Appendix TRA

Transportation Analysis







2001 Fortune Drive Data Center

Transportation Analysis



Prepared for:

Rincon Consultants

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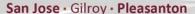
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Executive Summary

This report presents the results of the transportation analysis conducted for the expansion of a data center at 2001 Fortune Drive in San Jose, California. This study was conducted for the purpose of identifying the potential transportation impacts related to the project.

The site is currently occupied by two data center buildings (east and west buildings) and one admin/lobby building for a total of 146, 031 square feet (s.f.). As proposed, the development would demolish the east data center building and the admin/lobby building (67,587 s.f.) and construct a 239,725 square-foot data center building. The west data center building of 78,444 s.f. will remain. With the new data center building, the total building square footage would be 318,169 square feet on the site. The project site has four driveways, but employee site access would continue to be provided via one existing gated two-way driveway on Fortune Drive.

The potential impacts of the project were evaluated in accordance with the standards and methodologies set forth by the City of San Jose. Based on the City of San Jose's Transportation Analysis Policy (Policy 5-1) and the *Transportation Analysis Handbook 2018*, the transportation analysis report for the project includes a California Environmental Quality Act (CEQA) transportation analysis and a local transportation analysis (LTA). The CEQA transportation analysis comprises an evaluation of Vehicle Miles Traveled (VMT). The LTA includes an evaluation of weekday AM and PM peak-hour traffic conditions for signalized intersections. The LTA also includes an analysis of site access, on-site circulation, parking, and effects to transit, bicycle, and pedestrian facilities.

CEQA Transportation Analysis

The VMT generated by the project (14.95 VMT per employee) would exceed the threshold of 14.37 VMT per employee for industrial developments. Therefore, the project would result in a significant transportation impact on VMT. The following transportation demand management (TDM) mitigation measures are required to reduce the significant VMT impact.

- Provide commute trip reduction marketing and education for 100% of eligible employees. This would educate and encourage employees to use transit, shared rides, and active modes, therefore lowering the number of single occupancy vehicle trips.
- Provide a rideshare program for 100% of eligible employees. This would encourage employees to carpool with other employees and/or through ridematching services, which help employees find other commuters traveling in the same direction.

The project would be required to implement a TDM plan with these TDM measures to reduce the project VMT. The TDM measures should be offer to 100% of eligible employees of the existing and new data center buildings on the project site. The combination of the TDM mitigation measures would



reduce the project VMT to 14.36 per employee, which would make the project impact less than significant.

The project is consistent with the General Plan's long-range transportation goals and would result in a less-than-significant cumulative impact.

Local Transportation Analysis

Project Trip Generation

After applying the ITE trip rates to the proposed building and applying the appropriate trip adjustments and credits, the project would generate 158 new daily vehicle trips, with 18 new trips (10 inbound and 8 outbound) occurring during the AM peak hour and 15 new trips (6 inbound and 9 outbound) occurring during the PM peak hour.

Intersection Traffic Operations

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

Other Transportation Issues

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

Recommendations

- The project should widen its western and eastern driveways on Fortune Drive to 32 feet per the City of San Jose standards.
- The City's standard minimum width for two-way drive aisles is 26 feet where 90-degree parking
 is provided. The two-way drive aisles within the site with 90-degree parking are shown to vary
 from 25 to 26 feet wide. The project requires City approval for any reduction in the standard
 drive aisle width.
- The parking stalls should meet the City's off-street parking design standard for 90-degree uniform parking stalls (8.5 feet wide by 17 feet long) and compact parking stalls (8 feet wide by 16 feet long). Compact parking stalls should be marked accordingly.
- The project should ensure that all portions of the buildings are within 150 feet of the fire department access roads.



1.

Introduction

This report presents the results of the transportation analysis conducted for the expansion of a data center at 2001 Fortune Drive in San Jose, California (see Figure 1). This study was conducted for the purpose of identifying the potential transportation impacts related to the project.

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

Project Description

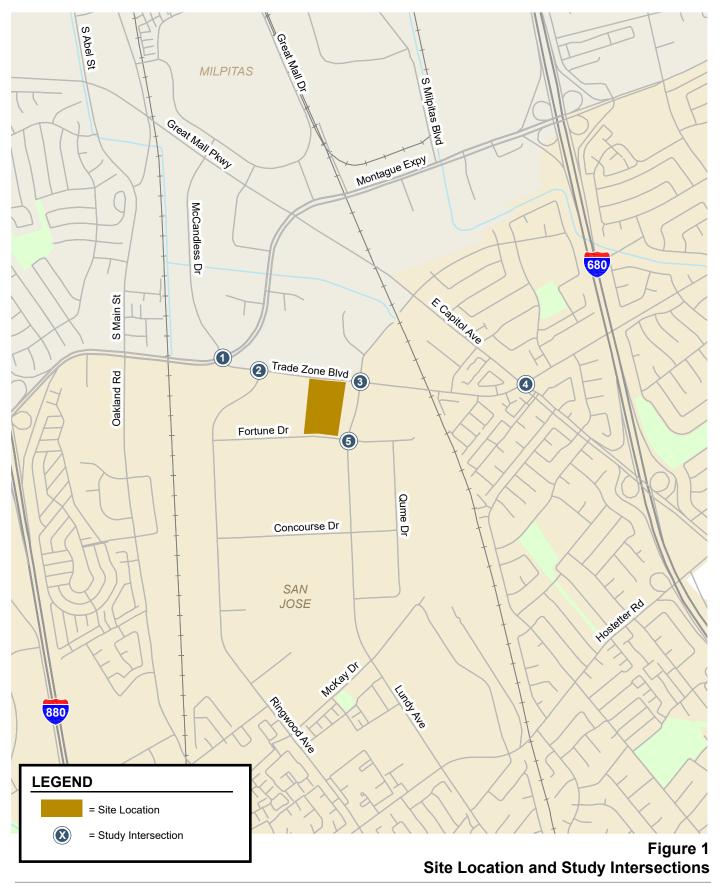
The site is currently occupied by two data center buildings (east and west buildings) and one admin/lobby building for a total of 146,031 square feet (s.f.). As proposed, the development would demolish the east data center building and the admin/lobby building (67,587 s.f.) and construct a 239,725 square-foot data center building for an increase of 172,138 s.f. of building floor area (see Figure 2). The west data center building of 78,444 s.f. will remain. With the new data center building, the total building square footage would be 318,169 square feet on the site. The project site has four driveways, but employee access would continue to be provided via one existing gated two-way driveway on Fortune Drive.

Transportation Policies

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

The new Transportation Analysis Policy 5-1 aligns with the Envision San Jose 2040 General Plan which seeks to focus new development growth within Planned Growth Areas, bringing together office, residential, and service land uses to internalize trips and reduce VMT. VMT-based policies support dense, mixed-use, infill projects as established in the General Plan's Planned Growth Areas.









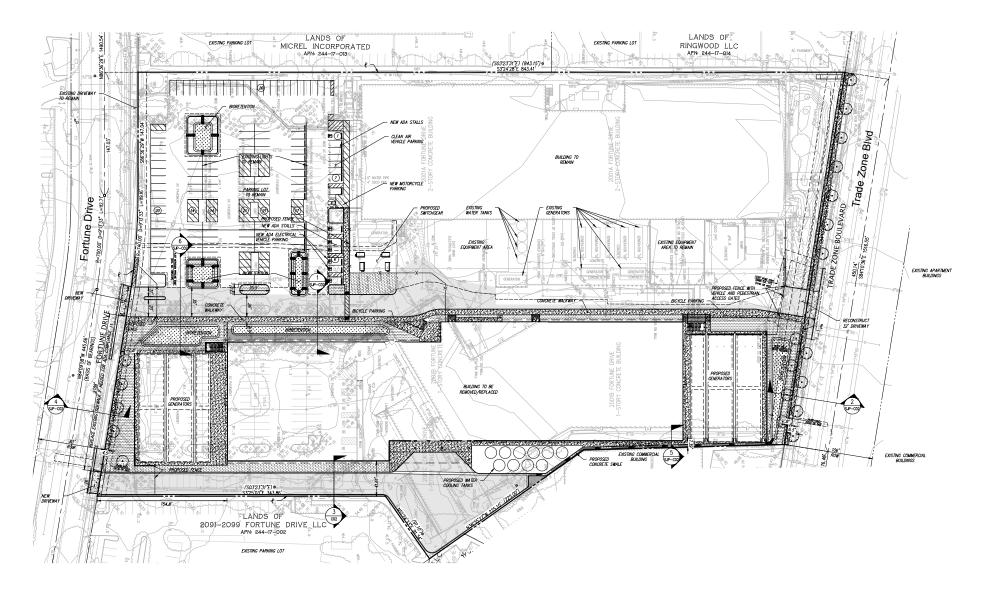


Figure 2 Site Plan





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

- Accommodate and encourage the use of non-automobile transportation modes to achieve San Jose's mobility goals and reduce vehicle trip generation and VMT (TR-1.1);
- Consider impacts on overall mobility and all travel modes when evaluating transportation impacts of new developments or infrastructure projects (TR-1.2);
- Through the entitlement process for new development, projects shall be required to fund or construct needed transportation improvements for all transportation modes, giving first consideration to improvement of bicycling, walking and transit facilities and services that encourage reduced vehicle travel demand (TR-1.4);
- 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, and require that new development is designed to
 accommodate and provide direct access to transit facilities (TR-3.3);
- Balance business viability and land resources by maintaining an adequate supply of parking to serve demand while avoiding excessive parking supply that encourages auto use (TR-8.2);
- 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);
- 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);

CEQA Transportation Analysis Scope and Methodology

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



Thresholds of Significance

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

Table 1
VMT Thresholds of Significance for Development Projects

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

The project would add 172,138 s.f. of building floor area which exceeds the screening criteria of 30,000 s.f. for industrial development. Therefore, a CEQA transportation analysis is required to evaluate the project's VMT against the threshold of significance. For industrial developments, the threshold of significance is the existing regional average VMT for employment uses (14.37 per worker).



Area VMT

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

As shown in Figure 3, the project site is colored in orange which means that the current VMT per worker in the project area exceeds the threshold of significant for employment uses, but the VMT impacts for employment developments in the area can be mitigated. Because the area VMT is greater than the regional average VMT, the project is located in a high-VMT area for employment uses.

Project VMT Analysis Methodology

To determine whether a project would result in CEQA transportation impacts related to VMT, the City has developed the San Jose VMT Evaluation Tool ("sketch tool") to streamline the analysis for residential, office, and industrial projects with local traffic. For larger projects with regional traffic, the City of San Jose's Travel Demand Model (model) may be required for the CEQA transportation analysis. Because the project is relatively small industrial development that would generate local traffic, the sketch tool is used to estimate the project VMT and determine whether the project would result in a significant VMT impact.

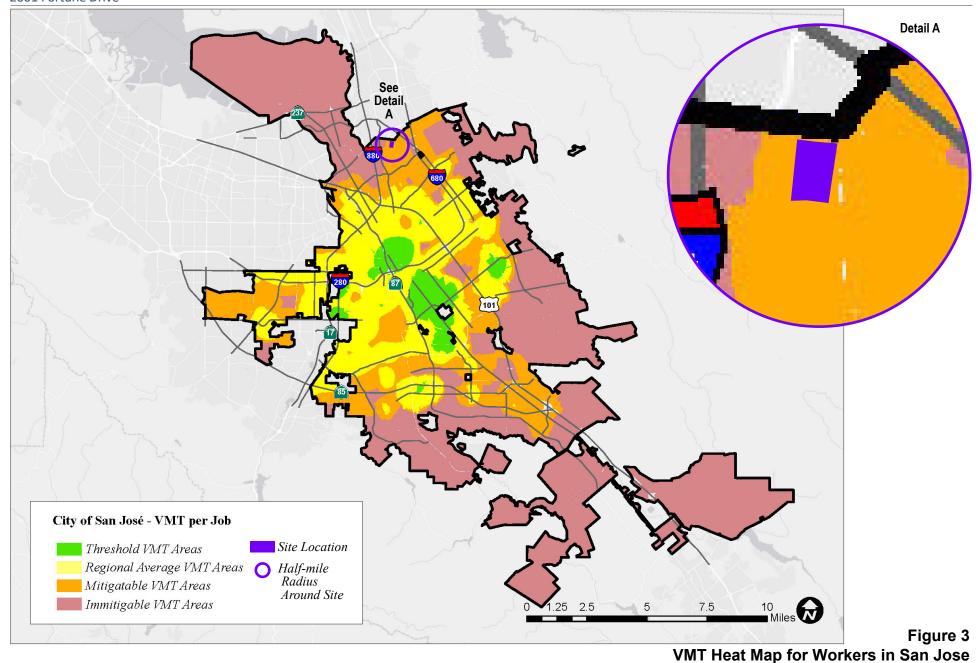
Based on the assessor's parcel number (APN) of a project, the sketch tool identifies the existing average VMT per capita and the existing average VMT per employee for the area. Based on the project location, type of development, project description, and proposed trip reduction measures, the sketch tool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

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

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

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









Local Transportation Analysis Scope

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

As part of the LTA, a project is required to conduct an intersection operations analysis if the project is expected to add 10 or more vehicle trips per hour per lane to any signalized intersection that is located within a half-mile of the project site and is currently operating at LOS D or worse. Based on these criteria, as outlined in the City's *Transportation Analysis Handbook*, a list of study intersections is developed. Note that intersections that do not meet all the criteria may be added to the list of study intersections at the City's discretion. The LTA comprises an analysis of AM and PM peak-hour traffic conditions for the following four (4) signalized intersections in the City of San Jose and one (1) signalized intersection in the City of Milpitas (see Figure 1):

- 1. Trade Zone Boulevard and Montague Expressway* (City of Milpitas intersection)
- 2. Ringwood Avenue and Trade Zone Boulevard
- 3. Lundy Avenue and Trade Zone Boulevard
- 4. Capitol Avenue/Cropley Avenue and Trade Zone Boulevard
- 5. Lundy Avenue and Fortune Drive

*Denotes CMP intersection

The Trade Zone Boulevard/Montague Expressway intersection is designated as a County Congestion Management Program (CMP) intersection. The Santa Clara Valley Transportation Authority (VTA) administers the CMP and monitors the PM peak-hour traffic conditions of CMP intersections.

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

- Existing Conditions. Existing AM and PM peak-hour traffic volumes were obtained from the City of San Jose, 2018 CMP Annual Monitoring Report, and new turning-movement counts (included in Appendix A). The new count data have been reviewed and approved by City of San Jose Department of Transportation staff for use in this traffic study. The signalized study intersections were evaluated with a level of service analysis using TRAFFIX software in accordance with the 2000 Highway Capacity Manual methodology.
- Background Conditions. Background traffic volumes were estimated by adding to existing
 peak-hour volumes the projected volumes from approved but not yet completed developments.
 The added traffic from approved but not yet completed developments in San Jose was provided
 by the City of San Jose in the form of the Approved Trips Inventory (ATI). The list of approved
 but not yet completed developments in Milpitas was obtained from the City of Milpitas's website.
 Background conditions represent the baseline conditions to which project conditions are
 compared for the purpose of determining potential adverse operational effects of the project.
 The ATI sheets are contained in Appendix B.
- Background Plus Project Conditions. Background plus project traffic volumes were estimated
 by adding to background traffic volumes the additional traffic generated by the project.
 Background plus project conditions were evaluated relative to background conditions in order to
 determine potential adverse effects of the project on intersection operations.



The LTA also includes an analysis of site access, on-site circulation, and effects to transit, bicycle, and pedestrian facilities.

Intersection Operations Analysis Methodology

This section presents the methods used to determine the traffic conditions at the study intersections and the potential adverse operational effects due to the project. It includes descriptions of the data requirements, the analysis methodologies, the applicable intersection level of service standards, and the criteria used to determine adverse effects on intersection operations.

Four of the study intersections are located within the City of San Jose and were evaluated based on the City of San Jose level of service standard. One of the study intersections is located within the City of Milpitas and is a CMP intersection and was evaluated based on the CMP level of service standard.

Data Requirements

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

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

Level of Service Analysis Methodology and Standards

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 Cities of San Jose and Milpitas evaluate level of service at signalized intersections based on the 2000 *Highway Capacity Manual (HCM)* level of service methodology using TRAFFIX software. Since TRAFFIX is the level of service methodology for the CMP-designated intersections, the Cities of San Jose and Milpitas employ the CMP defaults values for the analysis parameters. This HCM method evaluates signalized intersection operations on the basis of average control delay time for all vehicles at the intersection. The correlation between average delay and level of service is shown in Table 2.

Signalized study intersections are subject to the local municipalities' level of service standards. The City of San Jose level of service standard is LOS D or better at all signalized intersections within San Jose, including City, expressway, and CMP intersections. The City of Milpitas level of service standard for signalized intersections is LOS D or better at City-controlled intersections and LOS E or better at expressways and CMP intersections. The CMP level of service standard for signalized intersections is LOS E or better.

Definition of Adverse Intersection Operations Effects

City of San Jose Intersections

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

 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



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

Level of Service	Description	Average Control Delay Per Vehicle (sec.)		
Α	Signal progression is extremely favorable. Most vehicles arrive during the green phase and do not stop at all. Short cycle lengths may also contribute to the very low vehicle delay.	10.0 or less		
B+ B B-	Operations characterized by good signal progression and/or short cycle lengths. More vehicles stop than with LOS A, causing higher levels of average vehicle delay.	10.1 to 12.0 12.1 to 18.0 18.1 to 20.0		
C+ C C-	Higher delays may result from fair signal progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant, though may still pass through the intersection without stopping.	20.1 to 23.0 23.1 to 32.0 32.1 to 35.0		
D+ D D-	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable signal progression, long cycle lenghts, or high volume-to-capacity (V/C) ratios. Many vehicles stop and individual cycle failures are noticeable.	35.1 to 39.0 39.1 to 51.0 51.1 to 55.0		
E+ E E-	This is considered to be the limit of acceptable delay. These high delay values generally indicate poor signal progression, long cycle lengths, and high volume-to-capacity (V/C) ratios. Individual cycle failures occur frequently.	55.1 to 60.0 60.1 to 75.0 75.1 to 80.0		
F	This level of delay is considered unacceptable by most drivers. This condition often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of the intersection. Poor progression and long cycle lengths may also be major contributing causes of such delay levels.	greater than 80.0		
	ansportation Research Board, <i>2000 Highway Capacity Manual</i> (Washington, D.C. A Traffic Level of Service Analysis Guidelines (June 2003), Table 2.	, 2000) p10-16.		

2. The level of service at the intersection is an unacceptable level (LOS E or F) under background conditions and the addition of project trips cause both the critical-movement delay at the intersection to increase by four (4) or more seconds *and* the volume-to-capacity ratio (v/c) to increase by one percent (.01) or more.

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

CMP Intersection

The Trade Zone Boulevard/Montague Expressway intersection is a CMP intersection located in Milpitas. Therefore, the CMP level of service standard and significant impact criteria applies to the intersection. The definition of a significant impact at a CMP intersection is the same as definition of an adverse intersection operations effect described above, except that the CMP standards for acceptable



level of service at a CMP intersection is LOS E or better. A significant impact by CMP standards is said to be satisfactorily mitigated when measures are implemented that would restore intersection conditions to an acceptable level or no worse than no-project conditions.

Intersection Vehicle Queuing Analysis

The analysis of intersection operations is typically supplemented with a vehicle queuing analysis at study intersections where the project would add a substantial number of vehicle trips to the left-turn movements or stop-controlled approaches. The analysis provides a basis for estimating future left-turn pocket storage requirements at the study intersections and is presented for informational purposes only, since the Cities of San Jose and Milpitas has not defined a policy related to queuing. However, since the project would not add a noteworthy number of trips (10 new peak-hour trips or more per hour per lane) to the left-turn movements at any of the study intersections, an intersection queuing/left-turn pocket storage analysis was not prepared. Based on the project trip generation estimates and the distribution of trips (see Chapter 4), the maximum number of new vehicle trips added to any single left-turn lane at the study intersections would equate to 6 peak-hour vehicle trips.

Report Organization

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



2.

Existing Transportation Conditions

This chapter describes the existing conditions of the transportation system within the study area of the project. It describes transportation facilities in the vicinity of the project site, including the roadway network, transit service, and pedestrian and bicycle facilities. The analysis of existing intersection operations is included as part of the local transportation analysis (see Chapter 4).

Existing Roadway Network

Regional access to the project site is provided via I-680 and I-880. Direct access to the site is provided via Fortune Drive. Other roadways in the project vicinity include Ringwood Avenue, Lundy Avenue, Trade Zone Boulevard, Montague Expressway, and Capitol Avenue. These facilities are described below.

I-680 is an eight-lane freeway (four mixed-flow lanes in each direction) in the vicinity of the site. I-680 extends northward through Alamo and southward to transition into I-280 in San Jose. Access to and from the site is provided via a full interchange at Capitol Avenue.

I-880 is an eight-lane freeway (three mixed-flow lanes and one high occupancy vehicle (HOV) lane in each direction) in the vicinity of the site. I-880 extends northward through Oakland and southward to transition into SR 17 in San Jose. Access to and from the site is provided via a full interchange at Montague Expressway.

Fortune Drive is a two-lane local street that runs in an east-west direction in the vicinity of the site. There are left-turn pockets provided at intersections and a center turn lane provided between intersections in the study area. Fortune Drive extends westward to Ringwood Avenue and eastward to a cul-de-sac terminus. Fortune Drive includes sidewalks on both sides of the street between Lundy Avenue and the project site. Sidewalks do not extend westward to Ringwood Avenue. Fortune Drive has a posted speed limit of 35 mph. There are no striped bike lanes or marked bike routes on the street. On-street parking is permitted on both sides of the street from 6 AM to 10 PM (no overnight parking) in the project vicinity. Access to the project site is provided via one existing project driveway.

Ringwood Avenue is a two-lane local street that runs in the north-south direction in the vicinity of the site. There are left-turn pockets provided at intersections and a center turn lane provided between intersections in the study area. Ringwood Avenue extends northward to Trade Zone Boulevard and southward to Sajak Avenue. Ringwood Avenue includes a sidewalk on the east side of the street from approximately 300 feet south of Trade Zone Boulevard to Trade Zone Boulevard. Ringwood Avenue has a posted speed limit of 40 mph. Bike lanes exist along Ringwood Avenue from Trade Zone Boulevard to Murphy Avenue. On-street parking is prohibited on both sides of the street at all times. Access to the project site is provided via its intersection with Fortune Drive.



Lundy Avenue is a four-lane divided city-connector street that runs in the north-south direction in the vicinity of the site. Lundy Avenue extends northward to Tarob Court and southward to Commodore Drive, where it transitions into King Road. Lundy Avenue provides sidewalks on both sides of the street to approximately 450 feet north of Fortune Drive. The sidewalk ends along the west side of the street but continues along the east side of the street. Lundy Avenue has a posted speed limit of 40 mph. Bike lanes exist along Lundy Avenue from Trade Zone Boulevard to Berryessa Road. On-street parking is prohibited on both sides of the street at all times. Access to the project site is provided via its intersection with Fortune Drive.

Trade Zone Boulevard is a four-lane east-west city-connector street extending from Montague Avenue in the west and to Capitol Avenue in the east, where it transitions into Cropley Avenue. There are left-turn pockets provided at intersections and a center turn lane provided between intersections in the study area between Ringwood Avenue and Lundy Avenue. It has a raised, landscaped median with left-turn pockets provided at intersections from Lundy Avenue to Capitol Avenue and from Montague Expressway to Ringwood Avenue. Trade Zone Boulevard has sidewalks on both sides of the street along the project frontage between Ringwood Avenue and Lundy Avenue and has a posted speed limit of 40 mph. On-street parking is prohibited on both sides of the street. Trade Zone Boulevard provides access to the project site via its intersections with Ringwood Avenue and Lundy Avenue.

Montague Expressway is an east-west divided arterial expressway that extends from I-680 in the east to San Tomas Expressway in the west. Near the project site, Montague Expressway has six lanes with left-turn pockets provided at intersections. It has a posted speed limit of 45 mph near the project vicinity. Sidewalks are provided on both sides of the street. On-street parking is prohibited on both sides of the street in the project vicinity. Capitol Avenue provides access to the project site via its intersection with Trade Zone Boulevard.

Capitol Avenue is a north-south divided arterial that extends from Great Mall Parkway in the north to Capitol Expressway in the south. Capitol Avenue is a Grand Boulevard, as stated in the San Jose 2040 General Plan. Near the project site, Capitol Avenue has two northbound lanes and three southbound lanes with left-turn pockets provided at intersections. It has at-grade train tracks in the middle of street for the VTA light rail transit service. Capitol Avenue has a posted speed limit of 35 mph near the project vicinity. Sidewalks are provided on both sides of the street. On-street parking is prohibited on both sides of the street in the project vicinity. Capitol Avenue provides access to the project site via its intersection with Trade Zone Boulevard.

Existing Pedestrian, Bicycle and Transit Facilities

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

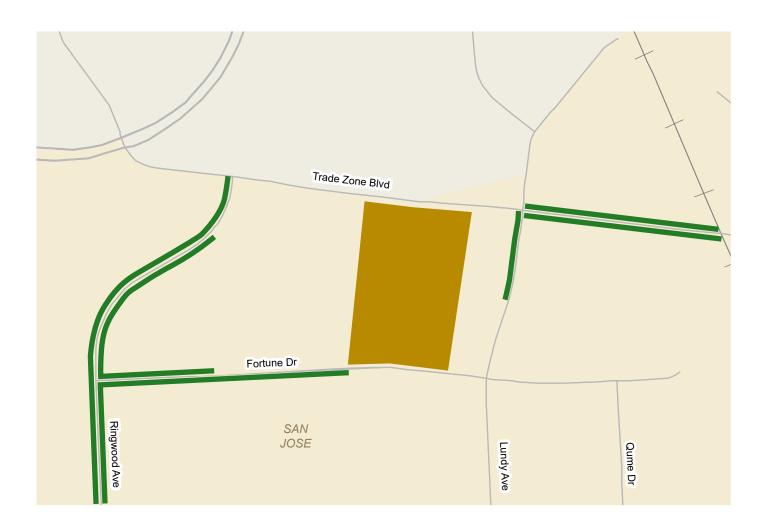
Existing Pedestrian Facilities

The overall network of sidewalks and crosswalks in the study area provides limited connectivity. There are gaps in the pedestrian routes between the project site and the nearest bus stops and LRT stations on Lundy Avenue, Montague Expressway, and Capitol Avenue. Furthermore, there are no commercial services (restaurants, banks, shops, etc) within walking distance (a half mile) of the project site.

Sidewalks are missing along the following street sections between the project site and the nearest bus stops and LRT stations (see Figure 4):

• Both sides of Fortune Drive, between Ringwood Avenue and 650 feet east of Ringwood Avenue on the north side and between Ringwood Avenue and the project site on the south side.





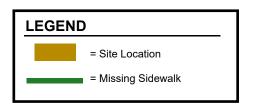


Figure 4
Street Sections Without Sidewalks





- West side of Lundy Avenue, between Trade Zone Boulevard and 320 feet south of Trade Zone Boulevard.
- Both sides of Trade Zone Boulevard, between Lundy Avenue to 900 feet east of Lundy Avenue
- East side of Ringwood Avenue, between Fortune Drive and 900 feet north of Fortune Drive

Crosswalks with pedestrian signal heads and push buttons are located at all signalized intersections in the study area. However, there are no crosswalks on the west leg of the Ringwood Avenue/Trade Zone Boulevard intersection and on the west and south legs of the Trade Zone Boulevard/Montague Expressway intersection.

Existing Bicycle Facilities

The existing bicycle facilities in the project vicinity include Class II bike lanes and Class III bike routes (see Figure 5). Bike lanes are lanes on roadways designated for use by bicycles with special lane markings, pavement legends, and signage. Bike routes are existing streets that accommodate bicycles but are not separate from the existing travel lanes. Bike routes are typically designated only with signage or with painted shared lane markings (Sharrows) on a road that indicate to motorists that bicyclists may use the full travel lane.

Class II striped bike lanes are present in the following street segments in the project vicinity:

- Trade Zone Boulevard between Montague Expressway and Capitol Avenue, with sharrows on westbound Trade Zone Boulevard between Montague Expressway and Ringwood Avenue
- Ringwood Avenue between Trade Zone Boulevard and Murphy Avenue
- Lundy Avenue between Trade Zone Boulevard and Berryessa Road
- McCandless Drive, for the entire street
- Capitol Avenue and Great Mall Expressway, for the entire street

There are no designated striped bike lanes or shared bike routes on Fortune Drive. However, because Fortune Drive carries relatively low traffic volumes, it is conducive to bicycle travel and connects bicyclists to the existing bicycle facilities.

Existing Transit Services

Existing transit services in the project vicinity are provided by the VTA (see Figure 6 and Table 3). In the project proximity, the VTA operates one light rail line (901), two local bus routes (Routes 77 and 321), and one shuttle route (Route 831). The project site is 0.8 mile from the Cropley Light Rail Station, 600 feet from the closest bus stop for the local bus route 77 and ACE violet shuttle 831, and 0.5 mile from the next closest bus stop for VTA bus route 321.

VTA Light Rail Service

The VTA operates the light rail transit (LRT) line system that extends from south San Jose through downtown to the northern areas of San Jose, Santa Clara, Mountain View and Sunnyvale. Service operates nearly 24-hours, every 15 minutes during much of the day.

The Alum Rock-Santa Teresa LRT line (901) provides service to the Cropley LRT station closest to the project site. The Cropley LRT station is located on Capitol Avenue at Trade Zone Boulevard, which is less than one-mile walking distance from the project site. Sidewalks are present for the majority of the route, except on Trade Zone Boulevard from Lundy Avenue to approximately 880 feet east of Lundy Avenue, where pedestrians need to travel through parking lots of adjacent properties. Striped bike lanes exist on both sides of Lundy Avenue, Trade Zone Boulevard, and Capitol Avenue between the site and the station.



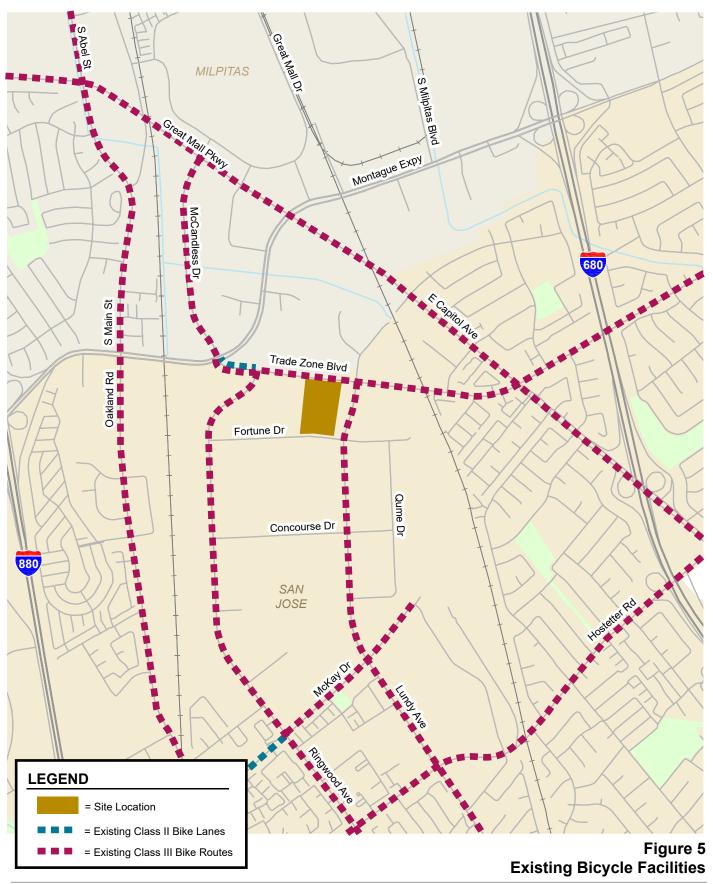












Table 3 **VTA Transit Service**

Bus Route	Route Description	Closest Stop and cription Distance to Project Site		Headway ¹		
Local Bus 77	Eastridge - Great Mall, via King	Lundy Ave north of Fortune Dr, 600 ft	5:55 AM - 10:00 PM	12 - 17 min		
Local Bus 321	Great Mall - Lockheed Martin	Montague Expy at Trade Zone Blvd, 0.5 mile	8:10 AM - 8:50 AM (westbound), 5:50 PM - 6:40 PM (eastbound)	One WB bus in AM, One EB bus in PM		
ACE Shuttle 831	Great America ACE Amtrak Station - East Milpitas	Lundy Ave north of Fortune Dr, 600 ft	6:15 AM - 9:50 AM (eastbound), 3:05 PM - 6:40 PM (westbound)	53 - 75 min, 4 EB buses in AM, 4 WB buses in PM		
Light Rail 901	Santa Teresa - Alum Rock, via Downtown San Jose	Capitol Ave at Trade Zone Blvd, 0.8 mile	4:18 AM - 2:15 AM	6 - 15 min		
Approximate w Approximate w	eekday operation hours and head		e periods in the projec	t area, as of		

September 2019.

VTA Bus Service

The closest bus stop to the project site is located on Lundy Avenue north of Fortune Drive, approximately 600 feet walking distance from the project site, and is served by the local bus route 77 traveling southbound and northbound. Local route 321 is also located within ½-mile of the project site (see Table 3).

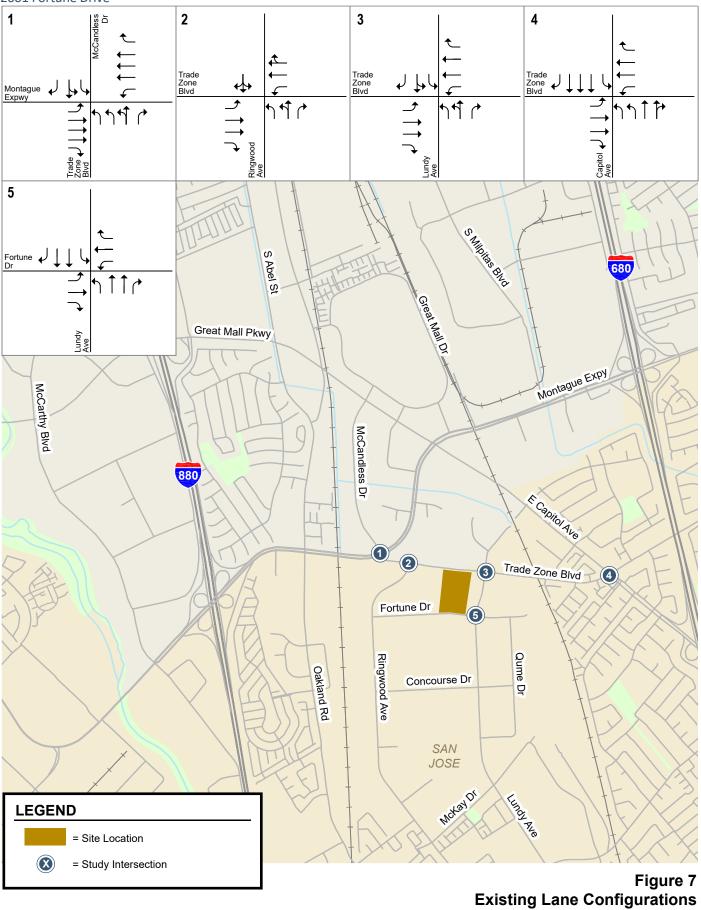
Altamont Commuter Express (ACE) Violet Shuttle

The Altamont Cummuter Express (ACE) Voilet Shuttle operates from Santa Clara/Great America Station to East Milpitas during weekday peak hours. Eastbound sevice is provided during weekday mornings and westbound service is provided during weekday afternoons. The closest shuttle stop to the project site is located on Lundy Avenue north of Fortune Drive, approximately 600 feet walking distance from the project site.

Existing Intersection Lane Configurations

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









Observed Existing Traffic Conditions

Traffic conditions were observed in the field to identify existing operational deficiencies. Overall, the study intersections operate adequately during the weekday AM and PM peak hours. Field observations conducted in September 2019 revealed the following noteworthy operational issues.

Trade Zone Boulevard and Montague Expressway

During the AM peak hour, the left-turn traffic from northbound Trade Zone Boulevard to westbound Montague Expressway is heavy. The queue often backed up to the unsignalized intersection of Momentum Drive and Trade Zone Boulevard. It often took two or more cycles for vehicles to clear the intersection. The queues were due to the back up from the downstream intersection of Montague Expressway and Oakland Road.

During the PM peak hour, the northbound left-turn queues on Trade Zone Boulevard are also lengthy. The queue on Trade Zone Boulevard often backed up to Ringwood Avenue. However, the queues were able to clear in one cycle. Occasionally, vehicles that were at the end of the queue needed to wait another cycle.

Ringwood Avenue and Trade Zone Boulevard

During the AM peak hour, because the westbound vehicle queues on Trade Zone Boulevard often back up from Montague Expressway and past the intersection, there was no space left for vehicles making a left turn from northbound Ringwood Avenue. Therefore, the northbound left-turn vehicles often block the intersection. However, the situation only occurred briefly before the westbound signal at the downstream stream intersection turned green, and did not cause any delays for other movements, as the southbound movement and the eastbound left-turn movement were minimal. The northbound left-turn queues usually cleared in one cycle.

During the PM peak hour, because the westbound vehicle queues on Trade Zone Boulevard often back up from Montague Expressway to the intersection, the northbound left-turn vehicles often blocked the intersection but did not cause any delays for other movements, similar to AM peak hour. The northbound left-turn movement had queues of approximately 6 to 12 vehicles. The queue usually cleared in one cycle, but occasionally one or two vehicles were left at the end of the cycle.

Capitol Avenue and Trade Zone Boulevard

During the PM peak hour, the eastbound right-turn movement from Trade Zone Boulevard had a long queue. The queue often backed up past the unsignalized intersection of Jubilee Lane and Trade Zone Boulevard. Pedestrians crossing the southern leg of the intersection also caused delays for the right turn vehicles. Vehicles often waited in the queue for two or more cycles.



3.

CEQA Transportation Analysis

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

Project-Level VMT Impact Analysis

The project-level impact analysis under CEQA uses the VMT metric to evaluate a project's transportation impacts by comparing against the VMT thresholds of significance as established in the Transportation Analysis Policy (see Table 1 in Chapter 1). The VMT threshold for industrial developments is the existing regional average VMT level (14.37 per employee).

Existing Area VMT

The San Jose VMT Evaluation Tool (sketch tool) is used to estimate the project VMT based on the project location (APN), type of development, project description, and proposed trip reduction measures. Figure 7 shows the VMT evaluation summary report generated by the City of San Jose's VMT Evaluation Tool for the project. Based on the sketch tool and the project site's APN, the existing area VMT for employment uses in the project vicinity is 14.96 per employee, which is higher than the regional average VMT level of 14.37 per employee.

Project VMT

Figure 8 shows that the VMT generated by the project would be 14.95 per employee, slightly lower than the area VMT. This is because the project would result in an increase in employment density on the site. However, the project VMT would still exceed the threshold of 14.37 per employee.

Project Impacts and Mitigation Measures

Impact: The VMT generated by the project (14.95 VMT per employee) would exceed the threshold of 14.37 VMT per employee; therefore, the project would result in a significant transportation impact on VMT, and mitigation measures are required to reduce the VMT impact. According to the *Transportation Analysis Handbook*, projects located in areas where the existing VMT is above the established threshold (such as the project study area) are referred to as being in "high-VMT areas", and projects in high-VMT areas are required to include a set of VMT reduction measures that would reduce the project VMT to the extent possible.



Figure 8
San Jose VMT Evaluation Tool Summary Report

CITY OF SA	N JOSE VEHI	CLE MILES TRAVELED EVALUATION TOOL	SUMMARY REPORT
ROJECT:			
Location: 200	01 Fortune Drive 01 Fortune Drive 417003 Pa		Version: 2/29/2019 Date: 11/19/2019
Proposed Parki	ng Spaces	Vehicles: 0 Bicycles: 5	
ND USE:			
Residential: Single Fam Multi Fami Subtotal		Very Low Income (> 30% MFI, < 50%	0 % Affordab MFI) 0 % Affordab 0 % Affordab
Office: Retail: Industrial:	0 KSI 0 KSI 318.2 KSI		o 70 Alloldab
MT REDUCTION			
	t Characteristic		
Existin		y esidential Acres in half-mile buffer)	
Increase De Existin	evelopment Dive g Activity Mix In		0.87
Extrem Very L	nely Low Income ow Income BMR	elow Market Rate BMR units units	0 %
Existin		ity Commercial Acres in half-mile buffer)	
Tier 2 - Multin	nodal Infrastru	ture	
Tier 3 - Parkin	g		
Tier 4 - TDM F			
Commute	Trip Reduction N	Marketing/ Education loyees	30 %
	ng Programs at of Eligible Eem	ployees	5 %

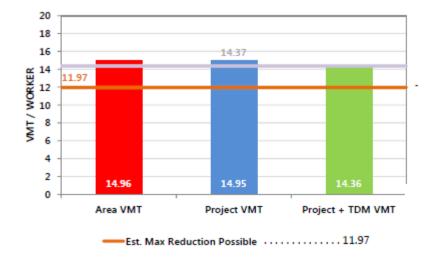


Figure 8 (Continued)
San Jose VMT Evaluation Tool Summary Report

CITY OF SAN JOSE VEHICLE MILES TRAVELED EVALUATION TOOL SUMMARY REPORT

EMPLOYMENT ONLY

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





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

- Provide commute trip reduction marketing and education for 100% of eligible employees. This
 would educate and encourage employees to use transit, shared rides, and active modes,
 therefore lowering the number of single occupancy vehicle trips.
- Provide a rideshare program for 100% of eligible employees. This would encourage employees to carpool with other employees and/or through ridematching services, which help employees find other commuters traveling in the same direction.

The combination of the TDM mitigation measures would reduce the project VMT to 14.36 per employee, which would make the project impact less than significant. The VMT estimate assumes that 30% of the employees would participate in the commute trip reduction/education program, and 5% of the employees would participate in the rideshare program.

The project would be required to implement a TDM plan with these TDM measures to reduce the project VMT. The TDM measures should be offer to 100% of eligible employees of the existing and new data center buildings on the project site. Additionally, as required by the San Jose Zoning Code Section 20.90.066, the project should provide at least one shower and changing room based on the requirement for warehouse buildings. Providing showers and lockers in the building in addition to the bicycle parking spaces would encourage employees to commute with bicycles.

The TDM plan is required to have an annual monitoring and reporting to ensure these mitigation measures are implemented and effective in reducing the project VMT. It is recommended that the property manager consult with City staff to ensure the monitoring and reporting meets the City's expectations. Monitoring should include annual rideshare surveys, or similar surveys, to ensure rideshare is being utilized by employees.

Cumulative Impact Analysis

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

- The project site is near bicycle lanes on Lundy Avenue, Trade Zone Boulevard, and Ringwood Avenue.
- The project would provide bicycle parking and end of trip bike facilities to encourage employees to commute with bicycles.
- The project is located within walking distance to the bus stops of two bus routes.
- The project would implement TDM measures to minimize vehicle trip generation and reduce VMT.
- The project would not negatively impact existing transit, bicycle or pedestrian infrastructure, nor
 would it conflict with any adopted plans or policies for new transit, bicycle or pedestrian facilities.

Therefore, the project would be considered part of the cumulative solution to meet the General Plan's long-range transportation goals and would result in a less-than-significant cumulative impact.



4.

Local Transportation Analysis

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

Intersection Operations Analysis

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

Project Trip Estimates

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

Trip Generation

Through empirical research, data have been collected that quantify the amount of traffic produced by many types of land uses. The research is compiled in the *Trip Generation Manual*, *10th Edition*, published by the Institute of Transportation Engineers (ITE). Trips that would be generated by the data center were estimated using the ITE trip rates for "Data Center" (ITE Land Use 160).

Trip Adjustments and Reductions

In accordance with *Transportation Analysis Handbook* (Section 4.8, "Intersection Operations Analysis"), the project qualifies for a location-based trip adjustment from the baseline trip generation. 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 ("sketch tool"). Based on the sketch tool, the project site is located



within a designated Suburban with Multifamily Housing place type. Therefore, the baseline project trips were adjusted to reflect a Suburban with Multifamily Housing mode share. Industrial developments within Suburban with Multifamily Housing areas have a vehicle mode share of 92 percent. Thus, an 8 percent location-based vehicle mode share reduction was applied to the trip generation estimates.

Additionally, the VMT reduction resulting from implementing the VMT reduction strategies in the sketch tool should be included as part of the trip generation estimates for the project. As discussed in Chapter 3, by implementing the VMT reduction strategies, the VMT level at the project site would be reduced from the existing level of 14.96 VMT per employee to 14.36 VMT per employee, which is a 4% reduction in VMT. The reduction is applied to the adjusted project trips (with location-based adjustment).

Existing Trip Credits

The project site is currently occupied by two existing data center buildings, one of which will remain and one that will be demolished as part of the proposed project. Trips that are generated by existing uses to be removed can be subtracted from the gross project trip generation estimates. Trips generated by the existing buildings were calculated based on counts conducted at the project driveway in September 2019.

Net Project Trips

After applying the ITE trip rates to the proposed building and applying the appropriate trip adjustments and credits, the project would generate 158 new daily vehicle trips, with 18 new trips (10 inbound and 8 outbound) occurring during the AM peak hour and 15 new trips (6 inbound and 9 outbound) occurring during the PM peak hour (see Table 4).

Table 4
Project Trip Generation Estimates

			Daily AM Peak Hour		PM Peak Hour							
Land Use	Size*	Unit	Rate	Trips	Rate	ln	Out	Total	Rate	ln	Out	Total
Proposed Use												
Data Center ¹	318	KSF	0.99	315	0.11	19	16	35	0.09	9	20	29
- Location-Based Mode Share Reduction (8%) ²				-25		-2	-1	-3		-1	-1	-2
- VMT reduction (4%) ³				-12		0	-1	-1		0	-1	-1
Gross Site Trips After Reduction				278		17	14	31		8	18	26
Existing Use												
Data Center ⁴	146	KSF	0.82	-120	0.09	-7	-6	-13	0.08	-2	-9	-11
Net Project Trips				158		10	8	18		6	9	15

Notes:

- 1. Trip generation was based on average rates contained in the ITE Trip Generation Manual, 10th Edition, for Data Center (Land Use 160). Rates are expressed in trips per 1,000 square feet (KSF) of gross floor area.
- 2. The trip reduction was based on the location-based vehicle mode share percentage outputs (Table 6 of TA Handbook) produced from the San Jose Travel Demand Model for office/industrial projects located within an suburban area with multifamily homes.
- 3. A 4% reduction was applied based on the external trip adjustments obtained from the City's VMT sketch tool.
- 4. Peak-hour trips generated by the existing data center were based on the driveway counts conducted on September 4, 2019.

 Daily trips were estimated based on the ratio of ITE daily to peak-hour trip rates for Data Center.



Trip Distribution and Assignment

The trip distribution patterns for the project were estimated based on existing travel patterns on the surrounding roadway network, the locations of complementary land uses, and freeway access points (see Figure 9). The net peak-hour vehicle trips generated by the project were assigned to the roadway network in accordance with the trip distribution pattern, the roadway network connections, and the locations of project driveways (see Figure 10). It should be noted that although the site plan (Figure 2) shows there is one driveway on Trade Zone Boulevard and three driveways on Fortune Drive, only the middle driveway on Fortune Drive would be used by employees and visitors to access the site. The driveway on Trade Zone Boulevard and the western driveway on Fortune Drive would be used for emergency access only, and the eastern driveway on Fortune Drive would be used for deliveries and emergency access. Therefore, it is assumed that all project trips would access the site via the middle driveway on Fortune Drive.

Traffic Volumes Under All Scenarios

Existing Traffic Volumes

Existing AM and PM peak-hour traffic volumes (see Figure 11) were obtained from new traffic count data, the City of San Jose, and the 2018 CMP Annual Monitoring Report. New AM and PM peak-hour turning movement counts were collected on September 17, 2019 for three of the five signalized study intersections (see Appendix A).

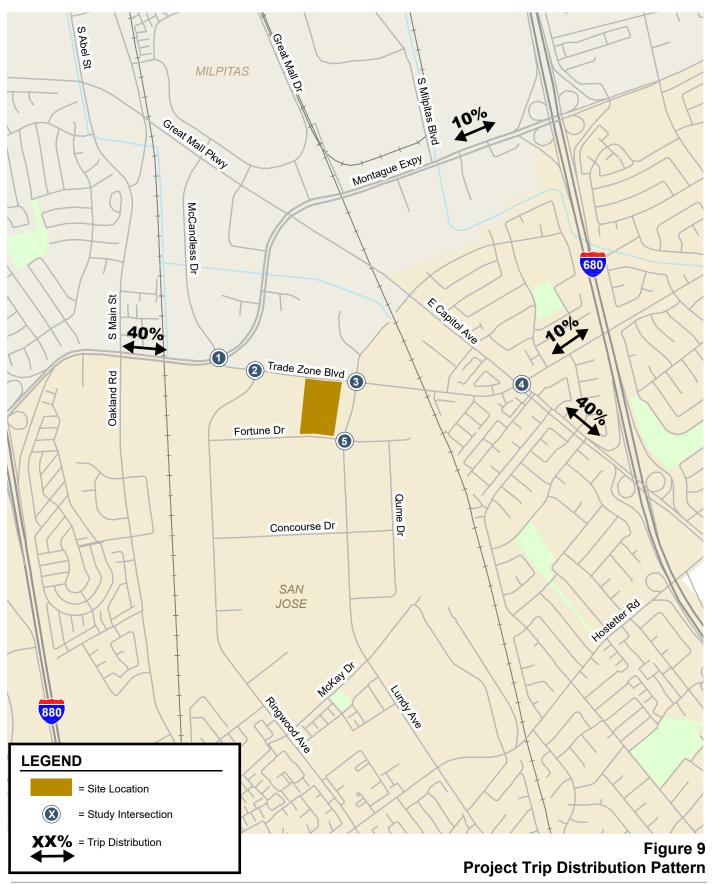
Background Traffic Volumes

Background AM and PM peak-hour traffic volumes were estimated by adding to existing traffic volumes the trips generated by nearby approved but not yet completed or occupied projects (see Figure 12). The approved projects in San Jose are listed as part of the Approved Trips Inventory (ATI) in Appendix B. The approved Milpitas projects considered for the study are also listed in Appendix B with the estimated trip generation using the ITE *Trip Generation Manual*.

Background Plus Project Traffic Volumes

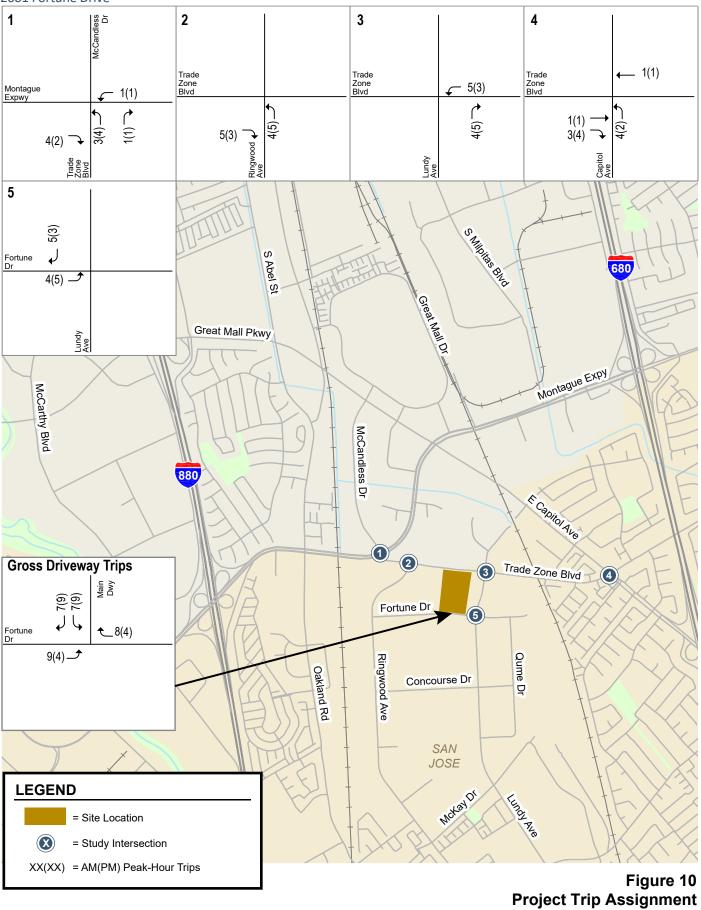
Project trips were added to background traffic volumes to obtain background plus project traffic volumes (see Figure 13).





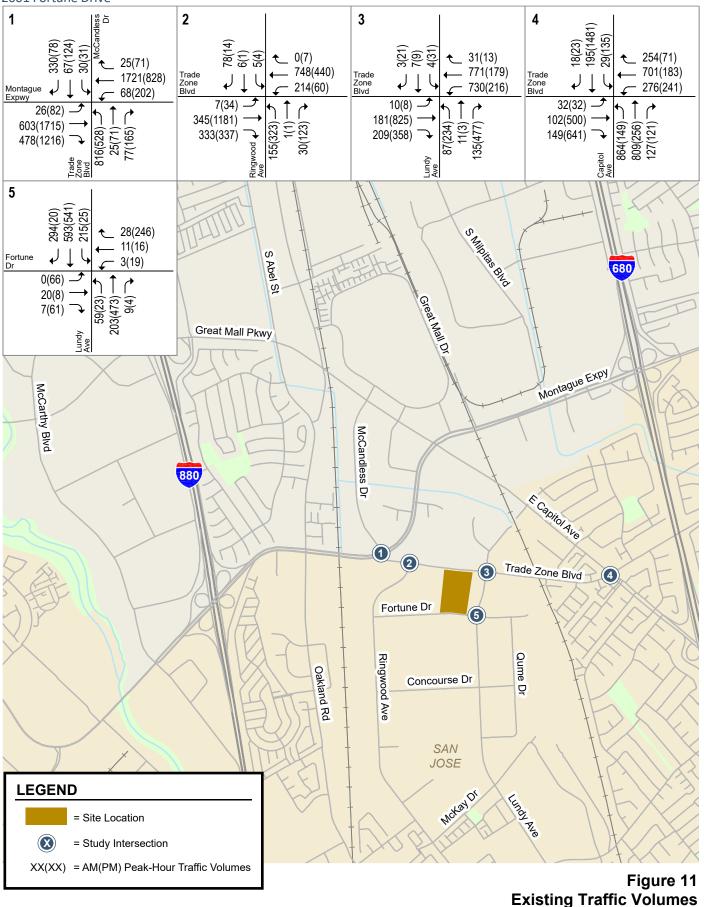






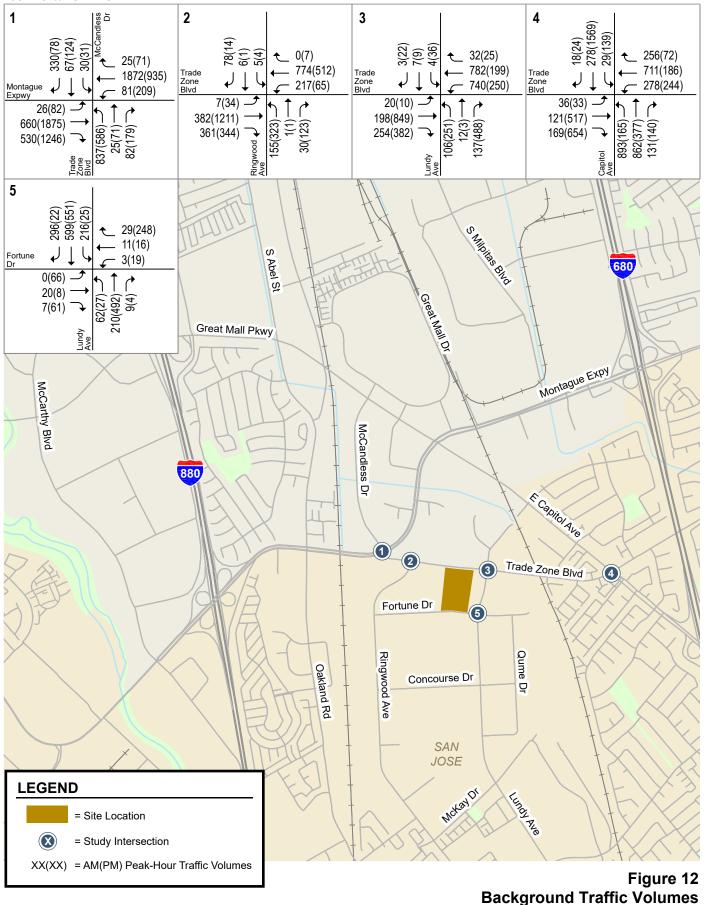








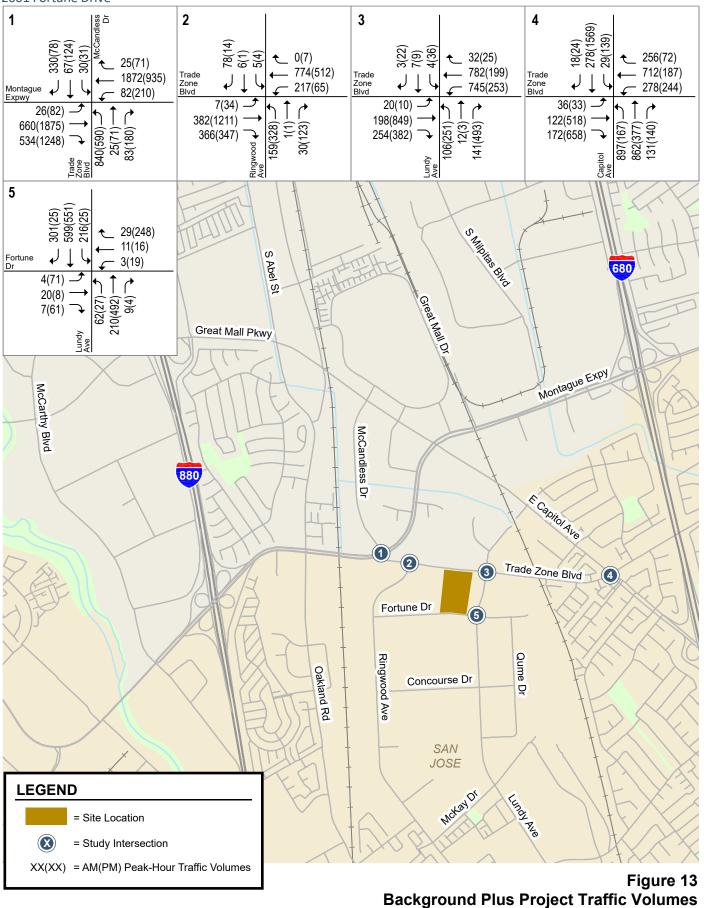








2001 Fortune Drive







Intersection Traffic Operations

Intersection levels of service were evaluated against the standards of the City of San Jose and CMP. The results of the analysis show that all the signalized study intersections are currently operating at acceptable levels of service (LOS D or better for the City of San Jose, LOS E or better for CMP) during the AM and PM peak hours of traffic, and all study intersections would continue to operate acceptably under background and background plus project conditions (see Table 5). The detailed intersection level of service calculation sheets are included in Appendix C.

Table 5
Intersection Level of Service Summary

			Exist	ing			Ва	ckgro	und	
					No Pr	oject		٧	vith Project	
Intersection	Peak Hour	Count Date	Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS	Incr. in Critical Delay (sec)	Incr. in Critical V/C
1 Trade Zone Blvd/Montague Expy*	AM	09/17/19	63.8	E	64.2	E	64.5	E	0.6	0.001
	PM	11/08/18	61.5	E	61.9	E	62.2	E	0.7	0.002
2 Ringwood Ave/Trade Zone Blvd	AM	09/17/19	19.7	B-	19.4	B-	19.5	B-	0.1	0.001
	PM	09/17/19	19.4	B-	19.3	B-	19.4	B-	0.1	0.002
3 Lundy Ave/Trade Zone Blvd	AM	09/13/19	22.4	C+	25.1	C	25.1	C	0.0	0.003
	PM	09/13/19	28.6	C	29.2	C	29.3	C	0.1	0.003
4 Capitol Ave/Trade Zone Blvd	AM	01/23/18	36.1	D+	36.7	D+	36.7	D+	0.0	0.002
	PM	01/23/18	45.0	D	46.3	D	46.4	D	0.2	0.003
5 Lundy Ave/Fortune Dr	AM	09/17/19	10.9	B+	11.0	B+	11.0	B+	-0.1	0.003
	PM	09/17/19	17.6	B	17.7	B	17.7	B	0.0	0.000
* Denotes the CMP designated Inters	ection									

Vehicular Site Access and On-Site Circulation

The site access and circulation evaluations are based on the site plan prepared by HGA, dated December 2019 (see Figure 2 in Chapter 1). Site access was evaluated to determine the adequacy of the site's driveways with regard to the following: traffic volume, vehicle queues, geometric design, and stopping sight distance. On-site vehicular circulation and parking layout were reviewed in accordance with generally accepted traffic engineering standards and transportation planning principles.

Site Access

Main vehicular access to the project site would be provided via the existing middle driveway along Fortune Drive. The driveway is and would continue to be used for deliveries and employees/visitors to access the site. There are three additional driveways (one on Trade Zone Boulevard and two on Fortune Drive) that have limited use for deliveries and emergency vehicles. The driveway on Trade Zone Boulevard and the western driveway on Fortune Drive are limited to emergency access only and the gates are to remain locked. The eastern driveway on Fortune Drive is limited to deliveries and emergency access.

According to the City of San Jose Department of Transportation (DOT) Geometric Design Guidelines, the typical width for a two-way driveway that serves an industrial development is 32 feet wide. This provides adequate width for vehicular ingress and egress and provides a reasonably short crossing distance for pedestrians. The western and eastern driveways on Fortune Drive are shown to be 26 feet wide, which would not meet City standards.



Recommendation: The project should widen its western and eastern driveways on Fortune Drive to

32 feet per the City of San Jose standards.

Traffic Operations at Project Driveways

As shown in Table 4, with the new data center building, the gross site trips would be 17 inbound trips and 14 outbound trips during the AM peak hour, and 8 inbound trips and 18 outbound trips during the PM peak hour. Employees and visitors would enter and exit the project site using the middle driveway on Fortune Drive. Figure 10 shows the estimated gross site trips that would occur at the middle driveway.

Due to the relatively low number of project-generated trips at the driveway, significant operational issues related to vehicle queueing/stacking and/or vehicle delay are not expected to occur at the driveway. Field observations indicate that there were no vehicle queuing issues for the left-turn and right-turn inbound traffic at the driveway in the AM and PM peak hours.

Sight Distance at Project Driveways

The project driveways should be free and clear of any obstructions to provide adequate sight distance, thereby ensuring that exiting vehicles can see pedestrians on the sidewalk and vehicles and bicycles traveling on Fortune Drive. Any landscaping and signage should be located in such a way to ensure an unobstructed view for drivers exiting the site. Providing the appropriate sight distance reduces the likelihood of a collision at a driveway and provides drivers with the ability to locate sufficient gaps in traffic and exit a driveway. The minimum acceptable sight distance is considered the Caltrans stopping sight distance. Sight distance requirements vary depending on roadway speeds. For the driveway on Fortune Drive, which has a posted speed limit of 35 mph, the Caltrans stopping sight distance is 300 feet (based on a design speed of 40 mph). Thus, a driver must be able to see 300 feet on both directions of Fortune Drive to locate a sufficient gap to turn out of the driveways. Although on-street parking is present along the project frontage, there are red curbs next to the driveway. Therefore, there would not be issues associated with on-street parking vehicles obstructing the vision of exiting drivers. There is no roadway curve on Fortune Drive that would obstruct the vision of exiting drivers. Therefore, it can be concluded that the project driveway would meet the Caltrans stopping sight distance standard, and sight distance would be adequate at the project driveways.

On-Site Circulation

Parking Lot

On-site vehicular circulation was reviewed for the parking lot in accordance with generally accepted traffic engineering standards. The project would provide 117 parking spaces located in front of the existing data center building. Parking stalls would be accessed via 25-26-foot drive aisles. Although the 25-foot wide drive aisle would provide adequate on-site circulation, according to the City Ordinance, Section 20.90.100, the minimum width for two-way drive aisles is 26 feet wide where 90-degree parking is provided. The City ordinance allows reduction of the minimum width of certain 26-foot aisles on a site to not less than 20 feet, provided such reduction will not impair the safe and convenient accessibility of the parking spaces affected and the safety of the site. The 25-foot drive aisles on site are not expected to impair the safe and convenient accessibility of the parking stalls. Therefore, the project should work with the City to obtain the approval for the drive aisles narrower than 26 feet.

Recommendation:

The City's standard minimum width for two-way drive aisles is 26 feet where 90-degree parking is provided. The two-way drive aisles within the site with 90-degree parking are shown to vary from 25 to 26 feet wide. The project requires City approval for any reduction in the standard drive aisle width.



Parking Stall Dimensions

The City's off-street parking design standard for 90-degree uniform parking stalls is 8.5 feet wide by 17 feet long. The 90-degree parking stalls vary in measurement from 8 to 9 feet wide by 18 feet long. Uniform parking spaces should be increased to 8.5 feet wide and compact parking spaces—required to be 8 feet wide by 16 feet long—should be marked accordingly. The handicap stalls all measure 9 feet wide by 18 feet long, with one 11 feet wide by 18 feet long van accessible space and include access aisles of 5 feet for van accessibility, which meets the City's standards.

Recommendation: The parking stalls should meet the City's off-street parking design standard for

90-degree uniform parking stalls (8.5 feet wide by 17 feet long) and compact parking stalls (8 feet wide by 16 feet long). Compact parking stalls should be

marked accordingly.

Truck Access and Circulation

The project site plan was reviewed for truck access using truck turning-movement templates for a SU-30 truck type (single unit trucks), which represents small emergency vehicles, garbage trucks, and small to medium delivery trucks. Based on the site plan configuration, adequate access would be provided for trucks to access the site from Fortune Drive and Trade Zone Boulevard and maneuver through the site via the drive aisles provided.

Loading Operations

The site plan shows one loading zone along the eastern edge of the new building and two loading zones along the eastern edge of the existing building. The loading zone meets the City's minimum required space of 10 feet wide and 30 feet long.

Garbage Collection

The site plan does not show trash enclosures for the project site. Any trash bins should be wheeled out to designated areas along the curb on garbage collection days. The garbage bins should be returned to the project site immediately after garbage pick-up.

Emergency Vehicle Access

Fortune Drive and Trade Zone Boulevard would provide emergency vehicle access to all sides of the project building. The City of San Jose Fire Department requires that all portions of the buildings be within 150 feet of a fire department access road and requires a minimum of 6 feet clearance from the property line along all sides of the buildings. According to the project site plan, the project would meet the 6-foot clearance requirement. However, it is not clear how close emergency vehicles can reach the new building via the Trade Zone Boulevard driveway. Potentially, a small portion of the new building along the east edge would be outside of the 150-foot fire access distance. The project should either provide the necessary access or consider the fire variance process for mitigation of non-compliance.

Recommendation: The project should ensure all portions of the buildings are within 150 feet of the fire department access roads.

Pedestrian, Bicycle, and Transit Facilities

All new development projects in San Jose should encourage multi-modal travel, consistent with the goals and policies of the City's General Plan. It is the goal of the General Plan that all development projects accommodate and encourage the use of non-automobile transportation modes to achieve San Jose's mobility goals and reduce vehicle trip generation and vehicle miles traveled. In addition, the adopted City Bike Master Plan establishes goals, policies and actions to make bicycling a daily part of



life in San Jose. The Master Plan includes designated bike lanes along many City streets, 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.

Bike and Pedestrian Access and On-Site Circulation

The overall network of sidewalks and crosswalks in the study area provides limited connectivity. The project frontages have existing sidewalks, which would remain. There are gaps in the pedestrian routes between the project site and the nearest bus stops and LRT stations on Lundy Avenue, Montague Expressway, and Capitol Avenue. Project employees would have to travel with caution along these streets between the project site and transit stops.

Most of the nearby intersections have ADA curb ramps at the crosswalks, except on the southwestern corner of the Lundy Avenue and Trade Zone Boulevard intersection. Additionally, there are no sidewalks at the corner and along the west side of Lundy Avenue for 320 feet from the corner. The missing ADA ramp and sidewalks are within a ½ mile radius of the project site; therefore, the City may require the project to construct the missing ADA ramp and sidewalks. These improvements would facilitate pedestrian travel between the project site and the nearest bus stop on Lundy Avenue.

Bike lanes are present on Ringwood Avenue, Trade Zone Boulevard, and Lundy Avenue surrounding the project site, as well as on Capitol Avenue. There are no designated striped bike lanes or shared bike routes on Fortune Drive. However, because Fortune Drive carries relatively low traffic volumes, it is conducive to bicycle travel and connects bicyclists to the existing bicycle facilities.

Transit Services

The project site is served by VTA local route 77 and ACE Shuttle 831 on Lundy Avenue and local route 321 on Montague Expressway. Light Rail Route 901 is located about 0.8 mile from the project site with the stations on Capitol Avenue at Trade Zone Boulevard. The bus stops closest to the project site are located on Lundy Avenue about 600 feet from the project frontage, north of the intersection of Lundy Avenue and Fortune Drive.

Due to the convenient location of the bus stops, it is assumed that some employees of the project would utilize the existing transit services. However, given that less than 20 trips are generated during either the AM or PM peak hour, the increase in transit riders would be minimal. Any possible increase in new riders from the project could be accommodated by the currently available capacity of the bus services in the study area, and improvement of the existing transit service would not be necessary with the project.

Due to the small amount of the vehicle trips generated by the project, the project would result in a minimal increase in vehicle delay at the study intersections and would not cause a noticeable change in transit travel time and vehicle delay for the bus routes in the study area.

Parking

Vehicle Parking

The City of San Jose's off-street parking requirements as described in the City's Zoning Code (Chapter 20.90, Table 20-210) for data centers are summarized in Table 6. The project proposes to provide 103 standard parking spaces, 7 accessible spaces (2van accessible space), and 7 clean air vehicle spaces, for a total of 117 parking spaces. Therefore, the project meets the City's parking requirement of 89 parking spaces.



Table 6 Vehicle Parking Requirements

Land Use	Size	Required Parking Rate ¹	Required Spaces
Proposed Data Center Buildi	ng		
Office	13.987 ksf (GFA)	1 space per 0.25 ksf of floor area ³	48
Computer Equipment Space ²	111.712 ksf (GFA)	1 space per 5 ksf of floor area ³	19
Existing Data Center Building	g to Remain		
Office	2.556 ksf (GFA)	1 space per 0.25 ksf of floor area ³	9
Computer Equipment Space ²	75.888 ksf (GFA)	1 space per 5 ksf of floor area ³	13
Sitewide Total			89
N .			

Notes:

ksf = 1,000 square feet

- 1. Vehicular parking requirements per the City of San Jose's Zoning Code, Chapter 20.90.
- 2. Gross floor area devoted to computer equipment space.
- 3. Floor area is defined as 85% of the total gross floor area (GFA) of the building.

Bicycle Parking

The City of San Jose's bicycle parking requirements as described in the City's Zoning Code (Chapter 20.90, Tables 20-190) for data centers are summarized in Table 7. At least 80 percent of the bicycle parking spaces should be provided in short-term bicycle parking spaces and a maximum of 20 percent should be provided in long-term bicycle spaces. The site plan shows 8 bicycle racks located near the entrances of the new building on concrete walkway along the west side of the new building. Therefore, the project meets the City's parking requirement of 8 parking spaces.

Table 7
Bicycle Parking Requirements

Land Use	Size	Required Parking Rate ¹	Required Spaces
Proposed Data Center Build	ing		
Office	13.987 ksf (GFA)	1 space per 5 ksf of floor area ³	3
Computer Equipment Space ²	111.712 ksf (GFA)	1 space per 50 ksf of floor area ³	2
Existing Data Center Buildin	g to Remain		
Office	2.556 ksf (GFA)	1 space per 5 ksf of floor area ³	1
Computer Equipment Space ²	75.888 ksf (GFA)	1 space per 50 ksf of floor area ³	2
Sitewide Total			8
Natas			

<u>Notes</u>

ksf = 1,000 square feet

- 1. Vehicular parking requirements per the City of San Jose's Zoning Code, Chapter 20.90.
- 2. Gross floor area devoted to computer equipment space.
- 3. Floor area is defined as 85% of the total gross floor area (GFA) of the building.



Motorcycle Parking

The City requires one motorcycle parking space for every 50 code-required vehicle parking spaces for office uses (per Chapter 20.90, Table 20-250 of the City's Zoning Code). Thus, the project is required to provide a total of 3 motorcycle spaces. The site plan shows 4 motorcycle parking spaces.

Construction Activities

Typical activities related to the construction of any development could include lane narrowing and/or lane closures, sidewalk and pedestrian crosswalk closures, and bike lane closures. In the event of any type of closure, clear signage (e.g., closure and detour signs) must be provided to ensure vehicles, pedestrians and bicyclists are able to adequately reach their intended destinations safely. Per City standard practice, the project would be required to submit a construction management plan for City approval that addresses the construction schedule, street closures and/or detours, construction staging areas and parking, and the planned truck routes.



5. Conclusions

This study was conducted for the purpose of identifying the potential transportation impacts related to the proposed development. The potential impacts of the project were evaluated in accordance with the standards and methodologies set forth by the City of San Jose. Based on the City of San Jose's Transportation Analysis Policy and the *Transportation Analysis Handbook*, the transportation analysis report for the project includes a CEQA transportation analysis and a local transportation analysis.

CEQA Transportation Analysis

The VMT generated by the project (14.95 VMT per employee) would exceed the threshold of 14.37 VMT per employee for industrial developments; therefore, the project would result in a significant transportation impact on VMT. The following TDM mitigation measures are required to reduce the significant VMT impact.

- Provide commute trip reduction marketing and education for 100% of eligible employees. This
 would educate and encourage employees to use transit, shared rides, and active modes,
 therefore lowering the number of single occupancy vehicle trips.
- Provide a rideshare program for 100% of eligible employees. This would encourage employees
 to carpool with other employees and/or through ridematching services, which help employees
 find other commuters traveling in the same direction.

The project would be required to implement a TDM plan with these TDM measures to reduce the project VMT. The TDM measures should be offer to 100% of eligible employees of the existing and new data center buildings on the project site. The combination of the mitigation measures would reduce the project VMT to 14.36 per employee, which would make the project impact less than significant.

The project is consistent with the General Plan's long-range transportation goals and would result in a less-than-significant cumulative impact.

Local Transportation Analysis

Intersection Traffic Operations

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

Other Transportation Issues

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



Recommendations

- The project should widen its western and eastern driveways on Fortune Drive to 32 feet per the City of San Jose standards.
- The City's standard minimum width for two-way drive aisles is 26 feet where 90-degree parking is provided. The two-way drive aisles within the site with 90-degree parking are shown to vary from 25 to 26 feet wide. The project requires City approval for any reduction in the standard drive aisle width.
- The parking stalls should meet the City's off-street parking design standard for 90-degree uniform parking stalls (8.5 feet wide by 17 feet long) and compact parking stalls (8 feet wide by 16 feet long). Compact parking stalls should be marked accordingly.
- The project should ensure that all portions of the buildings are within 150 feet of the fire department access roads.



2001 Fortune Drive Data Center Transportation Analysis

Technical Appendices

Appendix A

Traffic Counts

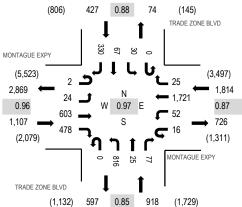


Location: 1 TRADE ZONE BLVD & MONTAGUE EXPY AM

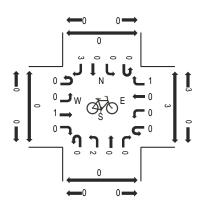
Date: Tuesday, September 17, 2019 Peak Hour: 07:30 AM - 08:30 AM

Peak 15-Minutes: 08:15 AM - 08:30 AM

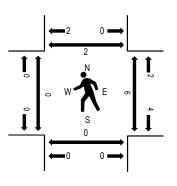
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

	MO	NTAG	UE EX	PY	MOM	NTAGL	JE EXP	Υ	TRA	DE ZO	NE BL	٧D	TRA	ADE ZO	NE BL	VD						
Interval		Eastb	ound			Westb	ound			Northb	ound			South	ound			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	0	5	94	87	7	18	548	8	0	163	4	9	0	4	7	31	985	4,077	0	1	0	2
7:15 AM	1	4	149	90	1	9	465	7	0	219	6	14	0	2	5	42	1,014	4,179	0	0	0	0
7:30 AM	0	3	150	89	4	12	501	9	0	182	4	12	0	7	14	54	1,041	4,266	0	0	0	2
7:45 AM	0	8	152	105	2	7	406	10	0	229	7	25	0	8	23	55	1,037	4,198	0	0	0	0
8:00 AM	1	5	158	141	6	14	468	0	0	159	8	19	0	6	20	82	1,087	4,034	0	5	0	0
8:15 AM	1	8	143	143	4	19	346	6	0	246	6	21	0	9	10	139	1,101		0	1	0	0
8:30 AM	0	11	145	146	2	5	309	1	0	183	16	11	0	4	21	119	973		0	11	0	0
8:45 AM	0	2	120	118	4	10	289	0	0	161	7	18	0	1	19	124	873		0	7	0	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	12	1	0	2	16	0	0	10	0	0	0	0	0	0	41
Lights	2	24	559	460	16	50	1,677	25	0	789	23	73	0	29	64	327	4,118
Mediums	0	0	32	17	0	0	28	0	0	17	2	4	0	1	3	3	107
Total	2	24	603	478	16	52	1,721	25	0	816	25	77	0	30	67	330	4,266

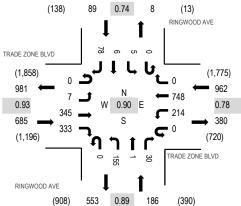


Location: 2 RINGWOOD AVE & TRADE ZONE BLVD AM

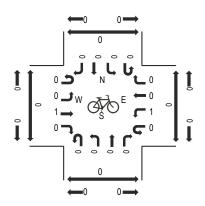
Date: Tuesday, September 17, 2019 Peak Hour: 07:45 AM - 08:45 AM

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

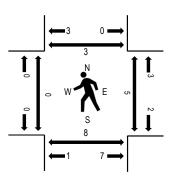
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

	TRA	ADE ZO	ONE BL	.VD	TRA	DE ZO	NE BLV	'D	RII	NGWO	OD AVE	Ξ	RI	NGWO	OD AV	Ε						
Interval		Eastb	ound			Westb	ound			Northb	ound			South	oound			Rolling	Ped	Jestriar	n Crossi	ngs
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	Hour	West	East	South	North
7:00 AM	0	2	83	45	0	19	181	0	0	28	0	6	0	0	0	4	368	1,655	0	0	0	0
7:15 AM	0	0	61	45	0	14	198	0	0	53	1	16	0	0	2	8	398	1,664	0	0	0	2
7:30 AM	0	1	75	58	0	24	145	0	0	38	0	5	0	0	1	9	356	1,767	0	1	0	1
7:45 AM	0	1	90	77	0	48	261	0	0	31	1	8	0	1	1	14	533	1,922	0	0	3	0
8:00 AM	0	4	79	88	0	38	107	0	0	37	0	7	0	1	3	13	377	1,844	0	1	0	1
8:15 AM	0	1	75	85	0	53	218	0	0	40	0	6	0	2	1	20	501		0	2	1	1
8:30 AM	0	1	101	83	0	75	162	0	0	47	0	9	0	1	1	31	511		0	2	4	1
8:45 AM	0	1	79	61	0	84	148	0	0	45	0	12	0	3	2	20	455		0	1	4	1

		East	bound			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	2	7	0	0	2	0	0	5	0	0	0	0	0	0	16
Lights	0	7	327	316	0	213	732	0	0	143	1	29	0	5	6	78	1,857
Mediums	0	0	16	10	0	1	14	0	0	7	0	1	0	0	0	0	49
Total	0	7	345	333	0	214	748	0	0	155	1	30	0	5	6	78	1,922

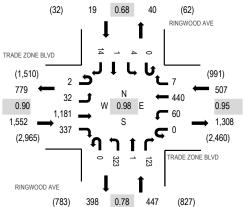


Location: 2 RINGWOOD AVE & TRADE ZONE BLVD PM

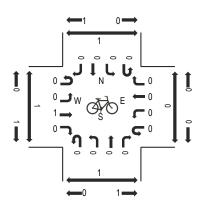
Date: Tuesday, September 17, 2019 Peak Hour: 05:00 PM - 06:00 PM

Peak 15-Minutes: 05:30 PM - 05:45 PM

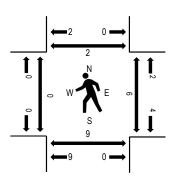
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

	TRA	DE ZC		.VD			NE BLV	D		NGWO		Ε	RI	NGWO		E						
Interval		Eastb	ound			Westb	ound			Northb	ound			South	ound			Rolling	Ped	lestriar	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	0	5	252	60	0	18	103	0	0	71	0	22	0	0	0	2	533	2,290	0	0	1	0
4:15 PM	0	7	270	87	0	9	101	2	0	56	0	9	0	0	0	3	544	2,400	0	0	0	0
4:30 PM	0	6	275	90	0	13	110	0	0	94	0	36	0	0	2	3	629	2,465	0	1	1	0
4:45 PM	0	1	260	100	0	4	124	0	0	63	1	28	0	0	2	1	584	2,483	0	0	6	1
5:00 PM	0	6	268	92	0	15	108	1	0	111	0	39	0	0	0	3	643	2,525	0	0	6	0
5:15 PM	0	9	291	69	0	20	118	1	0	79	0	19	0	1	0	2	609		0	3	1	1
5:30 PM	2	7	292	86	0	11	127	2	0	76	1	37	0	1	1	4	647		0	0	1	0
5:45 PM	0	10	330	90	0	14	87	3	0	57	0	28	0	2	0	5	626		0	3	1	1

		Eas	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	1	2	0	1	2	0	0	0	0	0	0	0	0	0	6
Lights	2	31	1,170	332	0	54	427	7	0	319	1	121	0	4	1	14	2,483
Mediums	0	1	10	3	0	5	11	0	0	4	0	2	0	0	0	0	36
Total	2	32	1,181	337	0	60	440	7	0	323	1	123	0	4	1	14	2,525

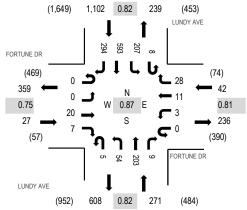


Location: 3 LUNDY AVE & FORTUNE DR AM

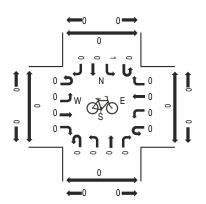
Date: Tuesday, September 17, 2019 Peak Hour: 08:00 AM - 09:00 AM

Peak 15-Minutes: 08:45 AM - 09:00 AM

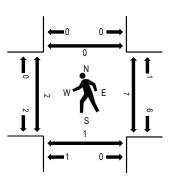
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

		F	ORTU	INE DR		F	ORTU	NE DR			LUNDY	' AVE			LUND	/ AVE							
Inter	val		Eastb	ound			Westb	ound			Northb	ound			Southl	oound			Rolling	Ped	lestriar	r Crossi	ngs
Start '	Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	Hour	West	East	South	North
7:00	AM	0	4	2	4	0	1	1	10	1	3	44	2	0	25	53	13	163	822	0	0	0	0
7:15	AM	0	2	3	2	0	1	0	4	1	6	40	5	0	27	58	13	162	987	0	0	1	0
7:30	AM	0	1	6	3	0	0	0	5	2	8	39	2	2	42	80	28	218	1,154	0	0	0	0
7:45	AM	0	1	2	0	0	0	2	8	1	10	49	0	5	38	137	26	279	1,305	0	0	1	0
8:00	AM	0	0	8	0	0	2	1	5	1	17	64	1	5	42	145	37	328	1,442	0	0	0	0
8:15	AM	0	0	1	4	0	0	3	10	2	14	45	2	2	52	123	71	329		0	2	0	0
8:30	AM	0	0	7	1	0	1	5	4	2	11	46	1	1	53	158	79	369		0	3	0	0
8:45	AM	0	0	4	2	0	0	2	9	0	12	48	5	0	60	167	107	416		2	2	1	0

		East	oound			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	1	0	0	1	2	0	4
Lights	0	0	20	7	0	3	11	28	5	52	195	9	8	205	580	292	1,415
Mediums	0	0	0	0	0	0	0	0	0	2	7	0	0	1	11	2	23
Total	0	0	20	7	0	3	11	28	5	54	203	9	8	207	593	294	1,442



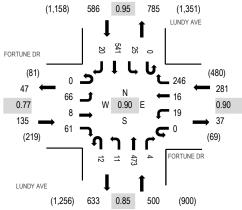
Location: 3 LUNDY AVE & FORTUNE DR PM

Date: Tuesday, September 17, 2019 Peak Hour: 04:45 PM - 05:45 PM

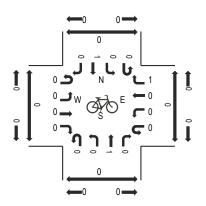
1 eak 110ai. 04.431 W - 05.431 W

Peak 15-Minutes: 05:30 PM - 05:45 PM

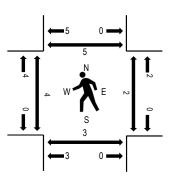
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

	F	ORTU	INE DR	1	F	ORTU	NE DR			LUNDY	AVE			LUND	/ AVE							
Interval		Eastb	ound			Westb	ound			Northb	ound			South	oound			Rolling	Ped	lestriar	n Crossir	ngs
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	Hour	West	East	South	North
4:00 PM	0	4	6	7	0	3	0	43	1	2	91	1	0	6	132	4	300	1,293	0	3	0	0
4:15 PM	0	5	3	7	0	2	0	48	3	3	73	2	0	5	131	4	286	1,395	0	0	0	1
4:30 PM	0	7	3	32	0	4	4	50	5	8	112	2	1	2	129	3	362	1,449	1	0	0	0
4:45 PM	0	15	2	16	0	3	8	62	2	2	93	2	0	7	128	5	345	1,502	0	1	0	5
5:00 PM	0	24	3	8	0	9	4	65	3	5	138	1	0	7	129	6	402	1,464	3	0	1	0
5:15 PM	0	7	2	14	0	2	2	55	2	1	108	1	0	6	136	4	340		0	0	1	0
5:30 PM	0	20	1	23	0	5	2	64	5	3	134	0	0	5	148	5	415		1	1	1	0
5:45 PM	0	3	0	7	0	5	4	36	3	1	93	0	0	2	152	1	307		0	1	0	1

		East	bound			West	oound			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	0	0	0	0	4	0	0	0	1	1	6
Lights	0	65	6	60	0	19	15	244	12	10	461	4	0	24	531	19	1,470
Mediums	0	1	2	1	0	0	1	2	0	1	8	0	0	1	9	0	26
Total	0	66	8	61	0	19	16	246	12	11	473	4	0	25	541	20	1,502

Appendix B

Approved Trips Inventory

2

20 2 10

AM PROJECT TRIPS

Intersection of : N Capitol Av & Cropl	ley Av & Trade	e Zone	Bl									
Traffix Node Number : 3381												
Permit No./Proposed Land Use/Description/Location	M09 NBL	M08 NBT	M07 NBR	M03 SBL	M02 SBT	M01 SBR	M12 EBL	M11 EBT	M10 EBR	M06 WBL	M05 WBT	M04 WBR
NSJ LEGACY	29	24	4	0	4	0	4	18	20	2	5	2
NORTH SAN JOSE												
PDC88-08-097 (3-06700) Residential CROPLEY & OLD PIEDMONT BRANCATO - 39 UNITS	0	0	0	0	0	0	0	1	0	0	5	0

29 24 4 0 4 0 4 19

	LEFT	THRU	RIGHT
NORTH	0	4	0
EAST	2	10	2
SOUTH	29	24	4
WEST	4	19	20

TOTAL:

PM PROJECT TRIPS

08/13/2019

Intersection of : N Capitol Av & Crop	ley Av & Trade	e Zone	Bl									
Traffix Node Number : 3381												
Permit No./Proposed Land Use/Description/Location	M09 NBL	M08 NBT	M07 NBR	M03 SBL	M02 SBT	M01 SBR	M12 EBL	M11 EBT	M10 EBR	M06 WBL	M05 WBT	M04 WBR
NSJ LEGACY	16	38	19	4	33	1	1	12	13	3	2	1
NORTH SAN JOSE												
PDC88-08-097 (3-06700) Residential CROPLEY & OLD PIEDMONT BRANCATO - 39 UNITS	0	0	0	0	0	0	0	5	0	0	1	0

TOTAL: 16 38 19 4 33 1 1 17 13 3 3 1

	LEFT	THRU	RIGHT
NORTH	4	33	1
EAST	3	3	1
SOUTH	16	38	19
WEST	1	17	13

AM PROJECT TRIPS

Intersection of : Fortune Dr & Lundy Av

Traffix Node Number: 3531

M09 M08 M07 M03 M02 M01 M12 M11 M10 M06 M05 M04 Permit No./Proposed Land NBL NBT NBR SBL SBT SBR EBL EBT EBR WBL WBT WBR Use/Description/Location NSJ 3 7 0 1 6 2 0 0 0 0 0 1

LEGACY

NORTH SAN JOSE

TOTAL: 3 7 0 1 6 2 0 0 0 0 1

	LEFT	THRU	RIGHT
NORTH	1	6	2
EAST	0	0	1
SOUTH	3	7	0
WEST	0	0	0

PM PROJECT TRIPS	08/13/2019
------------------	------------

Intersection of : Fortune Dr & Lundy Av

Traffix Node Number: 3531

Permit No./Proposed Land	M09	80M	M07	M03	M02	M01	M12	M11	M10	M06	M05	M04
Use/Description/Location	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
NSJ	4	19	0	0	10	2	0	0	0	0	0	2

LEGACY

NORTH SAN JOSE

TOTAL: 4 19 0 0 10 2 0 0 0 0 2

	LEFT	THRU	RIGHT
NORTH	0	10	2
EAST	0	0	2
SOUTH	4	19	0
WEST	0	0	0

AM PROJECT TRIPS 08/13/2019

Intersection of : Lundy Av & Lundy Pl & Trac	de Zone	Bl										
Traffix Node Number : 3663	240.0	2400	140 7				241.0		241.0	340 6	140 F	240.4
Permit No./Proposed Land Use/Description/Location	M09 NBL	M08 NBT	M07 NBR	M03 SBL	M02 SBT	M01 SBR	M12 EBL	M11 EBT	M10 EBR	M06 WBL	M05 WBT	M04 WBR
NSJ LEGACY	6	1	2	0	0	0	10	17	35	10	11	1
NORTH SAN JOSE												
PDC03-108 OFF (3-16680) Retail/Commercial BOTH SIDES OF BERRYESSA RD WEST OF UNION PACIFI BERRYESSA FLEA MKT (OFFICE)	0	0	0	0	0	0	0	0	3	0	0	0
PDC03-108 RES (3-16680) Residential BOTH SIDES OF BERRYESSA, WEST OF UNION PACIFIC BERRYESSA FLEA MKT (RESIDENTIAL)	13	0	0	0	0	0	0	0	7	0	0	0
PDC03-108 RET (3-16680) Retail/Commercial	0	0	0	0	0	0	0	0	0	0	0	0

TOTAL: 19 1 2 0 0 0 10 17 45 10 11 1

	LEFT	THRU	RIGHT
NORTH	0	0	0
EAST	10	11	1
SOUTH	19	1	2
WEST	10	17	45

BOTH SIDES OF BERRYESSA, WEST OF UNION PACIFIC

BERRYESSA FLEA MKT (RETAIL)

24

34

20

12

PM PROJECT TRIPS 08/13/2019

												,
Intersection of : Lundy Av & Lundy Pl & Trac	de Zone	Bl										
Traffix Node Number: 3663												
Permit No./Proposed Land Use/Description/Location	M09 NBL	M08 NBT	M07 NBR	M03 SBL	M02 SBT	M01 SBR	M12 EBL	M11 EBT	M10 EBR	M06 WBL	M05 WBT	M04 WBR
NSJ LEGACY	8	0	11	0	0	0	0	24	11	34	20	1
NORTH SAN JOSE												
PDC03-108 OFF (3-16680) Retail/Commercial BOTH SIDES OF BERRYESSA RD WEST OF UNION PACIFI BERRYESSA FLEA MKT (OFFICE)	3	0	0	0	0	0	0	0	1	0	0	0
PDC03-108 RES (3-16680) Residential BOTH SIDES OF BERRYESSA, WEST OF UNION PACIFIC BERRYESSA FLEA MKT (RESIDENTIAL)	6	0	0	0	0	0	0	0	12	0	0	0
PDC03-108 RET (3-16680) Retail/Commercial BOTH SIDES OF BERRYESSA, WEST OF UNION PACIFIC BERRYESSA FLEA MKT (RETAIL)	0	0	0	5	0	1	2	0	0	0	0	11

17 0 11 5 0 1 2 24

	LEFT	THRU	RIGHT
NORTH	5	0	1
EAST	34	20	12
SOUTH	17	0	11
WEST	2	24	24

TOTAL:

AM PROJECT TRIPS	08/13/2019

Intersection of : Ringwood Av & Trade Zone Bl

Traffix Node Number: 3905

Permit No./Proposed Land	M09	80M	M07	M03	M02	M01	M12	M11	M10	M06	M05	M04
Use/Description/Location	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
NSJ	0	0	0	0	0	0	0	37	28	3	26	0

LEGACY

NORTH SAN JOSE

TOTAL: 0 0 0 0 0 0 37 28 3 26 0

	LEFT	THRU	RIGHT
NORTH	0	0	0
EAST	3	26	0
SOUTH	0	0	0
WEST	0	37	28

PM PROJECT TRIPS

Intersection of : Ringwood Av & Trade Zone Bl

Traffix Node Number: 3905

M09 M08 M07 M03 M02 M01 M12 M11 M10 M06 M05 M04 Permit No./Proposed Land NBL NBT NBR SBL SBT SBR EBL EBT EBR WBL WBT WBR Use/Description/Location NSJ Ω 0 0 0 0 0 0 30 5 72 0

LEGACY

NORTH SAN JOSE

TOTAL: 0 0 0 0 0 0 30 7 5 72 0

	LEFT	THRU	RIGHT
NORTH	0	0	0
EAST	5	72	0
SOUTH	0	0	0
WEST	0	30	7

Milpitas Approved Project Trips near 2001 Fortune Drive

				Da	ily	AM Peak Hour		PM Peak Hour					
Land Use	ITE Code	Size*	Unit	Rate	Trips	Rate	ln	Out	Total	Rate	ln	Out	Total
730 E Capitol Avenue													
Retail/Commercial	820	5	ksf	37.75	189	0.94	3	2	5	3.81	9	10	19
Residential	221	582	units	5.44	3166	0.36	54	155	210	0.44	156	100	256
Total							57	157	214		165	110	275
720 Montague Expressway													
Retail/Commercial	820	5.63	ksf	37.75	213	0.94	3	2	5	3.81	10	11	21
Residential	221	216	units	5.44	1175	0.36	20	58	78	0.44	58	37	95
Total							23	60	83		68	48	116
1256 Piper Drive													
Retail/Commercial	820	2.937	ksf	37.75	111	0.94	2	1	3	3.81	5	6	11
Apartments	222	210	units	4.45	935	0.31	16	49	65	0.36	46	29	76
Townhomes	220	98	units	7.32	717	0.46	10	35	45	0.56	35	20	55
Total							28	85	113		86	56	142
Total Background Trips							109	302	410		320	214	533

Notes:

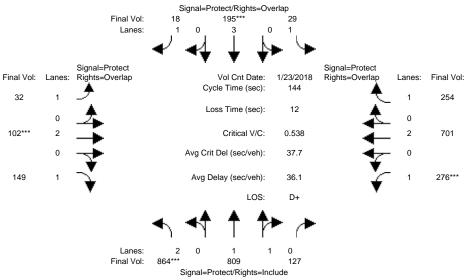
^{1.} Trip generation was based on average rates contained in the ITE Trip Generation Manual, 10th Edition, for the specified land uses.

Appendix C

Level of Service Calculations

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

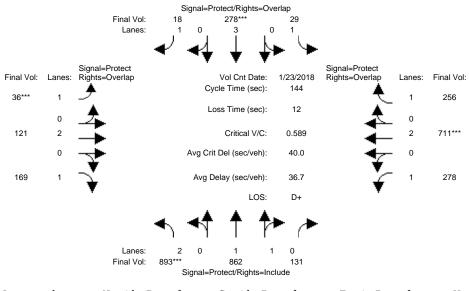
Intersection #3381: CAPITOL AVE/TRADE ZONE BLVD



3
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R
Min. Green: 7 10 10 7 10 10 7 10 10 7 10 10
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Volume Module: >> Count Date: 23 Jan 2018 <<
Base Vol: 864 809 127 29 195 18 32 102 149 276 701 254
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
Initial Bse: 864 809 127 29 195 18 32 102 149 276 701 254
Added Vol: 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 864 809 127 29 195 18 32 102 149 276 701 254
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
PHF Volume: 864 809 127 29 195 18 32 102 149 276 701 254
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 864 809 127 29 195 18 32 102 149 276 701 254
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: 864 809 127 29 195 18 32 102 149 276 701 254
Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 190
Adjustment: 0.83 0.98 0.95 0.92 1.00 0.92 0.92 1.00 0.92 0.92 1.00 0.92
Lanes: 2.00 1.72 0.28 1.00 3.00 1.00 1.00 2.00 1.00 1.00 2.00 1.00
Final Sat.: 3150 3198 502 1750 5700 1750 1750 3800 1750 1750 3800 1750
Capacity Analysis Module:
Vol/Sat: 0.27 0.25 0.25 0.02 0.03 0.01 0.02 0.03 0.09 0.16 0.18 0.15
Crit Moves: **** **** ****
Green Time: 71.1 68.0 68.0 13.1 10.0 20.6 10.6 10.0 81.1 40.9 40.3 53.3
Volume/Cap: 0.56 0.54 0.54 0.18 0.49 0.07 0.25 0.39 0.15 0.56 0.66 0.39
Delay/Veh: 25.9 27.1 27.1 61.1 65.5 53.5 63.9 65.0 15.1 45.2 47.4 33.8
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
AdjDel/Veh: 25.9 27.1 27.1 61.1 65.5 53.5 63.9 65.0 15.1 45.2 47.4 33.8
LOS by Move: C C C E E D- E E B D D C-
LOS by Move: C C C E E D- E E B D D C- HCM2kAvgQ: 16 15 15 1 3 1 1 2 3 11 14 9
Note: Queue reported is the number of cars per lane.

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

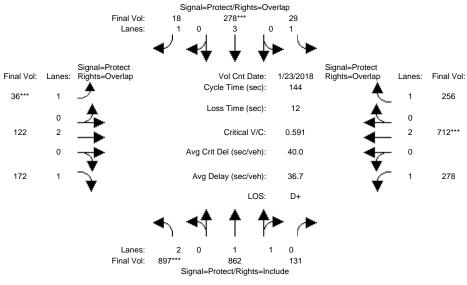
Intersection #3381: CAPITOL AVE/TRADE ZONE BLVD



North Bound South Bound East Bound West Bound L - T - R L - T - R Approach: West Bound Movement: -----|----|-----| 7 10 10 7 10 10 7 10 10 7 10 10 Min. Green: -----| Volume Module: >> Count Date: 23 Jan 2018 << Base Vol: 893 862 131 29 278 18 36 121 169 278 711 256 Initial Bse: 893 862 131 29 278 18 36 121 169 278 711 256 0 0 0 0 0 0 0 0 Added Vol: 0 0 0 0 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 Initial Fut: 893 862 131 29 278 18 36 121 169 278 711 256 PHF Volume: 893 862 131 29 278 18 36 121 169 278 711 256 Reduct Vol: 0 0 0 0 0 0 0 0 0 Ω 0 36 121 169 278 711 256 Reduced Vol: 893 862 131 29 278 18 36 121 169 278 711 256 FinalVolume: 893 862 131 29 278 18 Saturation Flow Module: Adjustment: 0.83 0.98 0.95 0.92 1.00 0.92 0.92 1.00 0.92 0.92 1.00 0.92 Lanes: 2.00 1.73 0.27 1.00 3.00 1.00 1.00 2.00 1.00 1.00 2.00 1.00 Final Sat.: 3150 3212 488 1750 5700 1750 1750 3800 1750 1750 3800 1750 -----||-----||-----| Capacity Analysis Module: Vol/Sat: 0.28 0.27 0.27 0.02 0.05 0.01 0.02 0.03 0.10 0.16 0.19 0.15 Crit Moves: **** * * * * * * * * Green Time: 68.2 67.7 67.7 12.3 11.7 18.7 7.0 15.8 84.1 36.2 45.0 57.3 Volume/Cap: 0.60 0.57 0.57 0.19 0.60 0.08 0.42 0.29 0.17 0.63 0.60 0.37 Delay/Veh: 28.5 28.1 28.1 61.9 66.0 55.2 69.9 59.3 13.9 50.9 42.7 30.9 AdjDel/Veh: 28.5 28.1 28.1 61.9 66.0 55.2 69.9 59.3 13.9 50.9 42.7 30.9 LOS by Move: C C C E E E+ E E+ B D D 2 2 4 12 13 C 5 17 16 HCM2kAvgQ: 16 1 1 Note: Queue reported is the number of cars per lane.

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

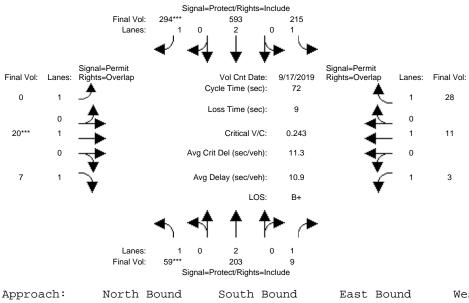
Intersection #3381: CAPITOL AVE/TRADE ZONE BLVD

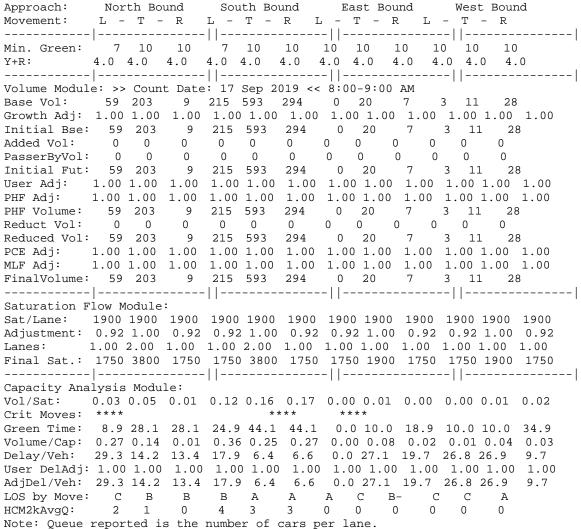


North Bound South Bound East Bound West Bound L - T - R L - T - R Approach: West Bound Movement: -----|----|-----| 7 10 10 7 10 10 7 10 10 7 10 10 Min. Green: -----|------||-------| Volume Module: >> Count Date: 23 Jan 2018 << Base Vol: 893 862 131 29 278 18 36 121 169 278 711 256 Initial Bse: 893 862 131 29 278 18 36 121 169 278 711 256 0 1 0 4 0 0 0 0 1 Added Vol: 0 0 3 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 Initial Fut: 897 862 131 29 278 18 36 122 172 278 712 256 PHF Volume: 897 862 131 29 278 18 36 122 172 278 712 256 0 0 0 0 0 0 0 Reduct Vol: 0 0 Ω 0 36 122 172 278 712 256 Reduced Vol: 897 862 131 29 278 18 36 122 172 278 712 256 FinalVolume: 897 862 131 29 278 18 Saturation Flow Module: Adjustment: 0.83 0.98 0.95 0.92 1.00 0.92 0.92 1.00 0.92 0.92 1.00 0.92 Lanes: 2.00 1.73 0.27 1.00 3.00 1.00 1.00 2.00 1.00 1.00 2.00 1.00 Final Sat.: 3150 3212 488 1750 5700 1750 1750 3800 1750 1750 3800 1750 -----||-----||-----| Capacity Analysis Module: Vol/Sat: 0.28 0.27 0.27 0.02 0.05 0.01 0.02 0.03 0.10 0.16 0.19 0.15 Crit Moves: **** * * * * * * * * Green Time: 68.3 67.8 67.8 12.3 11.7 18.7 7.0 15.8 84.1 36.2 45.0 57.2 Volume/Cap: 0.60 0.57 0.57 0.19 0.60 0.08 0.42 0.29 0.17 0.63 0.60 0.37 Delay/Veh: 28.5 28.0 28.0 61.9 66.1 55.2 69.9 59.3 13.9 51.0 42.8 30.9 AdjDel/Veh: 28.5 28.0 28.0 61.9 66.1 55.2 69.9 59.3 13.9 51.0 42.8 30.9 LOS by Move: C C C E E E+ E E+ B D-2 2 4 12 D C 5 17 16 HCM2kAvgQ: 16 1 1 12 13 Note: Queue reported is the number of cars per lane.

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

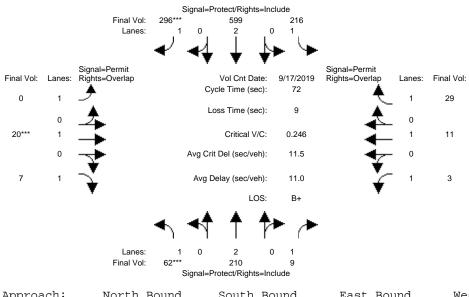
Intersection #3531: LUNDY AVE/FORTUNE DR





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

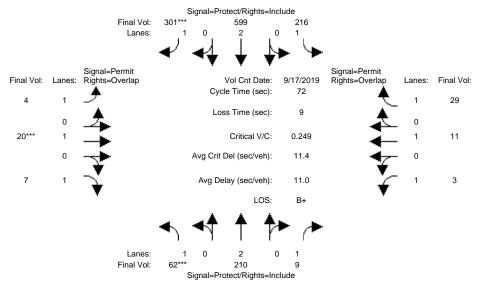
Intersection #3531: LUNDY AVE/FORTUNE DR

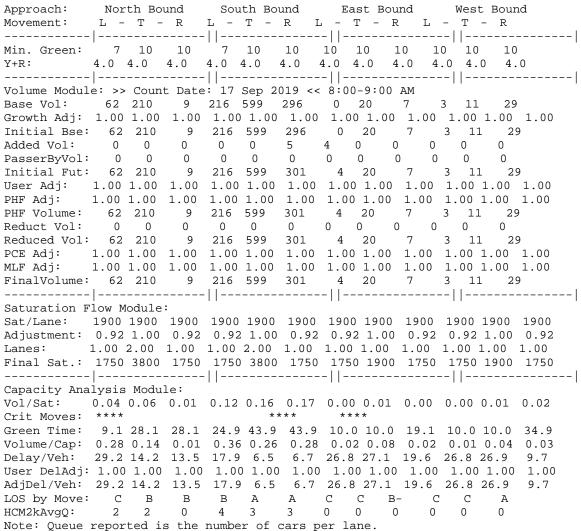


Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R L - T - R
Min. Green: 7 10 10 7 10 10 10 10 10 10 10 10
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Volume Module: >> Count Date: 17 Sep 2019 << 8:00-9:00 AM
Base Vol: 62 210 9 216 599 296 0 20 7 3 11 29
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
Initial Bse: 62 210 9 216 599 296 0 20 7 3 11 29
Added Vol: 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0
Initial Fut: 62 210 9 216 599 296 0 20 7 3 11 29
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
PHF Volume: 62 210 9 216 599 296 0 20 7 3 11 29
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 62 210 9 216 599 296 0 20 7 3 11 29
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: 62 210 9 216 599 296 0 20 7 3 11 29
Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 190
Adjustment: 0.92 1.00 0.92 0.92 1.00 0.92 0.92 1.00 0.92 0.92 1.00 0.92
Lanes: 1.00 2.00 1.00 1.00 2.00 1.00 1.00 1.00
Final Sat.: 1750 3800 1750 1750 3800 1750 1750 1900 1750 1750 1900 1750
Capacity Analysis Module:
Vol/Sat: 0.04 0.06 0.01 0.12 0.16 0.17 0.00 0.01 0.00 0.01 0.02
Crit Moves: **** ****
Green Time: 9.2 28.1 28.1 24.9 43.8 43.8 0.0 10.0 19.2 10.0 10.0 34.9
Volume/Cap: 0.28 0.14 0.01 0.36 0.26 0.28 0.00 0.08 0.02 0.01 0.04 0.03
Delay/Veh: 29.1 14.2 13.5 17.9 6.6 6.8 0.0 27.1 19.5 26.8 26.9 9.7
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
AdjDel/Veh: 29.1 14.2 13.5 17.9 6.6 6.8 0.0 27.1 19.5 26.8 26.9 9.7
LOS by Move: C B B B A A A C B- C C A HCM2kAvgQ: 2 2 0 4 3 3 0 0 0 0 0 0
Note: Queue reported is the number of cars per lane.

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

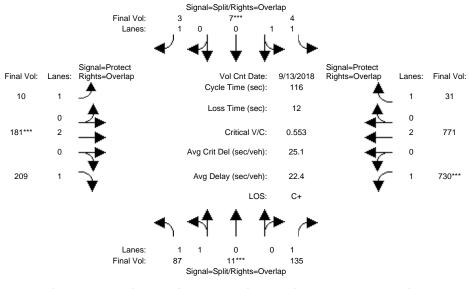
Intersection #3531: LUNDY AVE/FORTUNE DR





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

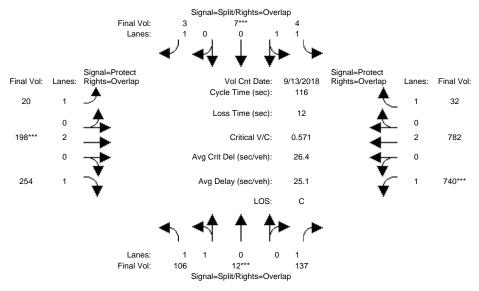
Intersection #3663: LUNDY AVE/TRADE ZONE BLVD



Approach: North Bound South Bound East Bound West Movement: L - T - R L - T - R L - T - R L - T -	- R
	10
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0	4.0
Volume Module: >> Count Date: 13 Sep 2018 <<	·
Base Vol: 87 11 135 4 7 3 10 181 209 730 771	
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	1.00 1.00
Initial Bse: 87 11 135 4 7 3 10 181 209 730 771	31
Added Vol: 0 0 0 0 0 0 0 0 0 0	0
PasserByVol: 0 0 0 0 0 0 0 0 0 0	0
Initial Fut: 87 11 135 4 7 3 10 181 209 730 771	31
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	
PHF Volume: 87 11 135 4 7 3 10 181 209 730 771	31
Reduct Vol: 0 0 0 0 0 0 0 0 0 0	~
Reduced Vol: 87 11 135 4 7 3 10 181 209 730 771	
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	00 1.00
FinalVolume: 87 11 135 4 7 3 10 181 209 730 771	
Saturation Flow Module:	
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 190	
Adjustment: 0.93 0.95 0.92 0.92 1.00 0.92 0.92 1.00 0.92 0.92	
Lanes: 1.78 0.22 1.00 1.00 1.00 1.00 2.00 1.00 1.00	
Final Sat.: 3151 398 1750 1750 1900 1750 1750 3800 1750 1750 3	
Capacity Analysis Module:	
Vol/Sat: 0.03 0.03 0.08 0.00 0.00 0.00 0.01 0.05 0.12 0.42 0	1.20 0.02
Crit Moves: **** **** ****	
Green Time: 10.0 10.0 84.0 10.0 10.0 29.3 19.3 10.0 20.0 74.0	
Volume/Cap: 0.32 0.32 0.11 0.03 0.04 0.01 0.03 0.55 0.69 0.65	
Delay/Veh: 50.4 50.4 4.8 48.6 48.7 32.5 40.6 52.9 51.9 14.5 1	
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	
AdjDel/Veh: 50.4 50.4 4.8 48.6 48.7 32.5 40.6 52.9 51.9 14.5	
LOS by Move: D D A D D C- D D- B B	A
HCM2kAvgQ: 2 2 2 0 0 0 0 3 8 17 7	0
Note: Queue reported is the number of cars per lane.	

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

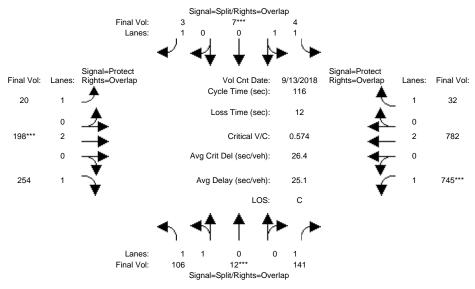
Intersection #3663: LUNDY AVE/TRADE ZONE BLVD

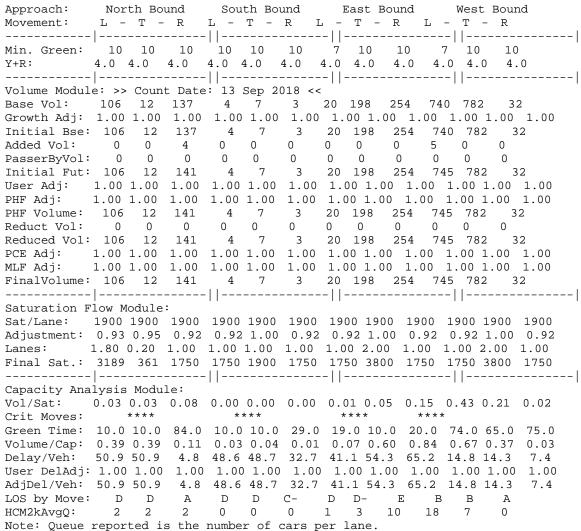


```
North Bound South Bound East Bound West Bound L - T - R L - T - R
Approach:
                                West Bound
Movement:
-----|----|-----|
-----|
Volume Module: >> Count Date: 13 Sep 2018 <<
Base Vol: 106 12 137 4 7 3 20 198 254 740 782
Initial Bse: 106 12 137
               4 7 3 20 198 254 740 782 32
            0
               0
                  0
                               0 0
Added Vol:
       0
         0
                    0
                       0 0
                            0
PasserByVol:
       0
         0
            0
               0 0
                    0
                       0
                         0
                            0 0 0
           137
                 7
                    3
                       20 198 254 740 782 32
Initial Fut: 106 12
               4
     PHF Volume: 106 12
            137
              4 7 3 20 198 254 740 782 32
         0
Reduct Vol:
               0
                            0 0 0
       0
            Ω
                  0
                    0
                      0 0
               4 7
                       20 198 254 740 782 32
Reduced Vol: 106 12
            137
                    3
FinalVolume: 106 12 137
               4 7
                    3 20 198 254 740 782 32
Saturation Flow Module:
Adjustment: 0.93 0.95 0.92 0.92 1.00 0.92 0.92 1.00 0.92 0.92 1.00 0.92
Final Sat.: 3189 361 1750 1750 1900 1750 1750 3800 1750 1750 3800 1750
Capacity Analysis Module:
Vol/Sat: 0.03 0.03 0.08 0.00 0.00 0.00 0.01 0.05 0.15 0.42 0.21 0.02
Crit Moves: ****
                ***
                        * * * *
Green Time: 10.0 10.0 84.0 10.0 10.0 29.0 19.0 10.0 20.0 74.0 65.0 75.0
Volume/Cap: 0.39 0.39 0.11 0.03 0.04 0.01 0.07 0.60 0.84 0.66 0.37 0.03
Delay/Veh: 50.9 50.9
            4.8 48.6 48.7 32.7 41.1 54.3 65.2 14.7 14.3
AdjDel/Veh: 50.9 50.9
            4.8 48.6 48.7 32.7 41.1 54.3 65.2 14.7 14.3
               D D C- D D- E B B O O O 1 3 10 18 7
LOS by Move: D D
            A
        2
HCM2kAvgQ:
          2
             2
Note: Queue reported is the number of cars per lane.
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Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative) Background + Project AM

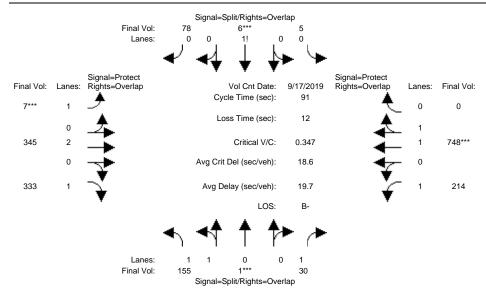
Intersection #3663: LUNDY AVE/TRADE ZONE BLVD





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

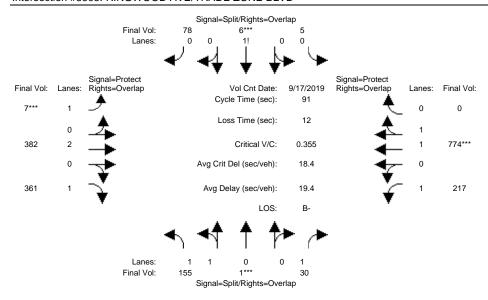
Intersection #3905: RINGWOOD AVE/TRADE ZONE BLVD



			nd East Bound West Bound
Movement: L	- T - R	L - T -	R L - T - R L - T - R
Min. Green: 1	0 10 10	10 10	10 7 10 10 7 10 10
			1.0 4.0 4.0 4.0 4.0 4.0 4.0
			19 << 7:45-8:45 AM
Base Vol: 15		5 6	
			1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 15		5 6	78 7 345 333 214 748 0
Added Vol: (0 0	0 0 0 0 0 0
PasserByVol:			0 0 0 0 0 0
Initial Fut: 15		5 6	78 7 345 333 214 748 0
User Adj: 1.0	0 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
PHF Volume: 15		5 6	78 7 345 333 214 748 0
Reduct Vol: (0 0	0 0 0 0 0 0 0
Reduced Vol: 15		5 6	78 7 345 333 214 748 0
			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 78 7 345 333 214 748 0
			/8 / 345 333 214 /48 U
Saturation Flow		-	
		1000 1000	1900 1900 1900 1900 1900 1900 1900
			0.92 0.92 1.00 0.92 0.92 0.97 0.92
			0.88 1.00 2.00 1.00 1.00 2.00 0.00
			1534 1750 3800 1750 1750 3700 0
		. 110 . 	
Capacity Analysi		11	
		0.05 0.05	0.05 0.00 0.09 0.19 0.12 0.20 0.00
Crit Moves:			****
			19.3 7.0 30.5 41.2 25.5 49.0 0.0
			0.24 0.05 0.27 0.42 0.44 0.38 0.00
			30.1 39.1 22.2 17.2 27.5 12.3 0.0
			1.00 1.00 1.00 1.00 1.00 1.00 1.00
_			30.1 39.1 22.2 17.2 27.5 12.3 0.0
LOS by Move: D			C D C+ B C B A
HCM2kAvgQ: 3	3 1	3 3	2 0 3 7 5 6 0
Note: Queue repo	orted is the	number of c	ars per lane.

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

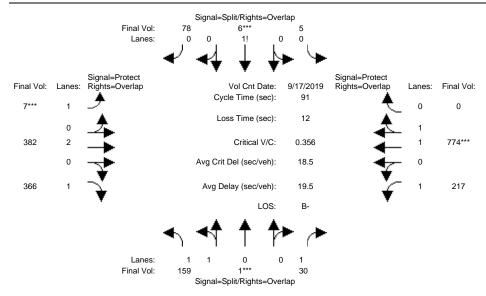
Intersection #3905: RINGWOOD AVE/TRADE ZONE BLVD



North Bound South Bound East Bound West Bound L - T - R L - T - R Approach: West Bound Movement: -----||-----||-----| -----| Volume Module: >> Count Date: 17 Sep 2019 << 7:45-8:45 AM Base Vol: 155 1 30 5 6 78 7 382 361 217 774 5 6 78 7 382 361 217 774 0 Initial Bse: 155 1 30 0 0 Added Vol: 0 0 0 0 0 0 0 0 0 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 Initial Fut: 155 30 5 78 7 382 361 217 774 1 6 PHF Volume: 155 1 30 5 6 78 7 382 361 217 774 0 0 Reduct Vol: 0 0 0 Ω 0 0 0 0 0 0 5 78 7 382 361 217 774 0 Reduced Vol: 155 1 30 6 FinalVolume: 155 1 30 5 6 78 7 382 361 217 774 -----|----||------| Saturation Flow Module: Adjustment: 0.93 0.95 0.92 0.92 0.92 0.92 0.92 1.00 0.92 0.92 0.97 0.92 Lanes: 1.99 0.01 1.00 0.05 0.07 0.88 1.00 2.00 1.00 1.00 2.00 0.00 98 118 1534 1750 3800 1750 1750 3700 Final Sat.: 3527 23 1750 -----|----||------| Capacity Analysis Module: Vol/Sat: 0.04 0.04 0.02 0.05 0.05 0.05 0.00 0.10 0.21 0.12 0.21 0.00 Crit Moves: **** **** *** Green Time: 10.4 10.4 34.9 12.0 12.0 19.0 7.0 32.1 42.5 24.5 49.5 0.0 Volume/Cap: 0.38 0.38 0.04 0.38 0.38 0.24 0.05 0.29 0.44 0.46 0.38 0.00 Delay/Veh: 37.9 37.9 17.6 37.1 37.1 30.3 39.1 21.3 16.7 28.5 12.1 AdjDel/Veh: 37.9 37.9 17.6 37.1 37.1 30.3 39.1 21.3 16.7 28.5 12.1 LOS by Move: D+ D+ В D+ D+ C D C+ B C B 3 0 4 2 5 6 HCM2kAvgQ: 3 3 1 3 7 Note: Queue reported is the number of cars per lane.

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

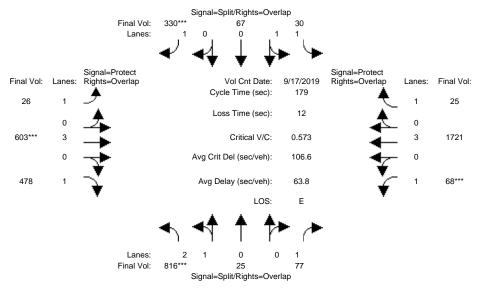
Intersection #3905: RINGWOOD AVE/TRADE ZONE BLVD



Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R
Min. Green: 10 10 10 10 10 10 7 10 10 7 10 10
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Volume Module: >> Count Date: 17 Sep 2019 << 7:45-8:45 AM
Base Vol: 155 1 30 5 6 78 7 382 361 217 774 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
Initial Bse: 155 1 30 5 6 78 7 382 361 217 774 0
Added Vol: 4 0 0 0 0 0 0 5 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 159 1 30 5 6 78 7 382 366 217 774 0
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
PHF Volume: 159 1 30 5 6 78 7 382 366 217 774 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 159 1 30 5 6 78 7 382 366 217 774 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: 159 1 30 5 6 78 7 382 366 217 774 0
Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 190
Adjustment: 0.93 0.95 0.92 0.92 0.92 0.92 0.92 1.00 0.92 0.92 0.97 0.92
Lanes: 1.99 0.01 1.00 0.05 0.07 0.88 1.00 2.00 1.00 1.00 2.00 0.00
Final Sat.: 3528 22 1750 98 118 1534 1750 3800 1750 1750 3700 0
Capacity Analysis Module:
Vol/Sat: 0.05 0.05 0.02 0.05 0.05 0.05 0.00 0.10 0.21 0.12 0.21 0.00
Crit Moves: **** **** ****
Green Time: 10.6 10.6 34.9 12.0 12.0 19.0 7.0 32.1 42.7 24.3 49.4 0.0
Volume/Cap: 0.39 0.39 0.04 0.39 0.39 0.24 0.05 0.28 0.45 0.47 0.39 0.00
Delay/Veh: 37.8 37.8 17.6 37.2 37.2 30.4 39.1 21.3 16.6 28.7 12.2 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
AdjDel/Veh: 37.8 37.8 17.6 37.2 37.2 30.4 39.1 21.3 16.6 28.7 12.2 0.0
LOS by Move: D+ D+ B D+ D+ C D C+ B C B A
HCM2kAvgQ: 3 3 1 3 3 2 0 4 7 5 6 0
Note: Queue reported is the number of cars per lane.

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

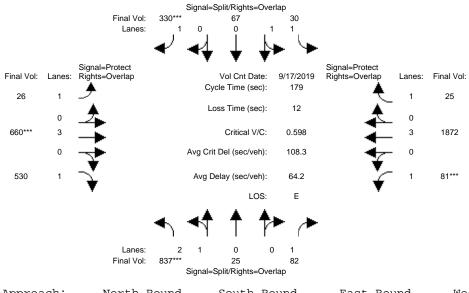
Intersection #5802: MONTAGUE EXPWY/TRADE ZONE BLVD



East Bound Approach: North Bound South Bound West Bound L-T-R L-T-R L-T-R Movement: -----||-----||-----| Min. Green: 37 37 37 15 15 15 11 101 101 14 104 104 5.3 5.3 5.3 5.4 5.4 5.4 4.9 5.8 4.0 4.6 5.8 4.0 ----|----||-----| Volume Module: >> Count Date: 17 Sep 2019 << 7:30-8:30 AM Base Vol: 816 25 77 30 67 330 26 603 478 68 1721 30 67 330 26 603 478 68 1721 25 Initial Bse: 816 25 77 0 0 0 0 0 0 0 0 0 0 Added Vol: 0 0 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 Initial Fut: 816 25 77 30 67 330 26 603 478 68 1721 PHF Volume: 816 25 77 30 67 330 26 603 478 68 1721 25 0 0 0 0 0 0 Reduct Vol: 0 0 0 Ω Ω Ω 77 Reduced Vol: 816 25 30 67 330 26 603 478 68 1721 25 FinalVolume: 816 25 77 30 67 330 26 603 478 68 1721 25 Saturation Flow Module: Adjustment: 0.68 0.95 0.92 1.38 0.50 0.92 0.92 1.00 0.92 0.92 1.00 0.92 Lanes: 2.94 0.06 1.00 1.00 1.00 1.00 3.00 1.00 1.00 3.00 1.00 Final Sat.: 3768 115 1750 2625 950 1750 1750 5700 1750 1750 5700 1750 -----||-----||-----| Capacity Analysis Module: Vol/Sat: 0.22 0.22 0.04 0.01 0.07 0.19 0.01 0.11 0.27 0.04 0.30 0.01 Crit Moves: **** *** **** Green Time: 37.0 37.0 51.0 15.0 15.0 26.0 11.0 101 138.0 14.0 104 119.0 Volume/Cap: 1.05 1.05 0.15 0.14 0.84 1.30 0.24 0.19 0.35 0.50 0.52 0.02 Delay/Veh: 116.0 116 48.0 76.1 121 236.6 81.2 25.3 12.9 81.9 30.8 15.8 AdjDel/Veh: 116.0 116 48.0 76.1 121 236.6 81.2 25.3 12.9 81.9 30.8 15.8 LOS by Move: F F D E- F F C B F C21 27 4 23 HCM2kAvgQ: 3 2 5 31 2 7 16 Note: Queue reported is the number of cars per lane.

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

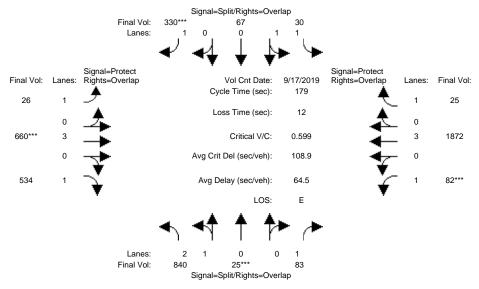
Intersection #5802: MONTAGUE EXPWY/TRADE ZONE BLVD

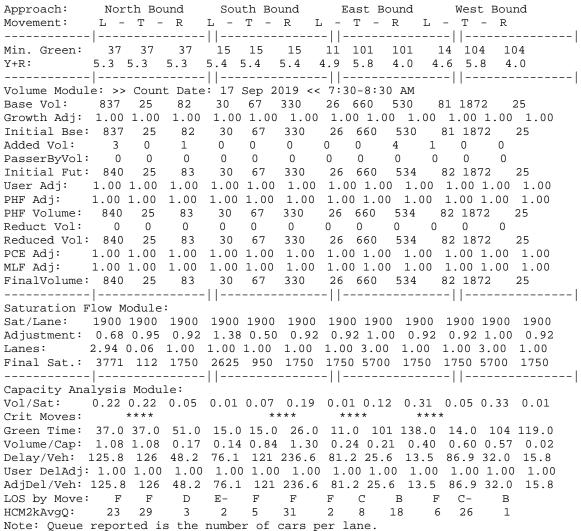


East Bound Approach: North Bound South Bound West Bound L-T-R L-T-R L-T-R Movement: -----||-----||-----| Min. Green: 37 37 37 15 15 15 11 101 101 14 104 104 5.3 5.3 5.3 5.4 5.4 5.4 4.9 5.8 4.0 4.6 5.8 4.0 ----|----||-----| Volume Module: >> Count Date: 17 Sep 2019 << 7:30-8:30 AM Base Vol: 837 25 82 30 67 330 26 660 530 81 1872 82 30 67 330 26 660 530 81 1872 25 Initial Bse: 837 25 Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 Initial Fut: 837 25 82 30 67 330 26 660 530 81 1872 PHF Volume: 837 25 82 30 67 330 26 660 530 81 1872 25 0 0 0 0 0 0 Reduct Vol: 0 0 Ω Ω 0 Ω Reduced Vol: 837 25 30 67 330 82 26 660 530 81 1872 25 FinalVolume: 837 25 82 30 67 330 26 660 530 81 1872 25 Saturation Flow Module: Adjustment: 0.68 0.95 0.92 1.38 0.50 0.92 0.92 1.00 0.92 0.92 1.00 0.92 Lanes: 2.94 0.06 1.00 1.00 1.00 1.00 3.00 1.00 1.00 3.00 1.00 Final Sat.: 3770 113 1750 2625 950 1750 1750 5700 1750 1750 5700 1750 -----||-----||-----| Capacity Analysis Module: Vol/Sat: 0.22 0.22 0.05 0.01 0.07 0.19 0.01 0.12 0.30 0.05 0.33 0.01 Crit Moves: **** **** **** Green Time: 37.0 37.0 51.0 15.0 15.0 26.0 11.0 101 138.0 14.0 104 119.0 Volume/Cap: 1.07 1.07 0.16 0.14 0.84 1.30 0.24 0.21 0.39 0.59 0.57 0.02 Delay/Veh: 124.5 125 48.2 76.1 121 236.6 81.2 25.6 13.5 86.5 32.0 15.8 AdjDel/Veh: 124.5 125 48.2 76.1 121 236.6 81.2 25.6 13.5 86.5 32.0 15.8 LOS by Move: F F D E- F F C B F C-5 2 8 22 28 6 26 HCM2kAvgQ: 3 2 31 18 Note: Queue reported is the number of cars per lane.

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

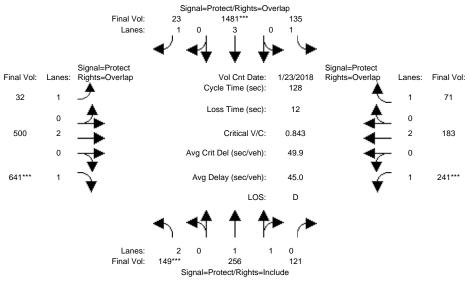
Intersection #5802: MONTAGUE EXPWY/TRADE ZONE BLVD





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

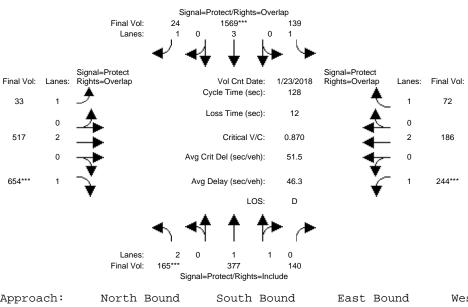
Intersection #3381: CAPITOL AVE/TRADE ZONE BLVD



North Bound South Bound East Bound West Bound L - T - R L - T - R L - T - R \mathbb{L} Approach: West Bound Movement: -----||-----||-----| 7 10 10 7 10 10 7 10 10 10 10 7 Min. Green: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 -----||-----||-----| Volume Module: >> Count Date: 23 Jan 2018 << 149 256 121 135 1481 23 32 500 641 241 183 Initial Bse: 149 256 121 135 1481 23 32 500 641 241 183 Ω Ω 0 0 0 0 0 0 Added Vol: Ω 0 0 0 0 0 0 0 0 Ω 0 0 PasserByVol: Ο Initial Fut: 149 256 121 135 1481 23 32 500 641 241 183 71 PHF Adj: 1.00 1.00 149 256 121 135 1481 23 32 500 641 241 183 PHF Volume: Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 Reduced Vol: 149 256 23 32 500 641 241 183 121 135 1481 PCE Adj: 1.00 1.00 MLF Adj: FinalVolume: 149 256 121 135 1481 23 32 500 641 241 183 -----||-----||-----| Saturation Flow Module: Adjustment: 0.83 0.99 0.95 0.92 1.00 0.92 0.92 1.00 0.92 0.92 1.00 0.92 Lanes: 2.00 1.34 0.66 1.00 3.00 1.00 1.00 2.00 1.00 1.00 2.00 1.00 Final Sat.: 3150 2512 1187 1750 5700 1750 1750 3800 1750 1750 3800 1750 -----||-----||-----| Capacity Analysis Module: Vol/Sat: 0.05 0.10 0.10 0.08 0.26 0.01 0.02 0.13 0.37 0.14 0.05 0.04 Crit Moves: **** **** **** Green Time: 7.2 26.5 26.5 20.1 39.5 67.6 28.1 47.3 54.5 20.9 40.1 60.2 Volume/Cap: 0.84 0.49 0.49 0.49 0.84 0.02 0.08 0.36 0.86 0.84 0.15 0.09 Delay/Veh: 88.8 45.3 45.3 50.7 45.3 14.5 39.8 29.4 43.3 71.7 31.7 18.7 Adipel/Veh: 88.8 45.3 45.3 50.7 45.3 14.5 39.8 29.4 43.3 71.7 31.7 18.7 LOS by Move: F D D D D B D C D E C B-HCM2kAvq0: 6 7 7 6 20 0 1 7 Note: Queue reported is the number of cars per lane.

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

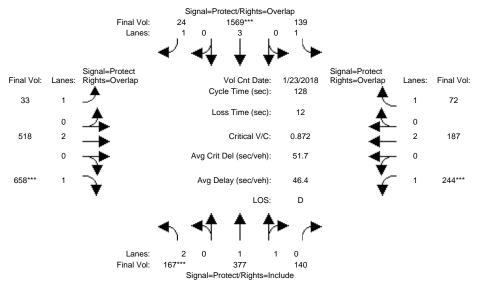
Intersection #3381: CAPITOL AVE/TRADE ZONE BLVD



North Bound South Bound East Bound West Bound L - T - R L - T - R Approach: West Bound Movement: -----||-----||-----| 7 10 10 7 10 10 7 10 10 10 10 Min. Green: 7 -----| Volume Module: >> Count Date: 23 Jan 2018 << Base Vol: 165 377 140 139 1569 24 33 517 654 244 186 140 139 1569 24 33 517 654 244 186 Initial Bse: 165 377 Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 24 Initial Fut: 165 377 140 139 1569 33 517 654 244 186 PHF Volume: 165 377 140 139 1569 24 33 517 654 244 186 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 33 517 654 244 186 Reduced Vol: 165 377 140 139 1569 24 72 33 517 654 244 186 FinalVolume: 165 377 140 139 1569 24 Saturation Flow Module: Adjustment: 0.83 0.98 0.95 0.92 1.00 0.92 0.92 1.00 0.92 0.92 1.00 0.92 Lanes: 2.00 1.44 0.56 1.00 3.00 1.00 1.00 2.00 1.00 1.00 2.00 1.00 Final Sat.: 3150 2697 1002 1750 5700 1750 1750 3800 1750 1750 3800 1750 -----||-----||-----| Capacity Analysis Module: Vol/Sat: 0.05 0.14 0.14 0.08 0.28 0.01 0.02 0.14 0.37 0.14 0.05 0.04 Crit Moves: **** *** Green Time: 7.7 30.7 30.7 17.5 40.5 68.3 27.8 46.9 54.6 20.5 39.7 57.1 Volume/Cap: 0.87 0.58 0.58 0.58 0.87 0.03 0.09 0.37 0.88 0.87 0.16 0.09 Delay/Veh: 92.0 43.9 43.9 55.5 46.1 14.1 40.1 29.9 44.8 76.5 32.1 20.5 AdjDel/Veh: 92.0 43.9 43.9 55.5 46.1 14.1 40.1 29.9 44.8 76.5 32.1 20.5 LOS by Move: F D D E+ D В D C D E- C-1 7 26 13 3 6 22 6 10 HCM2kAvgQ: 10 0 Note: Queue reported is the number of cars per lane.

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

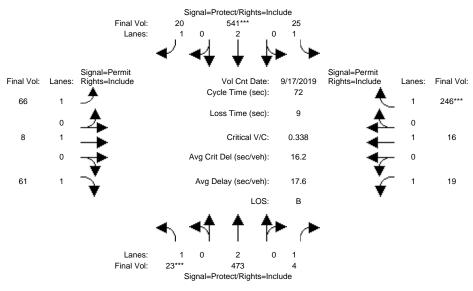
Intersection #3381: CAPITOL AVE/TRADE ZONE BLVD



North Bound South Bound East Bound West Bound L - T - R L - T - R Approach: West Bound Movement: -----||-----||-----| 7 10 10 7 10 10 7 10 10 10 10 Min. Green: 7 -----| Volume Module: >> Count Date: 23 Jan 2018 << Base Vol: 165 377 140 139 1569 24 33 517 654 244 186 140 139 1569 24 33 517 654 244 186 Initial Bse: 165 377 Added Vol: 0 0 1 4 0 1 0 0 0 0 2 0 0 PasserByVol: 0 0 0 0 0 0 0 0 0 0 24 Initial Fut: 167 377 140 139 1569 33 518 658 244 187 PHF Volume: 167 377 140 139 1569 24 33 518 658 244 187 0 0 0 0 0 0 0 0 0 0 Reduct Vol: 0 0 Reduced Vol: 167 377 140 139 1569 24 33 518 658 244 187 72 33 518 658 244 187 FinalVolume: 167 377 140 139 1569 24 Saturation Flow Module: Adjustment: 0.83 0.98 0.95 0.92 1.00 0.92 0.92 1.00 0.92 0.92 1.00 0.92 Lanes: 2.00 1.44 0.56 1.00 3.00 1.00 1.00 2.00 1.00 1.00 2.00 1.00 Final Sat.: 3150 2697 1002 1750 5700 1750 1750 3800 1750 1750 3800 1750 -----||-----||-----| Capacity Analysis Module: Vol/Sat: 0.05 0.14 0.14 0.08 0.28 0.01 0.02 0.14 0.38 0.14 0.05 0.04 Crit Moves: **** *** Green Time: 7.8 30.7 30.7 17.5 40.4 68.2 27.8 47.1 54.9 20.5 39.8 57.2 Volume/Cap: 0.87 0.58 0.58 0.58 0.87 0.03 0.09 0.37 0.88 0.87 0.16 0.09 Delay/Veh: 92.3 44.0 44.0 55.5 46.4 14.2 40.0 29.7 44.8 77.0 32.1 20.5 AdjDel/Veh: 92.3 44.0 44.0 55.5 46.4 14.2 40.0 29.7 44.8 77.0 32.1 20.5 E+ D B D C D E- C-6 22 0 1 7 26 13 3 LOS by Move: F D D 6 22 6 10 HCM2kAvgQ: 10 Note: Queue reported is the number of cars per lane.

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

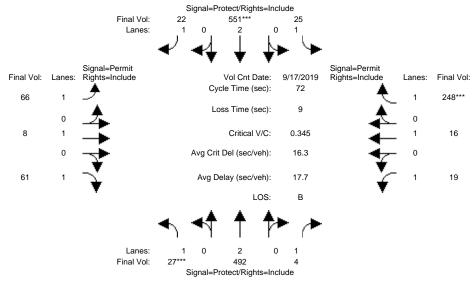
Intersection #3531: LUNDY AVE/FORTUNE DR



East Bound Approach: North Bound South Bound West Bound Movement: -----||-----||-----| 7 10 10 7 10 10 10 10 10 10 10 Min. Green: 10 -----| Volume Module: >> Count Date: 17 Sep 2019 << 4:45-5:45 PM Base Vol: 23 473 4 25 541 20 66 8 61 19 16 246 Initial Bse: 23 473 4 25 541 20 66 8 61 19 16 246 0 0 0 0 0 0 0 0 Added Vol: 0 0 0 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 Initial Fut: 23 473 4 25 541 20 66 8 61 19 16 246 PHF Adj: PHF Volume: 23 473 4 25 541 20 66 8 61 19 16 246 0 0 0 0 0 Reduct Vol: 0 0 0 0 0 0 20 66 8 61 19 16 246 Reduced Vol: 23 473 4 25 541 FinalVolume: 23 473 4 25 541 20 66 8 61 19 16 246 Saturation Flow Module: Adjustment: 0.92 1.00 0.92 0.92 1.00 0.92 0.92 1.00 0.92 0.92 1.00 0.92 Final Sat.: 1750 3800 1750 1750 3800 1750 1750 1900 1750 1750 1900 1750 -----|----|-----| Capacity Analysis Module: Vol/Sat: 0.01 0.12 0.00 0.01 0.14 0.01 0.04 0.00 0.03 0.01 0.01 0.14 Crit Moves: **** **** Volume/Cap: 0.14 0.43 0.01 0.07 0.36 0.03 0.10 0.01 0.09 0.03 0.02 0.36 Delay/Veh: 30.1 21.2 18.3 23.4 15.7 13.5 14.1 13.6 14.1 13.7 13.7 16.1 LOS by Move: C C+ B-С В В в в в в 1 0 4 1 HCM2kAvgQ: 5 0 0 0 1 0 0 Note: Queue reported is the number of cars per lane.

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

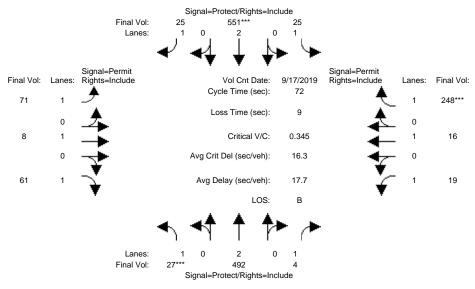
Intersection #3531: LUNDY AVE/FORTUNE DR



East Bound Approach: North Bound South Bound West Bound Movement: -----||-----||-----| 7 10 10 7 10 10 10 10 10 10 10 Min. Green: 10 -----| Volume Module: >> Count Date: 17 Sep 2019 << 4:45-5:45 PM Base Vol: 27 492 4 25 551 22 66 8 61 19 16 248 Initial Bse: 27 492 4 25 551 22 66 8 61 19 16 248 0 0 0 0 0 0 0 0 Added Vol: 0 0 0 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 Initial Fut: 27 492 4 25 551 22 66 8 61 19 16 248 PHF Adj: PHF Volume: 27 492 4 25 551 22 66 8 61 19 16 248 Reduct Vol: 0 0 0 0 0 0 0 0 0 Ω 25 551 Reduced Vol: 27 492 4 66 8 61 19 16 248 22 FinalVolume: 27 492 4 25 551 22 66 8 61 19 16 248 -----||-----||-----| Saturation Flow Module: Adjustment: 0.92 1.00 0.92 0.92 1.00 0.92 0.92 1.00 0.92 0.92 1.00 0.92 Final Sat.: 1750 3800 1750 1750 3800 1750 1750 1900 1750 1750 1900 1750 -----||-----||-----| Capacity Analysis Module: Vol/Sat: 0.02 0.13 0.00 0.01 0.15 0.01 0.04 0.00 0.03 0.01 0.01 0.14 Crit Moves: **** * * * * Green Time: 7.0 20.8 20.8 14.5 28.3 28.3 27.7 27.7 27.7 27.7 27.7 27.7 Volume/Cap: 0.16 0.45 0.01 0.07 0.37 0.03 0.10 0.01 0.09 0.03 0.02 0.37 Delay/Veh: 30.2 21.2 18.3 23.3 15.7 13.4 14.2 13.7 14.2 13.8 13.8 16.2 LOS by Move: C C+ B-С В В в в в в 4 1 HCM2kAvgQ: 1 5 0 0 0 0 1 0 0 Note: Queue reported is the number of cars per lane.

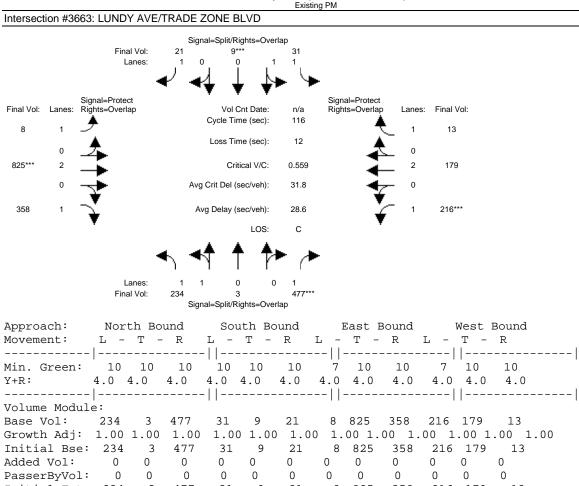
Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative) Background + Project PM

Intersection #3531: LUNDY AVE/FORTUNE DR



Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R L - T - R
Min. Green: 7 10 10 7 10 10 10 10 10 10 10 10
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Volume Module: >> Count Date: 17 Sep 2019 << 4:45-5:45 PM
Base Vol: 27 492 4 25 551 22 66 8 61 19 16 248
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
Initial Bse: 27 492 4 25 551 22 66 8 61 19 16 248
Added Vol: 0 0 0 0 3 5 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0
Initial Fut: 27 492 4 25 551 25 71 8 61 19 16 248
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
PHF Volume: 27 492 4 25 551 25 71 8 61 19 16 248
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 27 492 4 25 551 25 71 8 61 19 16 248
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: 27 492 4 25 551 25 71 8 61 19 16 248
Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 190
Adjustment: 0.92 1.00 0.92 0.92 1.00 0.92 0.92 1.00 0.92 0.92 1.00 0.92
Lanes: 1.00 2.00 1.00 1.00 2.00 1.00 1.00 1.00
Final Sat.: 1750 3800 1750 1750 3800 1750 1750 1900 1750 1900 1750
Capacity Analysis Module:
Vol/Sat: 0.02 0.13 0.00 0.01 0.15 0.01 0.04 0.00 0.03 0.01 0.01 0.14
Crit Moves: **** ****
Green Time: 7.0 20.8 20.8 14.5 28.3 28.3 27.7 27.7 27.7 27.7 27.7 27.7
Volume/Cap: 0.16 0.45 0.01 0.07 0.37 0.04 0.11 0.01 0.09 0.03 0.02 0.37
Delay/Veh: 30.2 21.2 18.3 23.3 15.7 13.5 14.3 13.7 14.2 13.8 13.8 16.2
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
AdjDel/Veh: 30.2 21.2 18.3 23.3 15.7 13.5 14.3 13.7 14.2 13.8 13.8 16.2
LOS by Move: C C+ B- C B B B B B B B B B B B B B B B B B
Note: Queue reported is the number of cars per lane.

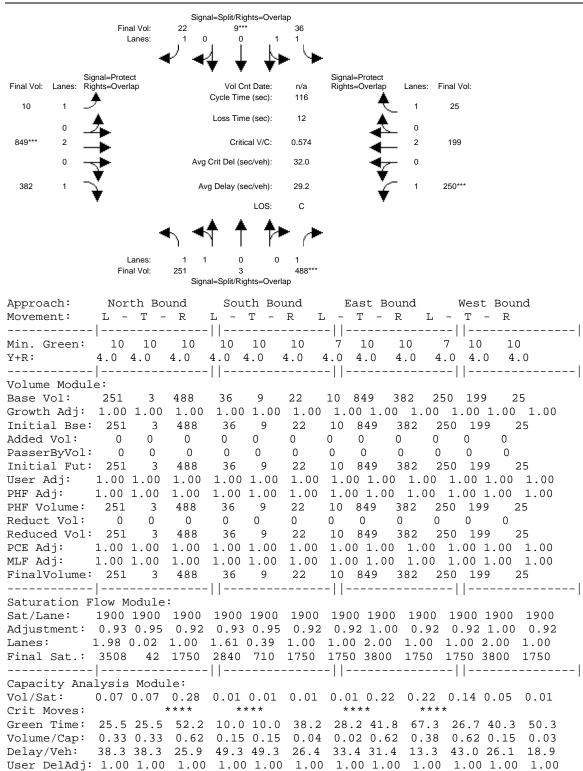
Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative)



-----| 21 8 825 358 216 179 13 Initial Fut: 234 477 9 21 8 825 358 216 179 13 3 31 PHF Volume: 234 3 477 31 9 21 8 825 358 216 179 13 Reduct Vol: 0 0 Ω Ω Ω Ω 0 Ω 0 0 0 31 9 Reduced Vol: 234 3 21 477 8 825 358 216 179 13 FinalVolume: 234 3 477 31 9 21 8 825 358 216 179 13 Saturation Flow Module: Adjustment: 0.93 0.95 0.92 0.93 0.95 0.92 0.92 1.00 0.92 0.92 1.00 0.92 Lanes: 1.98 0.02 1.00 1.56 0.44 1.00 1.00 2.00 1.00 1.00 2.00 1.00 Final Sat.: 3505 45 1750 2751 799 1750 1750 3800 1750 1750 3800 1750 -----||-----||-----| Capacity Analysis Module: Vol/Sat: 0.07 0.07 0.27 0.01 0.01 0.01 0.00 0.22 0.20 0.12 0.05 0.01 * * * * **** * * * * Crit Moves: Green Time: 28.6 28.6 52.3 10.0 10.0 36.9 26.9 41.7 70.3 23.7 38.5 48.5 Volume/Cap: 0.27 0.27 0.60 0.13 0.13 0.04 0.02 0.60 0.34 0.60 0.14 0.02 Delay/Veh: 35.4 35.4 25.4 49.2 49.2 27.3 34.4 31.2 11.5 44.8 27.3 19.8 AdjDel/Veh: 35.4 35.4 25.4 49.2 49.2 27.3 34.4 31.2 11.5 44.8 27.3 19.8 D D C C- C B+ D C 1 1 1 0 12 7 8 2 LOS by Move: D+ D+ C HCM2kAvgQ: 3 3 14 Note: Queue reported is the number of cars per lane.

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

Intersection #3663: LUNDY AVE/TRADE ZONE BLVD



HCM2kAvgQ:

LOS by Move: D+ D+

4

4

D D C C- C B D C

8

9

2

0 12

AdjDel/Veh: 38.3 38.3 25.9 49.3 49.3 26.4 33.4 31.4 13.3 43.0 26.1 18.9

1 1 1

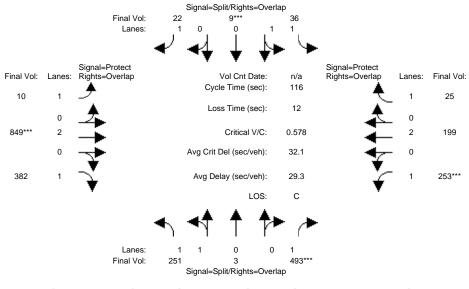
C

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

14

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

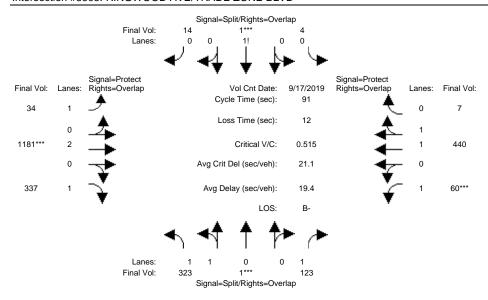
Intersection #3663: LUNDY AVE/TRADE ZONE BLVD



Approach: 1	North Bound	d South Bo	ound East Bound West Bound	
Movement: L	– T – F	R L – T –	R L - T - R L - T - R	ı
Min Green:	10 10		10 7 10 10 7 10 10	
			4.0 4.0 4.0 4.0 4.0 4.0 4.0	
Volume Module:				·
Base Vol: 2		88 36 9	22 10 849 382 250 199 25	
			1.00 1.00 1.00 1.00 1.00 1.00 1.00	
Initial Bse: 2	251 3 4	88 36 9		
Added Vol:	0 0	5 0 0	0 0 0 0 3 0 0	
PasserByVol:	0 0	0 0 0	0 0 0 0 0 0	
Initial Fut: 2				
User Adj: 1.			1.00 1.00 1.00 1.00 1.00 1.00 1.00	
PHF Adj: 1.		.00 1.00 1.00		
PHF Volume: 2		93 36 9		
Reduct Vol:	0 0	0 0 0	0 0 0 0 0 0	
			22 10 849 382 253 199 25	
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: 2	351 3 4	93 36 9	22 10 849 382 253 199 25	i
Saturation Flow				
			1900 1900 1900 1900 1900 1900	
			5 0.92 0.92 1.00 0.92 0.92 1.00 0.92	
			1.00 1.00 2.00 1.00 1.00 2.00 1.00	
			1750 1750 3800 1750 1750 3800 1750	
Capacity Analys	sis Module	:		ı
			0.01 0.01 0.22 0.22 0.14 0.05 0.01	
Crit Moves:	* * *	** ***	***	
Green Time: 25	5.5 25.5 5	2.4 10.0 10.0	38.2 28.2 41.6 67.1 26.9 40.3 50.3	
Volume/Cap: 0.	.33 0.33 0	.62 0.15 0.15	0.04 0.02 0.62 0.38 0.62 0.15 0.03	
Delay/Veh: 38	.3 38.3 2	5.8 49.3 49.3	26.5 33.4 31.7 13.4 43.0 26.1 18.9	
			1.00 1.00 1.00 1.00 1.00 1.00 1.00	
			3 26.5 33.4 31.7 13.4 43.0 26.1 18.9	
			C C- C B D C B-	
			1 0 12 8 9 2 1	
Note: Queue rep	ported is t	the number of	cars per lane.	

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

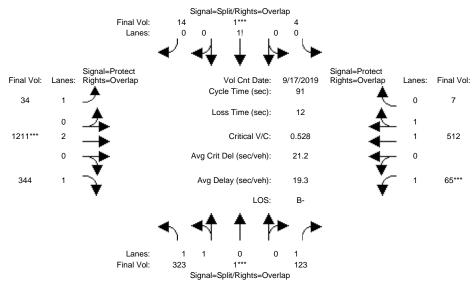
Intersection #3905: RINGWOOD AVE/TRADE ZONE BLVD



North Bound South Bound East Bound West Bound L - T - R L - T - R Approach: West Bound Movement: -----||-----||-----| -----| Volume Module: >> Count Date: 17 Sep 2019 << 5:00-6:00 PM Base Vol: 323 1 123 4 1 14 34 1181 337 60 440 Initial Bse: 323 1 123 4 1 14 34 1181 337 60 440 Added Vol: 0 0 0 0 0 0 0 0 0 0 0 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 60 440 Initial Fut: 323 123 4 1 14 34 1181 337 1 PHF Volume: 323 1 123 4 1 14 34 1181 337 60 440 Reduct Vol: 0 0 0 0 0 0 0 0 Ω 0 Ω 4 1 14 34 1181 337 60 440 Reduced Vol: 323 1 123 FinalVolume: 323 1 123 4 1 14 34 1181 337 60 440 7 Saturation Flow Module: Adjustment: 0.93 0.95 0.92 0.92 0.92 0.92 0.92 1.00 0.92 0.92 0.97 0.95 Lanes: 1.99 0.01 1.00 0.21 0.05 0.74 1.00 2.00 1.00 1.00 1.97 0.03 Final Sat.: 3539 11 1750 368 92 1289 1750 3800 1750 1750 3642 58 -----|----||------| Capacity Analysis Module: Vol/Sat: 0.09 0.09 0.07 0.01 0.01 0.01 0.02 0.31 0.19 0.03 0.12 0.12 Crit Moves: **** * * * * * * * * Green Time: 14.1 14.1 21.1 10.0 10.0 31.4 21.4 47.9 62.0 7.0 33.6 43.6 Volume/Cap: 0.59 0.59 0.30 0.10 0.10 0.03 0.08 0.59 0.28 0.45 0.33 0.25 Delay/Veh: 37.5 37.5 29.3 36.7 36.7 19.8 27.3 15.3 5.9 42.5 20.8 14.1 LOS by Move: D+ D+ C D+ D+ B- C B A D C+ В 1 11 5 1 2 HCM2kAvgQ: 5 3 1 0 4 Note: Queue reported is the number of cars per lane.

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

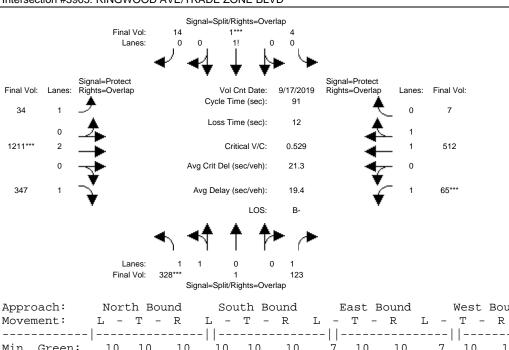
Intersection #3905: RINGWOOD AVE/TRADE ZONE BLVD



Movement:	L - T - R	L - T - R	l East Bound L - T - R L	- T - R
			7 10 10	
Y+R: 4	.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0 4	.0 4.0 4.0
			< 5:00-6:00 PM	
			34 1211 344	
			.00 1.00 1.00 1.00	
			4 34 1211 344	
Added Vol:	0 0 0	0 0 0	0 0 0 0	0 0
			0 0 0 0	
			4 34 1211 344	
User Adj: 1			.00 1.00 1.00 1.00	
PHF Adj: 1			.00 1.00 1.00 1.00	
PHF Volume:				65 512 7
Reduct Vol:		0 0 0		0 0
	323 1 123		4 34 1211 344	
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
			4 34 1211 344	
		-		
Saturation Flo				
			900 1900 1900 1900	
			.92 0.92 1.00 0.92	
			74 1.00 2.00 1.00	
	3539 11 1750		89 1750 3800 1750	
		-		
Capacity Analy	4	0 01 0 01 0	01 0 00 0 00 0 00	0.04.0.14.0.14
			.01 0.02 0.32 0.20	
	****		**** ***	
			9.5 19.5 48.2 62.0	
-			.03 0.09 0.60 0.29	
_			1.0 28.7 15.3 5.9	
_			00 1.00 1.00 1.00	
-			1.0 28.7 15.3 5.9	
			+ C B A 1	
HCM2kAvgQ:				5 4
Note: Queue re	eported is the	number of car	s per lane.	

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

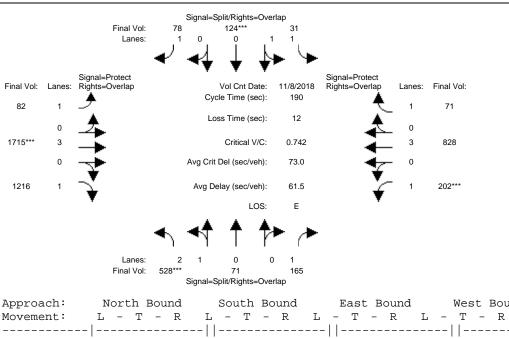
Intersection #3905: RINGWOOD AVE/TRADE ZONE BLVD



West Bound Movement: -----||-----||-----| -----| Volume Module: >> Count Date: 17 Sep 2019 << 5:00-6:00 PM Base Vol: 323 1 123 4 1 14 34 1211 344 65 512 Initial Bse: 323 1 123 4 1 14 34 1211 344 65 512 Added Vol: 0 0 0 0 0 0 0 0 5 0 3 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 Initial Fut: 328 1 123 1 14 34 1211 347 65 512 4 PHF Volume: 328 1 123 4 1 14 34 1211 347 65 512 0 0 0 0 0 0 0 Reduct Vol: 0 0 Ω 0 Ω 4 1 14 34 1211 347 65 512 Reduced Vol: 328 1 123 FinalVolume: 328 1 123 4 1 14 34 1211 347 65 512 -----||-----||------| Saturation Flow Module: Adjustment: 0.93 0.95 0.92 0.92 0.92 0.92 0.92 1.00 0.92 0.92 0.97 0.95 Lanes: 1.99 0.01 1.00 0.21 0.05 0.74 1.00 2.00 1.00 1.00 1.97 0.03 Final Sat.: 3539 11 1750 368 92 1289 1750 3800 1750 1750 3650 50 -----|----|-----| Capacity Analysis Module: Vol/Sat: 0.09 0.09 0.07 0.01 0.01 0.01 0.02 0.32 0.20 0.04 0.14 0.14 Crit Moves: **** * * * * * * * * Green Time: 14.0 14.0 21.0 10.0 10.0 29.5 19.5 48.0 62.0 7.0 35.5 45.5 Volume/Cap: 0.60 0.60 0.31 0.10 0.10 0.03 0.09 0.60 0.29 0.48 0.36 0.28 Delay/Veh: 37.9 37.9 29.4 36.7 36.7 21.0 28.8 15.4 5.9 43.0 19.8 13.3 C _ LOS by Move: D+ D+ D+ D+ C+ C B A D B-В 1 1 0 1 11 2 HCM2kAvgQ: 6 6 3 4 5 Note: Queue reported is the number of cars per lane.

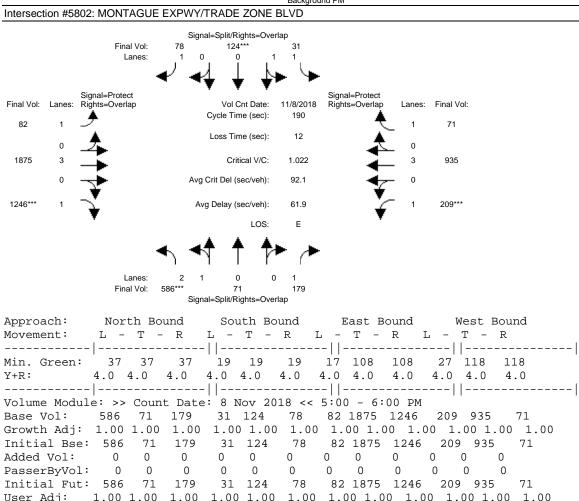
Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative) Existing PM

Intersection #5802: MONTAGUE EXPWY/TRADE ZONE BLVD



West Bound Movement: -----||-----||-----| Min. Green: -----| Volume Module: >> Count Date: 8 Nov 2018 << 5:00 - 6:00 PM 202 828 Base Vol: 528 71 165 31 124 78 82 1715 1216 Initial Bse: 528 71 165 31 124 78 82 1715 1216 202 828 $0 \qquad 0 \qquad 0 \qquad 0 \qquad 0 \qquad 0$ 0 0 Added Vol: 0 0 0 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 Initial Fut: 528 71 165 31 124 78 82 1715 1216 202 828 PHF Adj: PHF Volume: 528 71 165 31 124 78 82 1715 1216 202 828 Reduct Vol: 0 0 0 0 0 0 0 0 Ω Ω 0 0 Reduced Vol: 528 71 78 82 1715 1216 202 828 165 31 124 71 82 1715 1216 202 828 FinalVolume: 528 71 165 31 124 78 Saturation Flow Module: Adjustment: 0.67 0.95 0.92 1.38 0.50 0.92 0.92 1.00 0.92 0.92 1.00 0.92 Lanes: 2.74 0.26 1.00 1.00 1.00 1.00 3.00 1.00 1.00 3.00 1.00 Final Sat.: 3483 468 1750 2625 950 1750 1750 5700 1750 1750 5700 1750 -----||-----||-----| Capacity Analysis Module: Vol/Sat: 0.15 0.15 0.09 0.01 0.13 0.04 0.05 0.30 0.69 0.12 0.15 0.04 Crit Moves: **** **** **** Green Time: 34.6 34.6 59.9 17.8 17.8 33.7 15.9 101 135.7 25.3 110 128.2 Volume/Cap: 0.83 0.83 0.30 0.13 1.39 0.25 0.56 0.57 0.97 0.87 0.25 0.06 Delay/Veh: 88.1 88.1 52.8 84.4 315 72.3 94.2 41.0 65.5 113.7 28.4 17.6 AdjDel/Veh: 88.1 88.1 52.8 84.4 315 72.3 94.2 41.0 65.5 113.7 28.4 17.6 LOS by Move: F F D-F F E F D E F C 6 2 14 14 17 11 HCM2kAvgQ: 8 4 27 83 16 Note: Queue reported is the number of cars per lane.

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



-----| 209 935 78 82 1875 1246 209 935 0 0 0 0 0 0 0 78 82 1875 1246 209 935 PHF Adj: PHF Volume: 586 71 179 31 124 78 82 1875 1246 209 935 Reduct Vol: 0 0 0 0 0 0 0 0 Ω Ω 0 0 Reduced Vol: 586 71 179 78 82 1875 1246 209 935 31 124 71 82 1875 1246 209 935 FinalVolume: 586 71 179 31 124 78 Saturation Flow Module: Adjustment: 0.67 0.95 0.92 1.38 0.50 0.92 0.92 1.00 0.92 0.92 1.00 0.92 Lanes: 2.76 0.24 1.00 1.00 1.00 1.00 3.00 1.00 1.00 3.00 1.00 Final Sat.: 3517 426 1750 2625 950 1750 1750 5700 1750 1750 5700 1750 Capacity Analysis Module: Vol/Sat: 0.17 0.17 0.10 0.01 0.13 0.04 0.05 0.33 0.71 0.12 0.16 0.04 Crit Moves: **** **** Green Time: 34.6 34.6 59.9 23.5 23.5 38.7 15.2 101 135.7 25.3 105 128.9 Volume/Cap: 0.91 0.91 0.32 0.10 1.06 0.22 0.59 0.62 1.00 0.90 0.30 0.06 Delay/Veh: 97.6 97.6 53.4 78.9 179 67.7 96.4 42.9 73.7 119.7 31.7 17.3 AdjDel/Veh: 97.6 97.6 53.4 78.9 179 67.7 96.4 42.9 73.7 119.7 31.7 17.3 LOS by Move: F F D-E- F E F D E F C

2 11

9

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

16 20

HCM2kAvgQ:

6

31

89

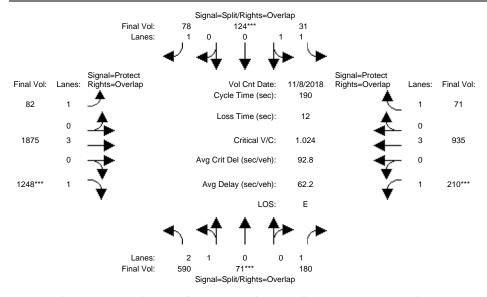
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13

17

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

Intersection #5802: MONTAGUE EXPWY/TRADE ZONE BLVD



Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R
Min. Green: 37 37 37 19 19 19 17 108 108 27 118 118
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: 8 Nov 2018 << 5:00 - 6:00 PM
Base Vol: 586 71 179 31 124 78 82 1875 1246 209 935 71
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
Initial Bse: 586 71 179 31 124 78 82 1875 1246 209 935 71
Added Vol: 4 0 1 0 0 0 0 0 2 1 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 590 71 180 31 124 78 82 1875 1248 210 935 71
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
PHF Volume: 590 71 180 31 124 78 82 1875 1248 210 935 71
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 590 71 180 31 124 78 82 1875 1248 210 935 71
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: 590 71 180 31 124 78 82 1875 1248 210 935 71
Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 190
Adjustment: 0.67 0.95 0.92 1.38 0.50 0.92 0.92 1.00 0.92 0.92 1.00 0.92
Lanes: 2.76 0.24 1.00 1.00 1.00 1.00 3.00 1.00 1.00 3.00 1.00
Final Sat.: 3519 424 1750 2625 950 1750 1750 5700 1750 1750 5700 1750
Capacity Analysis Module:
Vol/Sat: 0.17 0.17 0.10 0.01 0.13 0.04 0.05 0.33 0.71 0.12 0.16 0.04
Crit Moves: **** ****
Green Time: 34.6 34.6 59.9 23.5 23.5 38.7 15.2 101 135.7 25.3 105 128.9
Volume/Cap: 0.92 0.92 0.33 0.10 1.06 0.22 0.59 0.62 1.00 0.90 0.30 0.06
Delay/Veh: 98.6 98.6 53.4 78.9 179 67.7 96.4 42.9 74.3 120.7 31.7 17.3
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
AdjDel/Veh: 98.6 98.6 53.4 78.9 179 67.7 96.4 42.9 74.3 120.7 31.7 17.3
LOS by Move: F F D E F C B
HCM2kAvgQ: 16 21 9 2 11 4 6 31 89 17 13 3
Note: Queue reported is the number of cars per lane.