	
Volume Module							2.4	1000	0.5		E 1 0	0	
Base Vol:	31	9	21	12	12		34		25	60	512	2	
Growth Adj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Initial Bse:		9	21	12	12	9		1083	25	60	512	2	
Added Vol:	0		0	0	0	0	0	0	0	0	0	0	
ATI:	0		0	0	0	0	0	3	0	0		0	
Initial Fut:		9	21	12	12	9		1086	25	60	516	2	
User Adj:			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	
PHF Volume:		9	21	12	12	9		1086	25	60	516	2	
Reduct Vol:			0	0	0	0	0	0	0	0	0	0	
Reduced Vol:		9	21	12	12	_		1086	25	60	516	2	
PCE Adj:			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	
FinalVolume:			21	12	12	9		1086	25	60	516	2	
	1												
Saturation F				4000								4000	
		1900				1900		1900	1900		1900	1900	
_				0.92		0.92		0.97	0.95		0.97		
		0.15		0.37		0.27		1.95	0.05		1.99		
Final Sat.:				636		477			83		3686	14	
Capacity Ana	-			0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 1 4	0 14	
Vol/Sat:			0.03	0.02	U.U∠ ****	0.02	0.02	0.30	0.30	****	0.14	0.14	
		****	11 1	100		100	00 1		0.5.0		70 7	70 7	
				10.0		10.0		95.9	95.9		78.7	78.7	
Volume/Cap:				0.26		0.26		0.44	0.44		0.25	0.25	
Delay/Veh:				62.6		62.6	45.7		10.0		15.6	15.6	
User DelAdj:			1.00	1.00		1.00		1.00	1.00		1.00	1.00	
AdjDel/Veh:			63.7			62.6		10.0	10.0		15.6	15.6	
LOS by Move:			E	E		E	D	В	В	E		В	
HCM2kAvgQ:		3	3	2	_	2	_ 1		11	3	6	6	
Note: Queue	repor	ted is	the n	umber	of ca	ars per	lane	•					

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



Approach:	No	rth Bo	und	Soi	ath Bo	und	Εá	ast Bo	und	West Bound			
Movement:													
										-			
Min. Green:		10		10				10			10		
Y+R:	4.0					4.0			4.0		4.0	4.0	
Volume Module							2.4	1000	٥٦	60	F10	0	
Base Vol:	31	9	21	12	12		34		25	60	512	2	
Growth Adj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Initial Bse:		9	21	12	12	9		1083	25	60	512	2	
Added Vol:	0		0	5	0	0	0	25	0	18	14	0	
ATI:	0		0	0	0	0	0	3	0	0		0	
Initial Fut:		9	21	17	12	9		1111	25	78	530	2	
User Adj:				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	
PHF Volume:		9	21	17	12	9		1111	25	78	530	2	
Reduct Vol:			0	0	0	0	0	0	0	0		0	
Reduced Vol:		9	21	17	12	9		1111	25	78		2	
PCE Adj:			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	
FinalVolume:			21	17	12	9		1111	25	78		2	
	1												
Saturation F				4000									
		1900				1900		1900	1900		1900	1900	
Adjustment:				0.92		0.92		0.97	0.95		0.97	0.95	
		0.15		0.45				1.95	0.05		1.99	0.01	
Final Sat.:				783		414			81		3686	14	
Capacity Ana	-			0 00	0 00	0 00	0 00	0 01	0 01	0 04	0 1 4	0 1 4	
Vol/Sat:			0.03	0.02	U.U∠ ****	0.02	0.02	0.31	0.31	****	0.14	0.14	
		****	10.6	100		100	0		00 5				
Green Time:				10.0		10.0		93.7	93.7		79.7	79.7	
Volume/Cap:				0.30		0.30		0.46	0.46		0.25	0.25	
Delay/Veh:				63.1		63.1		11.2	11.2		15.3	15.3	
User DelAdj:				1.00		1.00		1.00	1.00		1.00	1.00	
AdjDel/Veh:			64.4			63.1		11.2	11.2		15.3	15.3	
LOS by Move:				E		E	D		В	E		В	
		3	3	2	_	2	1		12	4	6	6	
Note: Queue	repor	ted is	the n	umber	of ca	ars per	lane	•					

Appendix F Queue Length Calculations

Buena Vista/San Carlos Buena Vista/San Carlos Buena Vista/San Carlos WBL WBL WBL AM AM AM Existing Conditions
Avg. Queue Per Lane in Veh=
Percentile = 0.95 Background Conditions
Avg. Queue Per Lane in Veh=
Percentile = 0.95 Background Plus Project Conditions Avg. Queue Per Lane in Veh= Percentile = 0.95 2.1 5 1.8 1.8 0.95 0.95

Percentile =	0.95	4	Percentile =	0.95	4	Percentile :	= 0.9	5 5
		Number of			Number of			Number of
Individual	Cumulative	Queued	Individual	Cumulative	Queued	Individ	ual Cumulative	Queued
Probability	Probability	Vehicles	Probability	Probability	Vehicles	Probab	oility Probability	Vehicles
0.1608	0.1608	0	0.1608	0.1608	0	0.122	25 0.1225	0
0.2939	0.4546	1	0.2939	0.4546	1	0.257	72 0.3796	1
0.2685	0.7232	2	0.2685	0.7232	2	0.270	0.6496	2
0.1636	0.8868	3	0.1636	0.8868	3	0.189	0.8386	3
0.0748	0.9616	4	0.0748	0.9616	4	0.099	92 0.9379	4
0.0273	0.9889	5	0.0273	0.9889	5	0.041	17 0.9796	5
0.0083	0.9972	6	0.0083	0.9972	6	0.014	46 0.9941	6
0.0022	0.9994	7	0.0022	0.9994	7	0.004	14 0.9985	7
0.0005	0.9999	8	0.0005	0.9999	8	0.00		8
0.0001	1.0000	9	0.0001	1.0000	9	0.000		9
0.0000	1.0000	10	0.0000	1.0000	10	0.000		10
0.0000	1.0000	11	0.0000	1.0000	11	0.000		11
0.0000	1.0000	12	0.0000	1.0000	12	0.000		12
0.0000	1.0000	13	0.0000	1.0000	13	0.000		13
0.0000	1.0000	14	0.0000	1.0000	14	0.000		14
0.0000	1.0000	15	0.0000	1.0000	15	0.000		15
0.0000	1.0000	16	0.0000	1.0000	16	0.000		16
0.0000	1.0000	17	0.0000	1.0000	17	0.000		17
0.0000	1.0000	18	0.0000	1.0000	18	0.000		18
0.0000	1.0000	19	0.0000	1.0000	19	0.000		19
0.0000	1.0000	20	0.0000	1.0000	20	0.000		20
0.0000	1.0000	21	0.0000	1.0000	21	0.000		21
0.0000	1.0000	22	0.0000	1.0000	22	0.000		22
0.0000	1.0000	23	0.0000	1.0000	23	0.000		23
0.0000	1.0000	24	0.0000	1.0000	24	0.000		24
0.0000	1.0000	25	0.0000	1.0000	25	0.000		25
0.0000	1.0000	26 27	0.0000	1.0000	26 27	0.000		26 27
0.0000 0.0000	1.0000	28	0.0000 0.0000	1.0000 1.0000	28	0.000		28
0.0000	1.0000 1.0000	28 29	0.0000	1.0000	28 29	0.000		28 29
0.0000	1.0000	30	0.0000	1.0000	30	0.000		30
0.0000	1.0000	31	0.0000	1.0000	31	0.000		31
0.0000	1.0000	32	0.0000	1.0000	32	0.000		32
0.0000	1.0000	33	0.0000	1.0000	33	0.000		33
0.0000	1.0000	34	0.0000	1.0000	34	0.000		34
0.0000	1.0000	35	0.0000	1.0000	35	0.000		35
0.0000	1.0000	36	0.0000	1.0000	36	0.000		36
0.0000	1.0000	37	0.0000	1.0000	37	0.000		37
0.0000	1.0000	38	0.0000	1.0000	38	0.000		38
0.0000	1.0000	39	0.0000	1.0000	39	0.000		39
0.0000	1.0000	40	0.0000	1.0000	40	0.000		40
0.0000	1.0000	41	0.0000	1.0000	41	0.000		41
0.0000	1.0000	42	0.0000	1.0000	42	0.000		42
0.0000	1.0000	43	0.0000	1.0000	43	0.000		43
0.0000	1.0000	44	0.0000	1.0000	44	0.000		44
0.0000	1.0000	45	0.0000	1.0000	45	0.000		45

Buena Vista/San Carlos Buena Vista/San Carlos Buena Vista/San Carlos WBL WBL WBL PM PM PM Existing Conditions
Avg. Queue Per Lane in Veh=
Percentile = 0.95 Background Conditions
Avg. Queue Per Lane in Veh=
Percentile = 0.95 Background Plus Project Conditions
Avg. Queue Per Lane in Veh=
Percentile = 0.95 3.0 6 2.3 2.3 0.95 5 0.95 5

Percentile =	0.95	5	Percenule =	0.95	5	Percentile =	0.95	0
		Number of			Number of			Number of
Individual	Cumulative	Queued	Individual	Cumulative	Queued	Individual	Cumulative	Queued
Probability	Probability	Vehicles	Probability	Probability	Vehicles	Probability	Probability	Vehicles
0.0970	0.0970	0	0.0970	0.0970	0	0.0482	0.0482	0
0.2263	0.3232	1	0.2263	0.3232	1	0.1461	0.1942	1
0.2640	0.5872	2	0.2640	0.5872	2	0.2215	0.4158	2
0.2053	0.7925	3	0.2053	0.7925	3	0.2240	0.6398	3
0.1198	0.9123	4	0.1198	0.9123	4	0.1699	0.8096	4
0.0559	0.9682	5	0.0559	0.9682	5	0.1031	0.9127	5
0.0217	0.9899	6	0.0217	0.9899	6	0.0521	0.9648	6
0.0072	0.9972	7	0.0072	0.9972	7	0.0226	0.9874	7
0.0021	0.9993	8	0.0021	0.9993	8	0.0086	0.9959	8
0.0005	0.9998	9	0.0005	0.9998	9	0.0029	0.9988	9
0.0001	1.0000	10	0.0001	1.0000	10	0.0009	0.9997	10
0.0000	1.0000	11	0.0000	1.0000	11	0.0002	0.9999	11
0.0000	1.0000	12	0.0000	1.0000	12	0.0001	1.0000	12
0.0000	1.0000	13	0.0000	1.0000	13	0.0000	1.0000	13
0.0000	1.0000	14	0.0000	1.0000	14	0.0000	1.0000	14
0.0000	1.0000	15	0.0000	1.0000	15	0.0000	1.0000	15
0.0000	1.0000	16	0.0000	1.0000	16	0.0000	1.0000	16
0.0000	1.0000	17	0.0000	1.0000	17	0.0000	1.0000	17
0.0000	1.0000	18	0.0000	1.0000	18	0.0000	1.0000	18
0.0000	1.0000	19	0.0000	1.0000	19	0.0000	1.0000	19
0.0000	1.0000	20	0.0000	1.0000	20	0.0000	1.0000	20
0.0000	1.0000	21	0.0000	1.0000	21	0.0000	1.0000	21
0.0000	1.0000	22	0.0000	1.0000	22	0.0000	1.0000	22
0.0000	1.0000	23	0.0000	1.0000	23	0.0000	1.0000	23
0.0000	1.0000	24	0.0000	1.0000	24	0.0000	1.0000	24
0.0000	1.0000	25	0.0000	1.0000	25	0.0000	1.0000	25
0.0000	1.0000	26	0.0000	1.0000	26	0.0000	1.0000	26
0.0000	1.0000	27	0.0000	1.0000	27	0.0000	1.0000	27
0.0000	1.0000	28	0.0000	1.0000	28	0.0000	1.0000	28
0.0000	1.0000	29	0.0000	1.0000	29	0.0000	1.0000	29
0.0000	1.0000	30	0.0000	1.0000	30	0.0000	1.0000	30
0.0000	1.0000	31	0.0000	1.0000	31	0.0000	1.0000	31
0.0000	1.0000	32	0.0000	1.0000	32	0.0000	1.0000	32
0.0000	1.0000	33	0.0000	1.0000	33	0.0000	1.0000	33
0.0000	1.0000	34	0.0000	1.0000	34	0.0000	1.0000	34
0.0000	1.0000	35	0.0000	1.0000	35	0.0000	1.0000	35
0.0000	1.0000	36	0.0000	1.0000	36	0.0000	1.0000	36
0.0000	1.0000	37	0.0000	1.0000	37	0.0000	1.0000	37
0.0000	1.0000	38	0.0000	1.0000	38	0.0000	1.0000	38
0.0000	1.0000	39	0.0000	1.0000	39	0.0000	1.0000	39
0.0000	1.0000	40	0.0000	1.0000	40	0.0000	1.0000	40
0.0000	1.0000	41	0.0000	1.0000	41	0.0000	1.0000	41
0.0000	1.0000	42	0.0000	1.0000	42	0.0000	1.0000	42
0.0000	1.0000	43	0.0000	1.0000	43	0.0000	1.0000	43
0.0000	1.0000	44	0.0000	1.0000	44	0.0000	1.0000	44
0.0000	1.0000	45	0.0000	1.0000	45	0.0000	1.0000	45

Muller/San Carlos			Muller/San Carlos		Muller/San Carlos			
EBL			EBL			EBL		
AM			AM		AM			
Existing Conditions			Background Condition	ons	Background Plus Project Conditions			
Avg. Queue Per Lane in Veh= 0.2			Avg. Queue Per Lane in Veh= 0.2			Avg. Queue Per Lane in Veh=		
Percentile =	0.95	1	Percentile =	0.95	1	Percentile =	0.95	1

		Number of			Number of			Number of
Individual	Cumulative	Queued	Individual	Cumulative	Queued	Individual	Cumulative	Queued
Probability	Probability	Vehicles	Probability	Probability	Vehicles	Probability	Probability	Vehicles
0.8455	0.8455	0	0.8222	0.8222	0	0.7735	0.7735	0
0.1419	0.9874	1	0.1610	0.9832	1	0.1987	0.9721	1
0.0119	0.9993	2	0.0158	0.9989	2	0.0255	0.9977	2
0.0007	1.0000	3	0.0010	0.9999	3	0.0022	0.9999	3
0.0000	1.0000	4	0.0001	1.0000	4	0.0001	1.0000	4
0.0000	1.0000	5	0.0000	1.0000	5	0.0000	1.0000	5
0.0000	1.0000	6	0.0000	1.0000	5 6	0.0000	1.0000	6
0.0000	1.0000	7	0.0000	1.0000	7	0.0000	1.0000	7
0.0000	1.0000	8	0.0000	1.0000	8	0.0000	1.0000	8
0.0000	1.0000	9	0.0000	1.0000	9	0.0000	1.0000	9
0.0000	1.0000	10	0.0000	1.0000	10	0.0000	1.0000	10
0.0000	1.0000	11	0.0000	1.0000	11	0.0000	1.0000	11
0.0000	1.0000	12	0.0000	1.0000	12	0.0000	1.0000	12
0.0000	1.0000	13	0.0000	1.0000	13	0.0000	1.0000	13
0.0000	1.0000	14	0.0000	1.0000	14	0.0000	1.0000	14
0.0000	1.0000	15	0.0000	1.0000	15	0.0000	1.0000	15
0.0000	1.0000	16	0.0000	1.0000	16	0.0000	1.0000	16
0.0000	1.0000	17	0.0000	1.0000	17	0.0000	1.0000	17
0.0000	1.0000	18	0.0000	1.0000	18	0.0000	1.0000	18
0.0000	1.0000	19	0.0000	1.0000	19	0.0000	1.0000	19
0.0000	1.0000	20	0.0000	1.0000	20	0.0000	1.0000	20
0.0000	1.0000	21	0.0000	1.0000	21	0.0000	1.0000	21
0.0000	1.0000	22	0.0000	1.0000	22	0.0000	1.0000	22
0.0000	1.0000	23	0.0000	1.0000	23	0.0000	1.0000	23
0.0000	1.0000	24	0.0000	1.0000	24	0.0000	1.0000	24
0.0000	1.0000	25	0.0000	1.0000	25	0.0000	1.0000	25
0.0000	1.0000	26	0.0000	1.0000	26	0.0000	1.0000	26
0.0000	1.0000	27	0.0000	1.0000	27	0.0000	1.0000	27
0.0000	1.0000	28	0.0000	1.0000	28	0.0000	1.0000	28
0.0000	1.0000	29	0.0000	1.0000	29	0.0000	1.0000	29
0.0000	1.0000	30	0.0000	1.0000	30	0.0000	1.0000	30
0.0000	1.0000	31	0.0000	1.0000	31	0.0000	1.0000	31
0.0000	1.0000	32	0.0000	1.0000	32	0.0000	1.0000	32
0.0000	1.0000	33	0.0000	1.0000	33	0.0000	1.0000	33
0.0000	1.0000	34	0.0000	1.0000	34	0.0000	1.0000	34
0.0000	1.0000	35	0.0000	1.0000	35	0.0000	1.0000	35
0.0000	1.0000	36	0.0000	1.0000	36	0.0000	1.0000	36
0.0000	1.0000	37	0.0000	1.0000	37	0.0000	1.0000	37
0.0000	1.0000	38	0.0000	1.0000	38	0.0000	1.0000	38
0.0000	1.0000	39	0.0000	1.0000	39	0.0000	1.0000	39
0.0000	1.0000	40	0.0000	1.0000	40	0.0000	1.0000	40
0.0000	1.0000	41	0.0000	1.0000	41	0.0000	1.0000	41
0.0000	1.0000	42	0.0000	1.0000	42	0.0000	1.0000	42
0.0000	1.0000	43	0.0000	1.0000	43	0.0000	1.0000	43
0.0000	1.0000	44	0.0000	1.0000	44	0.0000	1.0000	44
0.0000	1.0000	45	0.0000	1.0000	45	0.0000	1.0000	45

Muller/San Carlos Muller/San Carlos Muller/San Carlos **EBL EBL EBL** PM PM PM Background Plus Project Conditions
Avg. Queue Per Lane in Veh=
Percentile = 0.95 Existing Conditions
Avg. Queue Per Lane in Veh=
Percentile = 0.95 Background Conditions
Avg. Queue Per Lane in Veh=
Percentile = 0.95 0.1 0.1 0.1 0.95 1 0.95 1 1

Percentile =	0.95	1	Percentile =	0.95	1	Percentile =	0.95	1
Individual Probability	Cumulative Probability	Number of Queued Vehicles	Individual Probability	Cumulative Probability	Number of Queued Vehicles	Individual Probability	Cumulative Probability	Number of Queued Vehicles
0.9211	0.9211	0	0.9168	0.9168	0	0.8822	0.8822	0
0.0757	0.9968	1	0.0797	0.9964	1	0.1106	0.9928	1
0.0031	0.9999	2	0.0035	0.9999	2	0.0069	0.9997	2
0.0001	1.0000	3	0.0001	1.0000	3	0.0003	1.0000	3
0.0000	1.0000	4	0.0000	1.0000	4	0.0000	1.0000	4
0.0000	1.0000	5	0.0000	1.0000	5	0.0000	1.0000	5
0.0000	1.0000	6	0.0000	1.0000	6	0.0000	1.0000	6
0.0000	1.0000	7	0.0000	1.0000	7	0.0000	1.0000	7
0.0000	1.0000	8	0.0000	1.0000	8	0.0000	1.0000	8
0.0000	1.0000	9	0.0000	1.0000	9	0.0000	1.0000	9
0.0000	1.0000	10	0.0000	1.0000	10	0.0000	1.0000	10
0.0000	1.0000	11	0.0000	1.0000	11	0.0000	1.0000	11
0.0000	1.0000	12	0.0000	1.0000	12	0.0000	1.0000	12
0.0000	1.0000	13	0.0000	1.0000	13	0.0000	1.0000	13
0.0000	1.0000	14	0.0000	1.0000	14	0.0000	1.0000	14
0.0000	1.0000	15	0.0000	1.0000	15	0.0000	1.0000	15
0.0000	1.0000	16	0.0000	1.0000	16	0.0000	1.0000	16
0.0000	1.0000	17	0.0000	1.0000	17	0.0000	1.0000	17
0.0000	1.0000	18	0.0000	1.0000	18	0.0000	1.0000	18
0.0000	1.0000	19	0.0000	1.0000	19	0.0000	1.0000	19
0.0000	1.0000	20	0.0000	1.0000	20	0.0000	1.0000	20
0.0000	1.0000	21	0.0000	1.0000	21	0.0000	1.0000	21
0.0000	1.0000	22	0.0000	1.0000	22	0.0000	1.0000	22
0.0000	1.0000	23	0.0000	1.0000	23	0.0000	1.0000	23
0.0000	1.0000	24	0.0000	1.0000	24	0.0000	1.0000	24
0.0000	1.0000	25	0.0000	1.0000	25	0.0000	1.0000	25
0.0000	1.0000	26	0.0000	1.0000	26	0.0000	1.0000	26
0.0000	1.0000	27	0.0000	1.0000	27	0.0000	1.0000	27
0.0000	1.0000	28	0.0000	1.0000	28	0.0000	1.0000	28
0.0000	1.0000	29	0.0000	1.0000	29	0.0000	1.0000	29
0.0000	1.0000	30	0.0000	1.0000	30	0.0000	1.0000	30
0.0000	1.0000	31	0.0000	1.0000	31	0.0000	1.0000	31
0.0000	1.0000	32	0.0000	1.0000	32	0.0000	1.0000	32
0.0000	1.0000	33	0.0000	1.0000	33	0.0000	1.0000	33
0.0000	1.0000	34	0.0000	1.0000	34	0.0000	1.0000	34
0.0000	1.0000	35	0.0000	1.0000	35	0.0000	1.0000	35
0.0000	1.0000	36	0.0000	1.0000	36	0.0000	1.0000	36
0.0000	1.0000	37	0.0000	1.0000	37	0.0000	1.0000	37
0.0000	1.0000	38	0.0000	1.0000	38	0.0000	1.0000	38
0.0000	1.0000	39	0.0000	1.0000	39	0.0000	1.0000	39
0.0000	1.0000	40	0.0000	1.0000	40	0.0000	1.0000	40
0.0000	1.0000	41	0.0000	1.0000	41	0.0000	1.0000	41
0.0000	1.0000	42	0.0000	1.0000	42	0.0000	1.0000	42
0.0000	1.0000	43	0.0000	1.0000	43	0.0000	1.0000	43
0.0000	1.0000	44	0.0000	1.0000	44	0.0000	1.0000	44
0.0000	1.0000	45	0.0000	1.0000	45	0.0000	1.0000	45