H18-053 Appendix C Local Transportation Analysis

Old Bayshore Highway Warehouse Local Transportation Analysis Report

Prepared for: Panattoni Development Company, Inc.

September 2019

SJ18-1894

FEHR PEERS

Table of Contents

1. Introduction	1
1.1 Project Description	1
1.2 Scope of Study/Report	1
2. Existing Conditions	5
2.1 Pedestrian and Bicycle Facilities	
2.2 Bus Service	
2.2.1 2019 New Transit Plan	6
2.3 Pedestrian and Bicycle Facilities	9
2.3.1 Pedestrian Facilities	9
2.3.2 Bicycle Facilities	9
2.4 Field Observations	11
3. CEQA Transportation Analysis	12
3.1 VMT Evaluation	12
3.1.1 VMT Screening Criteria	12
3.2 General Plan Consistency	13
4. Project Traffic	15
4.1 Trip Generation	15
4.2 Trip Distribution and Assignment	15
5. Intersection Operations Analysis	18
5.1 Signalized Intersection Level of Service (LOS) Method	18
5.2 Intersection Traffic Volumes and Lane Configurations	19
5.3 Intersection LOS Results	23
5.3.1 Existing and Background Levels of Service	23
5.3.2 Background with Project Levels of Service	24
6. Adjacent Development Policies	25
6.1 North San Jose Area Development Policy	25
6.2 US 101/Oakland/Mabury Transportation Development Policy	25
7. Site Access, On-Site Circulation, Parking	26
7.1 Vehicular Site Access	26
7.1.1 Vehicles	26
7.1.2 Left-Turn Feasibility	26
7.1.3 Emergency, Delivery, and Trash Vehicles	27
7.1.4 Queuing and Driveway Operations	27
7.2 Vehicular On-Site Circulation	28
7.2.1 Emergency, Delivery, and Trash Vehicles	28

7.2.2 Site Operations	28
7.3 Site Access for Pedestrians and Bicyclists	28
7.4 Parking	28
8. Construction Evaluation and Outside Agency Coordination	30
8.1 Effects on Pedestrian and Bicycle Circulation	30
8.2 Construction Mitigation	30
8.3 Union Pacific Railroad Coordination	31
9. Conclusion	32

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Appendices

Appendix A: San José VMT Evaluation Tool Report

Appendix B: City of San José VMT per Industrial Job Map

Appendix C: Intersection Level of Service Calculation

Appendix D: North San Jose Area Development Policy Area Map

Appendix E: Fire Truck Site Circulation Template

Appendix F: Delivery Truck Site Circulation Template

Appendix G: Garbage Truck Site Circulation Template

List of Figures

Figure 1: Site Location Map and Study Intersection	3
Figure 2: Site Plan	4
Figure 3: Existing Transit Network	7
Figure 4: 2019 New Transit Service	8
Figure 5: Project Trip Distribution	16
Figure 6: Project Trip Assignment	17
Figure 7: Existing Peak Hour Intersection Turning Movement Volumes, Lane Configurations and Devices	
Figure 8: Background Intersection Volumes	21
Figure 9: Background with Project Intersection Volumes	22
List of Tables	
Table 1: Envision San José 2040 General Plan Land Use and Transportation Policies	
Table 2: Project Vehicle Trip Generation Estimates ¹	
Table 3: Signalized Intersection Level of Service Definitions	19
Table 4: Existing and Background Intersection Levels of Service	23
Table 5: Background and Background with Project Intersection Levels of Service	24

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1. Introduction

This report presents the results of a Local Transportation Analysis (LTA) conducted for the proposed redevelopment of an approximate 21,000 square-foot concrete pipe manufacturing/batching facility with a warehouse facility. The purpose of the LTA is to evaluate the project's effects on the transportation system, site access and on-site circulation, and related safety elements in the area near the project and to address transportation-related items requested by City of San José staff.

1.1 Project Description

The proposed project is located at 1420 Old Bayshore Highway, on the southeast side of the Old Bayshore Highway/East Gish Street/North 10th Street intersection in San José, California. The project entails constructing a new 69,192 square-foot warehouse (project). Vehicle access is provided via two inbound and outbound driveways along Old Bayshore Highway and one inbound and outbound driveway along Gish Road. A total of 34 vehicle parking spaces will be provided within the parking lot. The parking spaces consist of 29 standards spaces, one carpool/vanpool space, one Americans with Disabilities Act (ADA) space, one ADA van accessible space, one ADA van accessible and electric vehicle (EV) charging space, and one EV charging space. The site includes outdoor bicycle parking with short-term bicycle storage capacity for five bicycles. The site plan also includes six dock positions for truck loading and unloading at the rear of the building. **Figure 1** shows the project location and **Figure 2** shows the proposed site plan.

1.2 Scope of Study/Report

This report was prepared for California Environmental Quality Act (CEQA) clearance purposes and to meet City of San José guidelines. Vehicle miles traveled (VMT) and the project's consistency with the *Envision San José 2040 General Plan* are discussed as part of the CEQA transportation analysis. The local transportation analysis (LTA) portion of the report focuses on the project's effect on the transportation system near the site and project site access and circulation to meet City analysis requirements. It includes a discussion of the amount of traffic generated by the project and its effect on the operations of nearby intersections. Descriptions and evaluations of pedestrian, bicycle, and transit facilities and services near the site with a focus on site access and connections are also presented.



The following chapters are included in this report to meet the City's transportation analysis work scope requirements:

Chapter 1. Introduction includes the study purpose, the project description, and an overview of the report.

Chapter 2. Existing Conditions provides descriptions of the transportation system near the site including the roadways, transit service, pedestrian facilities, and bicycle facilities.

Chapter 3. CEQA Transportation Analysis describes the process used to show how the project meets the VMT threshold and therefore a VMT analysis is not required.

Chapter 4. Project Traffic provides a description of the process used to estimate the amount of traffic generated by the project.

Chapter 5. Intersection Operations Analysis provides the operations of the study intersections under Existing Conditions, Background Conditions, and Background with project Conditions.

Chapter 6. Traffic Assessment provides a description of the added project traffic to the North San Jose Development Area (NSJDA), and the US 101/Oakland/Mabury Transportation Development Policy area.

Chapter 7. Site Access, On-Site Circulation, and Parking includes an assessment of the site plan regarding access for trucks, an evaluation of vehicle queuing at the project driveways, and a comparison of the proposed parking supply to City code requirements.

Chapter 8. Construction Overview and Outside Agency Coordination discusses the project's ability to support transit ridership, bicycling, and walking, the possible effects of construction activity on potential lane closures and on pedestrians and bicyclists, and describes the communication between the applicant and any outside agency.

Chapter 9. Conclusions summarizes the transportation analysis results.

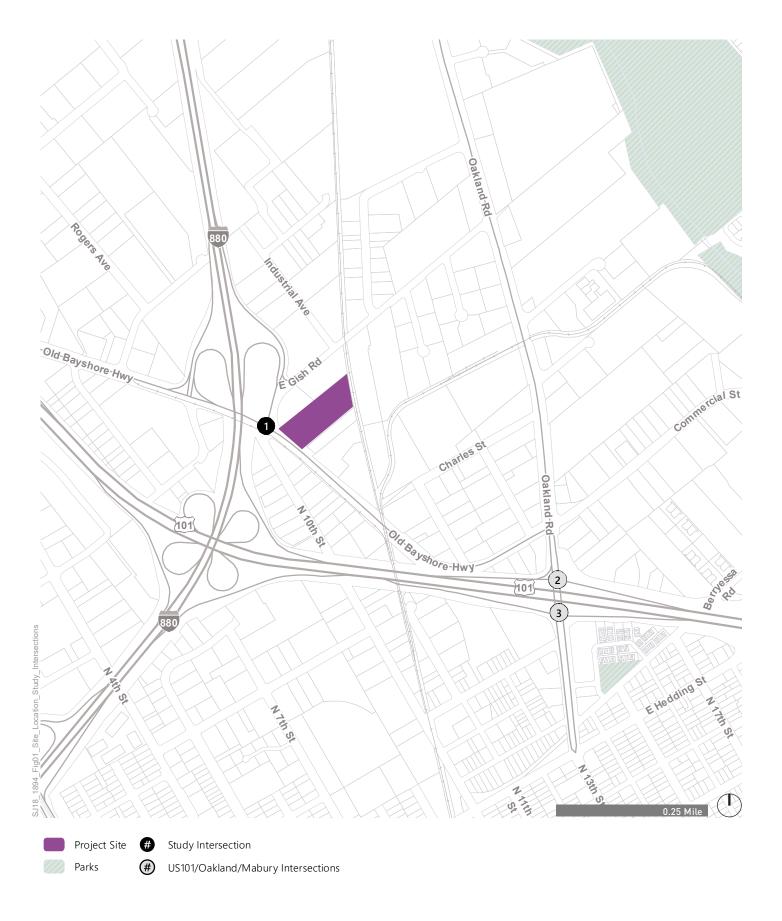




Figure 1







Source: RMW Architecture & Interiors





2. Existing Conditions

The transportation system in the study area is multi-modal and includes roadways, bus service, and bicycle facilities.

2.1 Pedestrian and Bicycle Facilities

Regional access to the site is provided by Interstate 880 (I-880) and US 101 and local access is provided by Old Bayshore Highway. These roadways, and others near the site, are described below:

I-880 is located west of the project site and provides freeway access between the cities of Oakland and San José. Near the project site, I-880 has three mixed flow lanes in each direction. Southbound I-880 has one High Occupancy Vehicle (HOV) lane. Access to/from I-880 is provided via interchanges with Old Bayshore Highway and East Gish Road.

US 101 is located south of the project site and provides freeway access between the cities of San Francisco, San José, and continues far south ending in Los Angeles. Near the project site, US 101 has three mixed flow lanes and one HOV lane in each direction. Access to/from US 101 is provided via Old Bayshore Highway and Oakland Road.

Old Bayshore Highway is located south of the project site. It is a four-lane roadway that provides local connections to North San José at its northern end and Oakland Road at its southern end. Old Bayshore Highway also provides connections to I-880. A Class II bike lane is provided on both sides of Old Bayshore Highway. Adjacent to the project site, Old Bayshore Highway has two lanes in each direction and a northbound left-turn pocket at East Gish Road. The posted speed limit is 40 miles per hour (mph).

Oakland Road is located east of the project site. It is a four to six-lane north-south roadway that provides local connections to Milpitas at its northern end and San José at its southern end. Oakland Road also provides connections to US 101. A Class II bike lane is provided on both sides of Oakland Road. The posted speed limit is 40 mph.

East Gish Road is located north of the project site. It is a two-lane, local street that extends east-west connecting Old Bayshore Highway to Oakland Road. It has discontinuous sidewalks on both sides. The posted speed limit is 30 mph.



2.2 Bus Service

Bus (and light rail transit (LRT)) service in Santa Clara County is operated by the Santa Clara Valley Transportation Authority (VTA). The project site is near local Bus Route 66 and VTA Express Bus Routes 121, 122, and 181. These routes are shown on **Figure 3** and described below:

Route 66 operates between Dixon Road and Arizona Avenue in Milpitas and Santa Teresa Boulevard & Cottle Road in San José. The service frequency is approximately 20 minutes on weekdays, and 30 minutes on weekends. The closest stop is located at Oakland Road and Charles Street, approximately 0.5 miles from the project site.

Route 121 operates between the Lockheed Martin Transit Center in Sunnyvale and the Gilroy Transit Center. The service frequency is approximately 30 minutes on weekdays only. This route operates along US 101 and there are no stops within the vicinity of the project.

Route 122 operates between the Lockheed Martin Transit Center in Sunnyvale and the Santa Teresa LRT Station. The service frequency is approximately 20 minutes on weekdays only. This route operates along US 101 and there are no stops within the vicinity of the project.

Route 181 operates between the Warm Springs BART station and San José Diridon Station. The service frequency is approximately 20 minutes on weekdays, and 30 minutes on weekends. The closest stop is at North 1st Street and West Mission Street, approximately 1.7 miles from the project site.

2.2.1 2019 New Transit Plan

VTA's 2019 New Transit Plan aims to maximize ridership and provide geographical coverage. Proposed changes to existing transit service in the project area include the discontinuation of Route 181 and increases in frequency of service for Route 66 to 15 minutes on the weekdays and on average 25 minutes on the weekend. **Figure 4** shows bus routes with VTA's 2019 New Transit Plan near the existing and proposed project site.





Figure 3





Figure 4



2.3 Pedestrian and Bicycle Facilities

2.3.1 Pedestrian Facilities

There are currently no designated sidewalks and curb ramps provided along the project frontage on Old Bayshore Highway and Gish Road.

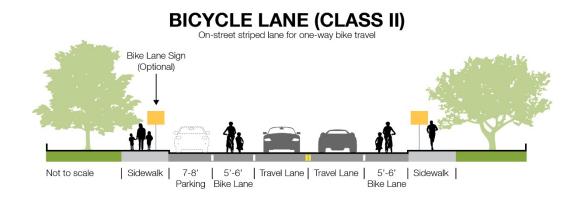
2.3.2 Bicycle Facilities

Bikeway planning and design in California typically rely on guidelines and design standards established by the California Department of Transportation (Caltrans) in the Highway Design Manual (Chapter 1000: Bicycle Transportation Design). Caltrans provides for four distinct types of bikeway facilities, as described below and shown in the accompanying figures.

<u>Class I Bikeways (Shared-Use Paths)</u> provide a completely separate right-of-way and are designated
for the exclusive use of bicycles and pedestrians, with vehicle and pedestrian cross-flow minimized.
In general, bike paths serve corridors when on-street facilities are not feasible or where sufficient
right-of-way exists to allow them to be constructed.

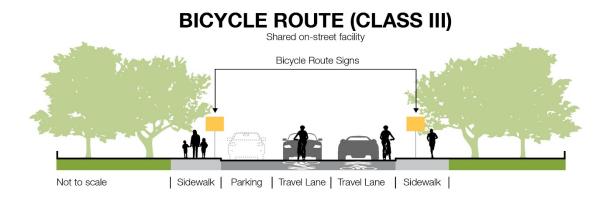


 <u>Class II Bikeways (Bicycle Lanes)</u> are dedicated lanes for bicyclists generally adjacent to the outer vehicle travel lanes. These lanes have special lane markings, pavement legends, and signage. Bicycle lanes are typically five (5) feet wide. Adjacent vehicle parking and vehicle/pedestrian cross-flow are permitted.

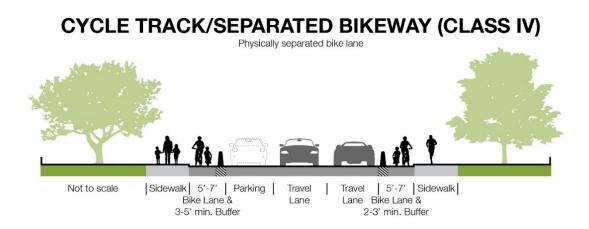




• <u>Class III Bikeways (Bicycle Routes)</u> are designated by signs or pavement markings for shared use with pedestrians or motor vehicles, but have no separated bike right-of-way or lane striping. Bike routes serve either to: a) provide a connection to other bicycle facilities where dedicated facilities are infeasible, or b) designate preferred routes through high-demand corridors.



• <u>Class IV Bikeways (cycle tracks or "separated" bikeways)</u> provide a right-of-way designated exclusively for bicycle travel within a roadway and are protected from other vehicle traffic by physical barriers, including, but not limited to, grade separation, flexible posts, inflexible vertical barriers such as raised curbs or parked cars.



Class II bike lanes are provided along Old Bayshore Highway extending from Zanker Road to Berryessa Road.



2.4 Field Observations

Field observations were conducted on June 11th, 2019 to observe overall operations of the transportation system around the project site. For this discussion, North 10th Street and East Gish Road are assumed to run in a north-south direction and Old Bayshore Highway in an east-west direction.

During the morning peak period, northbound traffic on North 10th Street consisted of a high number of vehicles turning left onto Old Bayshore Highway. The lane geometry on this intersection approach includes one left-turn lane and one shared left-turn/through lane. The left-turn only lane was observed to have higher utilization during both the morning and evening peak periods. Left turning vehicles were occasionally unable to clear the intersection due to queues extending from the intersection of Old Bayshore Highway and US 101 southbound ramp. This was only observed during the morning peak period and the blockages occurred for less than five seconds. Long queues were also observed extending from the stop-controlled intersection of East Gish Road and US 101 Northbound Ramp to Old Bayshore Highway during the morning peak period. These queues did not cause intersection delays at East Gish Road/North 10th Street and Old Bayshore Highway.

Most southbound traffic on East Gish Road was observed making a right turn onto Old Bayshore Highway during both the morning and evening peak periods. Southbound right turning vehicles would create long queues for short periods that would clear every cycle during both peak periods. Southbound left-turn storage capacity was not exceeded during either peak period.

During the morning peak period long queues were observed on westbound Old Bayshore Highway extending from East Gish Road to the proposed project's frontage, and northbound on North 10th Street extending from Old Bayshore Highway to the San José Fire Department Station 5. The vehicle mix for westbound traffic on Old Bayshore Highway contained a high number of heavy vehicles during the morning peak period. All westbound through lanes were observed to have equal lane utilization for both peak periods. The westbound left-turn lane storage capacity was not exceeded during either peak period.

Eastbound traffic on Old Bayshore Highway had equal lane utilization during the morning peak period with higher right-turn volumes during the evening peak period. No queues were observed during either peak period. The left-turn lane storage capacity was only exceeded during the morning peak period when large trucks were observed waiting to make a left turn.



3. CEQA Transportation Analysis

This chapter provides a description of the VMT screening process and discusses the project's consistency with *Envision San José 2040 General Plan*.

3.1 VMT Evaluation

Vehicle miles traveled (VMT) can be a useful metric in understanding the overall effects of a project on the roadway system. It is the sum of each generated vehicle multiplied by the length of their trip to and from the site on an average weekday. For example, a vehicle driven one mile is one VMT. Therefore, a project with a high VMT would have a greater effect on the roadway system than a project with a low VMT.

SB 743 is California's law to replace level of service (LOS) with VMT in environmental review. This shift towards VMT aligns with San José's long-term goal of reducing drive-alone trips and increasing the use of walking, bicycling, and transit modes. The benefits of reducing drive-alone trips and increasing the use of other modes include reduced energy consumption, reduced greenhouse gas emissions, and support of healthier communities. Strategies from the *Envision San José 2040 General Plan* to address VMT include:

- TR-9.1: Enhancing and expanding walking and bicycle facilities to facilitate non-automobile trips
- TR-8.3 through TR-8.10: Supporting parking strategies such as parking supply limits, pricing, car share programs, and unbundled private off-street parking to encourage the use of non-automobile modes
- TR-7.1: Requiring large employers to develop and maintain TDM programs to reduce vehicle trips
- TR-3.5 Increasing transit frequency and service along major corridors and to major destinations

The City of San José developed the *San José Transportation Analysis Handbook (2018)* which provides guidance on project screening criteria, thresholds of significance for environmental clearance for development projects, a framework for transportation analyses based on the City's policies and *Envision San José 2040 General Plan*, and methodologies for VMT analysis.

3.1.1 VMT Screening Criteria

The first step is to determine whether the project passes the VMT screening criteria. According to Table 1 Screening Criteria for CEQA Transportation Analysis for Development projects in the City's handbook, industrial projects of 30,000 square feet of gross floor area or less do not be require a detailed CEQA transportation analysis. The project's 69,192 gross square feet square surpasses this amount.



However, as shown **Appendix A**, the San José VMT Evaluation Tool indicates VMT Industrial threshold for the area is 14.37. The report in **Appendix A** shows that the project would generate 14.3 VMT per employee meaning it will be below the City's threshold. According to the City's VMT heat map in **Appendix B**, the project will also be located within an area that VMT per Industrial Job fall below the City's threshold. Therefore, the industrial project as proposed does not have a VMT impact. A Local Transportation Analysis (LTA) would still be required as requested by the City to evaluate the effects the project will have on transportation, access, circulation, related safety elements in the proximate area of the project and establish consistency with General Plan policies and goals.

3.2 General Plan Consistency

According to *San José Transportation Analysis Handbook (2018)*, projects must demonstrate consistency with the *Envision San José 2040 General Plan*, referred to as the General Plan, to address cumulative impacts. The determination of consistency with the General Plan includes a project's density, design, and conformance to the goals and policies set forth in the General Plan. This section describes the land use and transportation goals in the General Plan and the project's consistency with those goals.

The proposed project is consistent with the General Plan land use goals by developing in an identified Growth Area to preserve and protect the quality of existing neighborhoods.

The transportation goals in the General Plan aim to complete and maintain a multimodal transportation system with an emphasis on improvements of walking and bicycling facilities, and to maximize efficiency of the existing street system. The General Plan listed the Transportation Demand Management (TDM) strategies that minimize vehicle trips and vehicle miles traveled by employees and residents. The pedestrian and bicycle improvements for the project include the construction of completing the sidewalks along the project's frontage and providing bicycle storage on site for users.

The project is consistent with the General Plan land use and transportation policies in **Table 1**.



Table 1: Envision San José 2040 General Plan Land Use and Transportation Policies

	Land Use
LU-2.1	Include within the Envision General Plan Land Use / Transportation Diagram significant job and housing growth capacity within the following identified Growth Areas: • Employment Lands – The Plan supports the significant intensification of employment activity within each of the city's major employment districts. Within the North San José, Berryessa/ International Business Park and Old Edenvale areas.
	Transportation
TR-2.2	Provide continuous pedestrian and bicycle system to enhance connectivity through the City by completing missing segments.
TR-2.3	Construct sidewalks that are universally accessible and designed for use by people of all abilities.
TR-2.8	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-2.18	Provide bicycle storage facilities as identified in the San José Bicycle Master Plan.



4. Project Traffic

This chapter discusses the process used to estimate the amount of traffic generated by the proposed Old Bayshore Highway Warehouse development.

4.1 Trip Generation

The amount of traffic generated by a development is referred to as its vehicle trip generation. It is presented as the number of inbound and outbound vehicles during a typical weekday and during the single hours during the morning and evening commute periods, when traffic volumes on the roadway network are at their highest, referred to as the AM and PM peak hours. The vehicle trip generation estimates for the proposed warehouse development were developed using warehousing trip generation rates from the Institute of Transportation Engineers, ITE's, *Trip Generation Manual*, 10th Edition. Warehousing (ITE Code 150) is described as a building primarily devoted to the storage of materials, but it may also include office and maintenance areas. The resulting daily and peak hour traffic volumes are shown in **Table 2**.

Table 2: Project Vehicle Trip Generation Estimates¹

Land Use	Cina (NCE)	Daile Trina		.Μ Peak Hoι	ır Trips	PM Peak Hour Trips		
Land Ose	Size (KSF)	Daily Trips	ln	Out	Total	ln	Out	Total
Warehousing	69.192	120	9	3	12	4	9	13

Notes:

1. ITE land Use Code 150 for Warehousing (ITE *Trip Generation Manual*, 10th Edition).

Source: Fehr & Peers, 2019

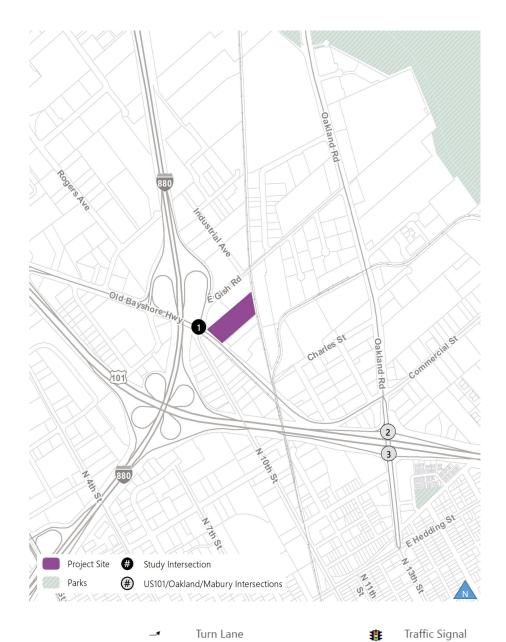
4.2 Trip Distribution and Assignment

The geographical distribution of trips is based on the locations of complementary land uses, the street system serving the project, and existing travel patterns in the area. The general directions of approach and departure assumed for the project trips are illustrated on **Figure 6**. Using this trip distribution pattern, the traffic generated by the project was assigned to the street network, and **Figure 7** shows the project-generated traffic volumes at the study intersections and project driveways during the weekday AM and PM peak hours. As noted on **Figure 7**, an estimated 3 PM peak hour project-related trips would use Oakland Road to reach the US 101/Oakland Road interchange.





Figure 5



Peak Hour Traffic Volume

AM (PM)

Stop Sign

1. E Gish Rd/10th St/Old Bayshore Hwy	2. Oakland Rd/US101 NB Ramps	3. Oakland Rd/US101 SB Ramps		
E Gah	Owkland Re	Owkland Rd		
○○○○○ ○○○○○ ○○○○○○ ○○○○○○ ○○○○○ ○○○○○ ○○○○	(C) (C) (D) (D) (D) (D) (D) (D) (D) (D) (D) (D	US101 SB OH-Ramp 0 (0) 0 (0) 0 (0)		



Figure 6
Peak Hour Traffic Volumes and Lane Configurations
Background with Project Conditions



5. Intersection Operations Analysis

An intersection operations analysis was conducted for the following intersection near the site:

1. East Gish Road/North 10th Street and Old Bayshore Highway

The operations of these intersections were evaluated with level of service calculations for the morning and evening peak hours for the following scenarios:

- 1. Existing Conditions Existing peak hour volumes, lane configurations, and traffic control devices
- 2. Background Conditions Existing conditions plus traffic from approved projects
- 3. Background with Project Conditions Background Conditions plus project trips

5.1 Signalized Intersection Level of Service (LOS) Method

The method described in Chapter 16 of the 2000 Highway Capacity Manual (HCM) (Special Report 209, Transportation Research Board) was used to prepare the level of service (LOS) calculations for the three signalized study intersections. This method, which is adopted by San José and the VTA, analyzes intersection operations based on average control delay per vehicle. Control delay includes the initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The average control delay is calculated using TRAFFIX analysis software and in correlated to a LOS designation as shown in **Table 1**. The LOS threshold for signalized intersections in San José is LOS D.



Table 1: Signalized Intersection Level of Service Definitions

Level of Service	Description	Average Control Delay Per Vehicle (Seconds)
А	Operations with very low delay occurring with favorable progression and/or short cycle lengths.	≤ 10.0
B+ B B-	Operations with low delay occurring with good progression and/or short cycle lengths.	10.1 to 12.0 12.1 to 18.0 18.1 to 20.0
C+ C C-	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.1 to 23.0 23.1 to 32.0 32.1 to 35.0
D+ D D-	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, and high 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-	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences.	55.1 to 60.0 60.1 to 75.0 75.1 to 80.0
F	Operations with delays unacceptable to most drivers occurring due to over-saturation, poor progression, or very long cycle lengths.	> 80.0

Source: Traffic Level of Service Analysis Guidelines, October 2014; VTA Congesting Management Programs, June 2003; Highway Capacity Manual, Transportation Research Board, 2000.

5.2 Intersection Traffic Volumes and Lane Configurations

Existing intersection volumes were obtained from the City of San Jose Staff and are contained in **Appendix C**. The existing morning and evening peak hour volumes, lane configurations, and traffic control devices for the study intersection are shown on **Figure 7**. Traffic from approved projects from the City's Approved Trip Inventory (ATI) were added to create traffic volumes for Background Conditions, as shown on **Figure 8**. The project's trip assignment from **Figure 6** was added to the background volumes on **Figure 8** to obtain traffic forecasts for Background with project Conditions, as shown on **Figure 9**.



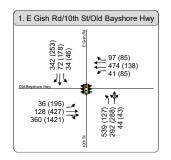
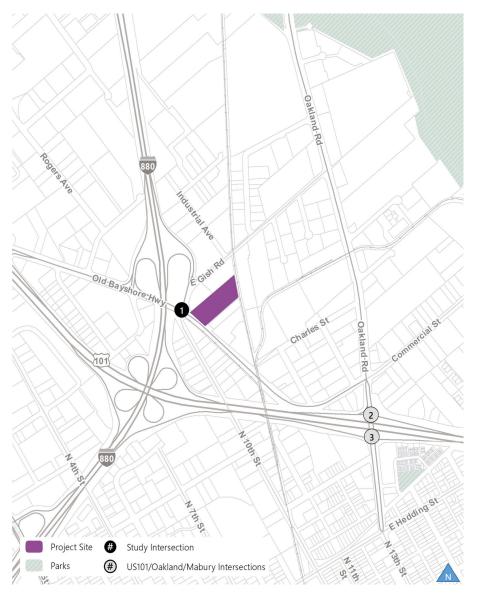






Figure 7
Peak Hour Traffic Volumes and Lane Configurations
Existing Conditions



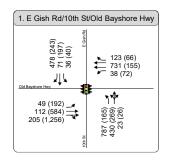




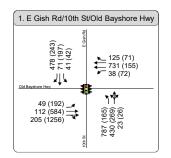


Figure 8
Peak Hour Traffic Volumes and Lane Configurations
Background Conditions



Peak Hour Traffic Volume

Stop Sign





AM (PM)

Figure 9
Peak Hour Traffic Volumes and Lane Configurations
Background with Project Conditions



5.3 Intersection LOS Results

5.3.1 Existing and Background Levels of Service

The results of the Existing Conditions and Background Conditions LOS analysis for the signalized study intersections are presented in **Table 2**.

Table 2: Existing and Background Intersection Levels of Service

#	Intersection	Control	Jurisdiction (LOS Threshold) ¹	Peak	Existing		Background	
				Hour ²	Delay³	LOS ⁴	Delay ³	LOS ⁴
1	East Gish Road/North 10 th Street & Old Bayshore Highway	Signal	San José (D)	AM PM	32.4 45.4	C- D	56.6 74.5	E+ E

Notes: **Bold text** indicates intersection operates at unacceptable level of service.

- 1. Intersection jurisdiction and associated LOS threshold applied.
- 2. AM = morning peak hour, PM = evening peak hour.
- 3. Whole intersection weighted average control delay expressed in seconds per vehicle calculated using methods described in the 2000 Highway Capacity Manual, with adjusted saturation flow rates to reflect Santa Clara County Conditions for signalized intersections.
- 4. LOS = Level of Service. LOS calculations conducted using the TRAFFIX analysis software packages, which apply the methods described in the 2000 *Highway Capacity Manual*.

Source: Fehr & Peers, 2019.

East Gish Road/North10th Street and Old Bayshore Highway show an increase in average delay with the addition of background trips. The increase of trips from all approaches during both peak periods translates to an increase in delays resulting in LOS E+ and E in the morning and evening peak periods respectively.



5.3.2 Background with Project Levels of Service

The results of the intersection LOS analysis for Background with project Conditions are presented in **Table 3**. The results for Background Conditions are included for comparison purposes. Increases in critical delays and volume-to-capacity ratios are presented to assess adverse intersection operations effects.

Table 3: Background and Background with Project Intersection Levels of Service

#	Intersection		Jurisdiction Peak (LOS Threshold) ¹	Background		Background with Project				
		Control			Delay ³	LOS⁴	Delay ³	LOS⁴	Δ in Crit. V/C ⁵	Δ in Crit. Delay ⁶
1	East Gish Road/North 10 th Street & Old Bayshore Highway	Signal	San José (D)	AM PM	56.6 74.5	E+ E	56.5 74.4	E+ E	0.00 0.00	0.000 0.000

Notes: **Bold text** indicates intersection operates at unacceptable level of service.

- 1. Intersection jurisdiction and associated LOS threshold applied.
- 2. AM = morning peak hour, PM = evening peak hour.
- 3. Whole intersection weighted average control delay expressed in seconds per vehicle calculated using methods described in the 2000 Highway Capacity Manual, with adjusted saturation flow rates to reflect Santa Clara County Conditions for signalized intersections.
- 4. LOS = Level of Service. LOS calculations conducted using the TRAFFIX analysis software packages, which apply the methods described in the 2000 *Highway Capacity Manual*.
- 5. Change in critical volume to capacity ratio between Background and Background with project conditions.
- 6. Change in average critical movement delay between Background and Background with project conditions.

Source: Fehr & Peers, 2019.

East Gish Road/North 10th Street and Old Bayshore Highway show a decrease in average delay with the addition of project trips, which is counterintuitive. The average delay values in the table are weighted averages. Weighted average delays will be reduced when traffic is added to a movement with a low delay, such as the through movements in the non-peak direction. Conversely, relatively small volume increases to movements with high delays can substantially increase the weighted average delay. Based on the *City of San José Transportation Engineering Handbook (2018)*, an adverse effect on an intersection already operating at LOS E or F occurs when the analysis demonstrates that a project would cause the following:

- Increase in average critical delay by 4.0. seconds or more and an increase in the critical volume-to0capcaicty (V/C) ratio of 0.010 or more; or
- A decrease in average critical delay and an increase in the critical V/C ratio of 0.010 or more.

As shown in **Table 5**, the addition of projects trips does not increase the critical V/C ratio and critical delay over the City's thresholds meaning that the project does not adversely affect the study intersection.



6. Adjacent Development Policies

This chapter discusses the effects of the added traffic to the surrounding roadway system by the proposed Old Bayshore Highway Warehouse development in relation to the North San Jose Area Development Policy and the US 101/Oakland/Mabury Transportation Development Policy.

6.1 North San Jose Area Development Policy

The North San Jose Area Development Policy (NSJADP) Boundary map is shown in **Appendix D**. The intersection within this boundary that is near the project location is Old Bayshore Highway/US 101 Southbound Ramp. The proposed project is anticipated to generate a total of 12 to 13 peak hour trips. These trips, when distributed on the roadway system, would add a minimal amount of traffic to any one intersection. Project trips that travel into the NSJADP area will result in a negligible effect on intersection operations. Due to the nominal amount of project traffic, it is likely that no impact will result in the NSJADP area and no fee is required.

6.2 US 101/Oakland/Mabury Transportation Development Policy

The San José City Council adopted the December 2007 US 101/Oakland/Mabury Transportation Development Policy (TDP) to address the needed improvements in the proximity of the US 101/Oakland Road interchange. The TDP requires all industrial, commercial, and residential to pay a fee per trip traversing through one or more Policy Interchange Intersection. (Policy Interchange Intersections include Oakland Road/Commercial Street, Oakland Road/US 101 North ramps, and Oakland Road/US 101 South ramps.)

The TDP also provides an incentive for new industrial development in the area by exempting a certain amount of new development or intensification of existing development. The *San José Municipal Code* Chapter 20.50 – Industrial Zoning Districts, classifies the project as an Industrial Land use. The proposed project will generate 3 PM peak hour interchange trips, based on the project Trip Assignment on **Figure 8**. Thus, the TDP will require a fee based on the 3 trips and the fee rate determine at the time of payment.



7. Site Access, On-Site Circulation, Parking

The site plan (on **Figure 2**) was reviewed to evaluate site access and on-site circulation for vehicles, pedestrians, and bicycles. The assessment included specific topics per City staff request:

- Limiting the western-most driveway to right-turns only due to existing left-turn pocket on Old Bayshore Highway.
- Discussion of site driveway operations for all vehicles including trucks (garbage, delivery, and emergency vehicles).
 - Discussion of projected queuing on Old Bayshore Highway and East Gish Road/North 10th
 Street and how it affects driveway operations.
- Discussion on-site circulation for all vehicles, including trucks (garbage, delivery, and emergency vehicles).
 - Evaluation of pick-up/drop-off operations and projected queues in the public right-of-way and on-site.
- The number of parking spaces provided compared to City of San José's Zoning Code requirements.

7.1 Vehicular Site Access

7.1.1 Vehicles

Passenger vehicles would enter and exit the site via the two main driveways on Old Bayshore Highway. The western-most and eastern-most driveways are restricted to right-turns in and out only due its location near the westbound left-turn pocket on Old Bayshore Highway. Trucks will be restricted to entering the site through the eastern-most driveway and exiting the site through the western-most driveway. There is also a third driveway along the west side of the site that provides access to East Gish Road.

7.1.2 Left-Turn Feasibility

Currently there is double-double yellow stripping on Old Bayshore Highway in front of the project's frontage. Shortening the double-double yellow stripping will allow eastbound vehicles to make left turns form Old Bayshore Highway into the eastern-most driveway. The opening for the driveway would be approximately 300 feet east of the East Gish Road/North 10th Street and Old Bayshore Highway intersection.



As described in field observations westbound queues were observed blocking the proposed project's frontage during the morning peak period. However, these queue clears each cycle and would allow eastbound-left turning vehicles to enter the project site. The existing westbound volume on Old Bayshore Highway is 612 vehicles in the morning peak hour and 308 in the evening peak hour. The project's eastbound-left turn demand is six vehicles in the morning peak hour and three vehicles in the evening peak hour and would therefore not cause significant queues on Old Bayshore Highway. The existing eastbound through volumes on Old Bayshore Highway is 206 vehicles in the morning peak hour and 516 in the evening peak hour. These through vehicles would be able to go around queued vehicles in the second eastbound lane.

7.1.3 Emergency, Delivery, and Trash Vehicles

Emergency, delivery, and trash vehicles would enter the site on Old Bayshore Highway via the eastern-most driveway, and exit the site via the western-most driveway. Both main driveways can accommodate emergency, delivery, and trash vehicles entering and exiting the project site as shown in **Appendix E**, **F**, and **G** respectively.

7.1.4 Queuing and Driveway Operations

During the morning peak period westbound queues on Old Bayshore Highway extend to the project's frontage and therefore will cause delays for vehicles entering and exiting the site using the main driveways. However, due to the small number of morning peak hour inbound and outbound project-generated trips this will result in negligible effects to queuing in the public streets or on-site.

During the morning peak period northbound queues on East Gish Road will cause minor delays for vehicles exiting the project site onto Old Bayshore Highway and traveling towards northbound East Gish Road. The small number of outbound project generated trips will result in negligible effects to queuing in the public streets.

During the evening peak period no queueing was observed along the project frontage on Old Bayshore Highway nor on East Gish Road. The small number of evening peak hour inbound and outbound project generated trips would not cause queuing in the public streets or on-site.



7.2 Vehicular On-Site Circulation

7.2.1 Emergency, Delivery, and Trash Vehicles

Fire trucks would enter the site via the eastern-most driveway and exit via the driveways on Old Bayshore Highway as shown in **Appendix E**. The circulation aisles on the sides of the warehouse to reach the rear of the warehouse are both 23 feet wide.

Delivery trucks would enter the eastern-most driveway on Old Bayshore Highway and back up into the loading docks at the rear of the warehouse. The delivery trucks will continue and circulate around the building and exit via the driveways on Old Bayshore Highway shown in **Appendix F.**

The trash collection room will be located in the southeast corner of the warehouse with outward opening doors as shown in **Figure 2**. Garbage trucks will enter the eastern-most driveway on Old Bayshore Highway to collect trash from the building. The garbage trucks will continue and circulate around the building and exit via the driveways on Old Bayshore Highway shown in **Appendix G.**

7.2.2 Site Operations

Trucks will enter the project site via the eastern-most driveway and exit via the western-most driveway on Old Bayshore Highway. Drop-off and pick-up activity will occur at the six grade-level overhead doors located around the warehouse or the six docks located at the rear of the building.

7.3 Site Access for Pedestrians and Bicyclists

The project will add few pedestrian and bicycle trips to the area. Class II bicycle facilities are adjacent to the project site along Old Bayshore Highway. Sidewalks are currently not present along the project frontage. The project will be adding a new sidewalk along its frontage helping to fill the pedestrian facility gap along the westbound side of Old Bayshore Highway. Overall, the project's driveways would not interfere with the existing and planned pedestrian and bicycle facilities.

7.4 Parking

According to the *San José Municipal Code* Chapter 20.90.060, the vehicle parking requirement for warehouse land use is one space per 5,000 square feet of floor area. This results in a total of 14 required parking spaces. The 34 parking spaces provided meets the City of San José municipal code requirements.



According to the *San José Municipal Code* Chapter 20.90.060, the bicycle parking requirement is one per 10 full time employees; however, employment information is not known at this time. According to the VTA's *Bicycler Technical Guidelines, 2012* Table 10-3 the minimum number of required bicycle parking spaces is four. As shown in **Figure 2**, the project provides a minimum of five bicycle spaces meeting this requirement.



8. Construction Evaluation and Outside Agency Coordination

8.1 Effects on Pedestrian and Bicycle Circulation

Pedestrians and bicycle facilities will be maintained along the project frontage. If needed a temporary ADA accessible pedestrian sidewalk and bicycle facilities will be constructed along the project frontage during project construction.

8.2 Construction Mitigation

The project applicant should develop a construction management plan for review and approval by city staff. The plan should include but not limited to the following items and requirements:

- Identify proposed truck routes to be used by construction vehicles.
- Specify construction hours, including limits on the number of truck trips during the AM and PM peak traffic periods (7:00 9:00 AM and 4:00 6:00 PM), if conditions demonstrate the need.
- Include a parking management plan for ensuring that construction worker parking results in minimal disruption to surrounding uses.
- Include a public information and signage plan to inform residents of the planned construction activities, roadway changes/closures, and parking changes.
- Store construction materials only in designated areas that minimize impacts to nearby roadways.
- Use California Department of Transportation (Caltrans) certified flag persons for any temporary lane closures to minimize impacts to traffic flow, and to ensure safe access into and out of the project sites.
- Install traffic control devices as specified in the California Department of Transportation Manual of Traffic Controls for Construction and Maintenance Work Zones.
- When a pedestrian/bicycle path is to be closed, detour signs will be installed to clearly designate
 an alternative route. Temporary fencing or other indicators of pedestrian and bicycle hazards will
 be provided.
- Ensure that access to fire hydrants remains available at all times.



8.3 Union Pacific Railroad Coordination

The project planner, Michelle Flores, has informed the applicant that she will be in charge of reaching out to Union Pacific Railroad (UPRR).



9. Conclusion

The results of the transportation analysis for the proposed Old Bayshore Highway Warehouse are:

- The project is the redevelopment of an approximate 21,000 square-foot concrete pipe manufacturing/batching facility with a warehouse facility.
- The project meets the VMT screening criteria and is expected to result in less-than-significant VMT impacts; therefore, a detailed CEQA transportation analysis is not required.
- The project would not cause adverse intersection operations to East Gish Road/North 10th Street and Old Bayshore Highway due to the small number of morning and evening peak hour project generated trips.
- The small number of project trips entering the project site via eastbound on Old Bayshore Highway can be accommodated by shortening the double-double yellow stripping.
- The project will not affect intersections within the adjacent NSJADP area due to the nominal amount of project generated trips.
- The vehicle parking supply will meet City Code.
- No projected queues in the public streets or on-site are expected due to the small number of project generated morning and evening peak hour trips.
- The bicycle parking supply will meet VTA's Bicycler Technical Guidelines, 2012 requirements.

Appendix A

CITY OF SAN JOSE VEHICLE MILES TRAVELED EVALUATION TOOL SUMMARY REPORT

PROJECT:

Name: Old Bayshore Highway Warehouse Tool Version: 2/29/2019 Location: 1420 Old Bayshore Highway San Jose CA 95112 Date: 7/2/2019

Parcel: 23706015 Parcel Type: Suburb with Multifamily Housing

Proposed Parking Spaces Vehicles: 34 Bicycles: 5

LAND USE:

Residential:		Percent of All Residential Units	
Single Family	0 DU	Extremely Low Income (< 30% MFI)	0 % Affordable
Multi Family	0 DU	Very Low Income (> 30% MFI, < 50% MFI)	0 % Affordable
Subtotal	0 DU	Low Income (> 50% MFI, <u><</u> 80% MFI)	0 % Affordable
Office:	0 KSF		
Retail:	0 KSF		
Industrial:	69.19 KSF		

VMT REDUCTION STRATEGIES

Tier 1 - Project Characteristics

Increase Residential Density	
Existing Density (DU/Residential Acres in half-mile buffer)	6
With Project Density (DU/Residential Acres in half-mile buffer)	6
Increase Development Diversity	
Existing Activity Mix Index	0.89
With Project Activity Mix Index	0.88
Integrate Affordable and Below Market Rate	
Extremely Low Income BMR units	0 %
Very Low Income BMR units	0 %
Low Income BMR units	0 %
Increase Employment Density	
Existing Density (Jobs/Commercial Acres in half-mile buffer)	18
With Project Density (Jobs/Commercial Acres in half-mile buffer)	18

Tier 2 - Multimodal Infrastructure

Pedestrian Network Improvements (In Coordination with SJ)

Are pedestrian improvements provided beyond the development frontage? No

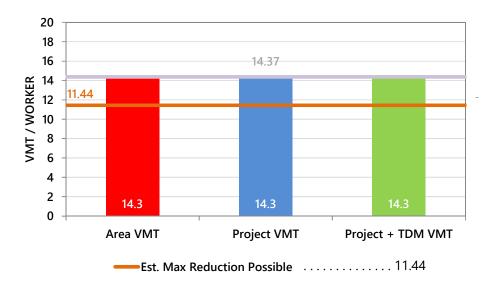
Tier 3 - Parking

Tier 4 - TDM Programs

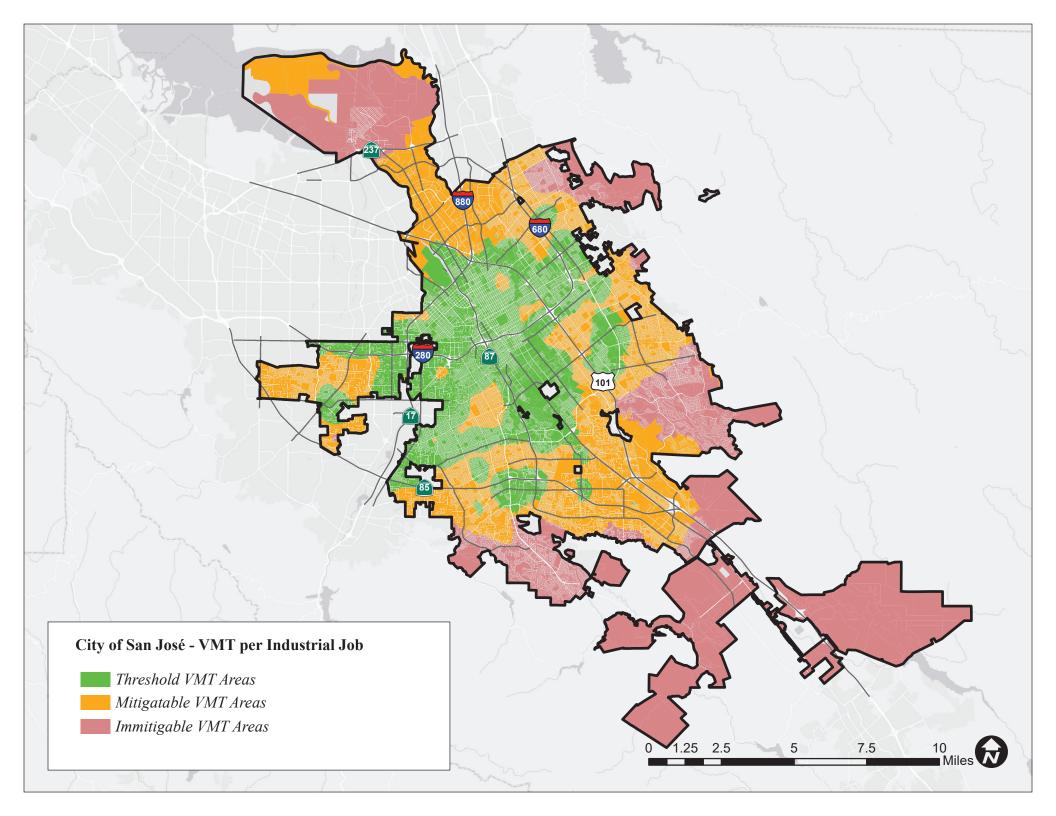
CITY OF SAN JOSE VEHICLE MILES TRAVELED EVALUATION TOOL SUMMARY REPORT

EMPLOYMENT ONLY

The tool estimates that the project would generate per non-industrial worker VMT below the City's threshold. There are selected strategies that require coordination with the City of San Jose to implement.

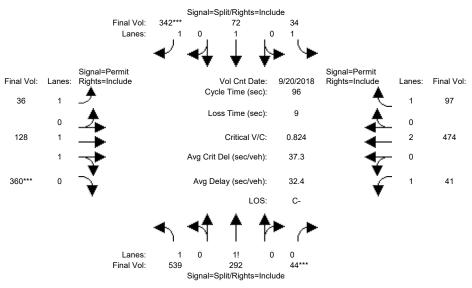


Appendix B



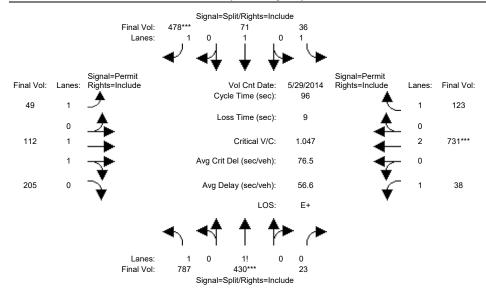
Appendix C

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



Street Name: Approach: Movement:		rth Bo				ound - R							
Min. Green: Y+R:	4.0		4.0	4.0	4.0	4.0	4.0	10 4.0	4.0		4.0	10	
Volume Module													
Base Vol:	539	292	44	34	72	342		128	360	41	474	97	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	539	292	44	34	72	342	36	128	360	41	474	97	
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
ATI:	0	0	0	0	0	0	0	0	0	0	0	0	
Initial Fut:	539	292	44	34	72	342	36	128	360	41	474	97	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	539	292	44	34	72	342	36	128	360	41	474	97	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:		292	44	34	72	342	36	128	360	41	474	97	
PCE Adj:			1.00	1.00		1.00		1.00	1.00	1.00		1.00	
MLF Adj:			1.00	1.00		1.00		1.00	1.00			1.00	
FinalVolume:			44	34	72	342	36		360	41		97	
Saturation F.													
		1900	1900	1900	1000	1900	1000	1900	1900	1900	1000	1900	
Adjustment:			0.92	0.92		0.92		1.00	0.92	0.92		0.92	
-	1.45		0.92		1.00	1.00		1.00	1.00	1.00		1.00	
Final Sat.:			127		1900	1750		1900	1750	1750		1750	
Capacity Ana				ı		1	1		'	1		1	
Vol/Sat:	-			0.02	0.04	0.20	0.02	0.07	0.21	0.02	0.12	0.06	
Crit Moves:			****			***			****				
Green Time:	40.3	40.3	40.3	22.8	22.8	22.8	24.0	24.0	24.0	24.0	24.0	24.0	
	0.51		0.82	0.08	0.16	0.82		0.27	0.82	0.09		0.22	
Delay/Veh:	20.8	30.1	30.1	28.6	29.2	47.4	27.7	29.1	43.2	27.8	31.3	28.9	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:			30.1	28.6	29.2	47.4	27.7	29.1	43.2	27.8	31.3	28.9	
LOS by Move:	C+	C	C	С	С	D	С	С	D	С	С	С	
HCM2k95thQ:	17	33	33	2	4	23	2	6	24	2	12	5	
Note: Queue	repor	ted is	the n	umber	of ca	ars per	lane	•					

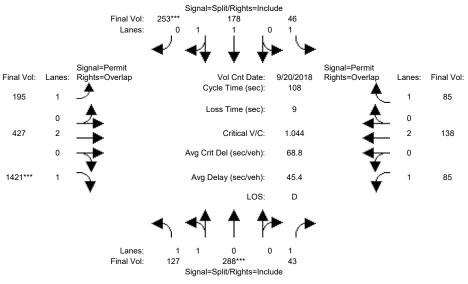
Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative) Background (AM)



Street Name:	No	rth Po	E Gish		1+b Po	und	N 10th Street East Bound West Bound							
Movement:														
		10				10	10	10	10	10	10			
Y+R:		4.0			4.0				4.0			4.0		
Volume Module														
	612		21	36	68	475	49		190	38	705	103		
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00		
Initial Bse:			21	36		475	49	95 0	190	38	705	103		
Added Vol:	0	0	0	0		0	0	0	0	0		0		
ATI:	175				3	3	0	17	15	0	26	20		
Initial Fut:	787	430	23	36	71	478	49	112	205	38	731	123		
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
PHF Volume:	787	430	23 0	36	71	478	49		205	38	731	123		
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0		
Reduced Vol:	787	430	23	36	71	478	49	112	205	38	731	123		
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		
FinalVolume:			23	36			49		205		731	123		
Saturation Fl														
Sat/Lane:								1900	1900		1900			
Adjustment:				0.92		0.92		1.00	0.92		1.00	0.92		
Lanes:					1.00			1.00	1.00		2.00	1.00		
Final Sat.:					1900			1900	1750		3800			
Capacity Anal	_													
Vol/Sat:			0.48	0.02	0.04		0.03	0.06	0.12	0.02		0.07		
Crit Moves:						****					****			
Green Time:				25.0		25.0		17.6	17.6		17.6	17.6		
Volume/Cap:			1.05	0.08		1.05		0.32	0.64		1.05	0.38		
Delay/Veh:			65.3	26.9		90.6		34.2	39.0		86.3	35.2		
User DelAdj:			1.00	1.00		1.00		1.00	1.00		1.00	1.00		
AdjDel/Veh:					27.4			34.2	39.0		86.3	35.2		
LOS by Move:	C+	E				F				C-	F	D+		
HCM2k95thQ:				2				6	13	2	30	7		
Note: Queue 1	repor	ted is	the n	umber	of ca	rs per	lane							

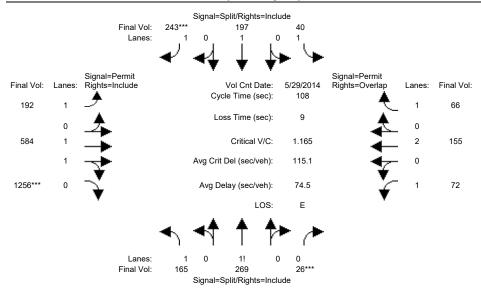
Summary Scenario Comparison Report (With Average Critical Delay)

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



Street Name: Approach: Movement:			E Gish und - R	Road Sou	ıth Bo - T	ound - R	Ea L -	N ast Bo - T	10th und - R	Street West Bound L - T - R			
Min. Green: Y+R:	10 4.0	10 4.0	10 4.0	10	10 4.0	10 4.0	10	10 4.0	10 4.0	10 4.0	10 4.0	10 4.0	
Volume Module													
Base Vol:	127	288	43	46	178	253		427	1421	85	138	85	
Growth Adj:			1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Initial Bse:		288	43	46	178	253	195	427	1421	85	138	85	
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
ATI:	0	0	0	0	0	0	0	0	0	0	0	0	
Initial Fut:	127	288	43	46	178	253	195	427	1421	85	138	85	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	127	288	43	46	178	253	195	427	1421	85	138	85	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	127	288	43	46	178	253	195	427	1421	85	138	85	
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	
FinalVolume:			43		178	253	195		1421		138	85	
Saturation F													
Sat/Lane:	1900		1900	1900		1900		1900	1900	1900		1900	
Adjustment:			0.92	0.92		0.92		1.00	0.92	0.92		0.92	
Lanes:	1.00		1.00		1.00	1.00		2.00	1.00	1.00		1.00	
Final Sat.:			1750		1900	1750		3800	1750	1750		1750	
Capacity Ana				0 00	0 00	0 14	0 11	0 11	0 01	0 05	0 04	0 05	
Vol/Sat:			0.02	0.03	0.09	0.14	0.11	0.11	0.81	0.05	0.04	0.05	
Crit Moves:		****	1	1 = 0	1 = 0			60.4		60.4		00.0	
Green Time:	15.7		15.7	15.0		15.0		68.4	84.0		68.4	83.3	
Volume/Cap:			0.17		0.68	1.04		0.18	1.04	0.08		0.06	
Delay/Veh:		103	40.8			102.6	8.3	8.2	48.5	7.7	7.6	3.0	
User DelAdj:			1.00	1.00		1.00	8.3	1.00	1.00 48.5	1.00		1.00	
AdjDel/Veh:													
LOS by Move:		F 27	D 3	D 3	D 13	F 26	A 6		D 98	A 2	A 2	A 2	
HCM2k95thQ:	9								98	2	2	2	
Note: Queue	report	ea is	the n	unber	OI Ca	ırs per	ıane	•					

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



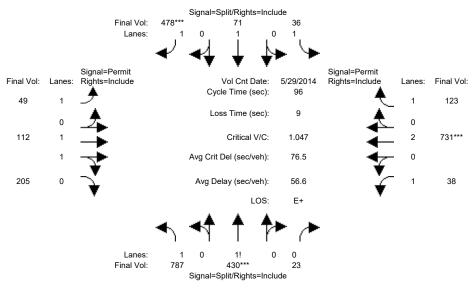
Street Name: E Gish Road N 10th Street	N 10th Street						
Approach: North Bound South Bound East Bound West Bo	und						
Movement: L - T - R L - T - R L - T	- R						
Min. Green: 10 10 10 10 10 10 10 10 10 10 10	10						
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0	4.0						
Volume Module: >> Count Date: 29 May 2014 << 4:45-5:45							
Base Vol: 106 212 15 40 191 237 192 560 1237 72 137	54						
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	1.00						
Initial Bse: 106 212 15 40 191 237 192 560 1237 72 137	54						
Added Vol: 0 0 0 0 0 0 0 0 0 0	0						
ATI: 59 57 11 0 6 6 0 24 19 0 18	12						
Initial Fut: 165 269 26 40 197 243 192 584 1256 72 155	66						
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	1.00						
DUE 74: 1 00 1 00 1 00 1 00 1 00 1 00 1 00 1	1.00						
PHF Volume: 165 269 26 40 197 243 192 584 1256 72 155	66						
PHF Volume: 165 269 26 40 197 243 192 584 1256 72 155 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	66 0						
Reduced Vol: 165 269 26 40 197 243 192 584 1256 72 155	66						
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	1.00						
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	1.00						
Final Volume: 165 269 26 40 197 243 192 584 1256 72 155	66						
Saturation Flow Module:							
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 190	1900						
Adjustment: 0.92 0.95 0.95 0.92 1.00 0.92 0.92 1.00 0.92 0.92 1.00	0.92						
Lanes: 1.22 0.71 0.07 1.00 1.00 1.00 1.00 1.00 1.00							
Final Sat.: 2141 1275 123 1750 1900 1750 1750 1900 1750 1750 3800	1750						
Capacity Analysis Module:	·						
Vol/Sat: 0.08 0.21 0.21 0.02 0.10 0.14 0.11 0.31 0.72 0.04 0.04	0.04						
Crit Moves: **** **** ****							
Green Time: 19.6 19.6 19.6 12.9 12.9 12.9 66.6 66.6 66.6 66.6 66.6	79.4						
Volume/Cap: 0.43 1.16 1.16 0.19 0.87 1.16 0.18 0.50 1.16 0.07 0.07	0.05						
Delay/Veh: 39.5 143 142.6 43.3 75.0 161.4 9.0 11.6 102.2 8.3 8.3	3.9						
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	1.00						
AdjDel/Veh: 39.5 143 142.6 43.3 75.0 161.4 9.0 11.6 102.2 8.3 8.3	3.9						
	A						
HCM2k95thQ: 9 39 39 3 17 29 6 20 107 2 2	1						
Note: Queue reported is the number of cars per lane.	-						

Summary Scenario Comparison Report (With Average Critical Delay)

	Summary Scenario Comparison Report (With Average Critical Delay) Future Volume Alternative																	
	I	???					Existing (PM)				Background (PM)					???		
		Avg Del	Crit	Avg Crit Del		Avg Del	Crit	Avg Crit Del		Avg Del	Crit	Crit V/C	Avg Crit Del	Avg Crit Del		Avg Del	Crit	Avg Crit Del
Intersection	LOS	(sec)	V/C	(sec)	LOS	(sec)	V/C	(sec)	LOS	(sec)	V/C	Change	(sec)	Change	LOS	(sec)	V/C	(sec)
#1	LOS ?	(sec) XX.X	V/C x.xxx	(sec) XX.X	LOS	(sec) 45.4	V/C 1.044	(sec) 68.8	E	(sec) 74.5	V/C 1.165	Change + 0.121	(sec) 115.1	Change + 46.3	LOS	(sec) XX.X	V/C x.xxx	(sec) xx.x

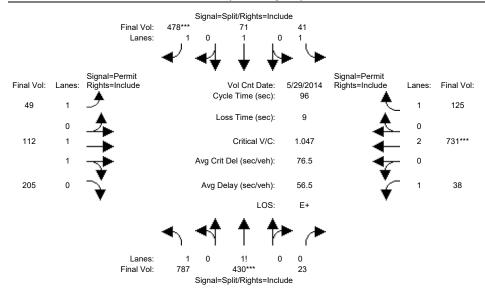
(updated Jun 5, 2015)

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



Street Name: Approach:		rth Bo		Road	ıth Bo	ound	N 10th Street East Bound West Bound							
Movement:	L ·	- T	- R	L -	- T	- R	L -	- T	- R	L -	- T	- R		
Min. Green: Y+R:	10	10 4.0	10	10 4.0	10 4.0	10 4.0	10 4.0	10 4.0	10 4.0	10	10 4.0	10 4.0		
Volume Modul									1					
Base Vol:	612		21	36	68	475	49	95	190	38	705	103		
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Initial Bse:			21	36	68	475	49	95	190	38	705	103		
Added Vol:	0		0	0	0	0	0	0	0	0	0	0		
ATI:	175			0	3	3	0		15	0		20		
Initial Fut:			23	36	71	- / 0	49		205	38	731	123		
User Adj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00		
PHF Adj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00		
PHF Volume:	787		23	36	71	478	49	112	205	38	731	123		
Reduct Vol:	0		0	0	0	0	0	0	0	0	0	0		
Reduced Vol:			23	36	71	478	49		205	38	731	123		
PCE Adj:		1.00		1.00		1.00		1.00	1.00		1.00	1.00		
MLF Adj:		1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00		
FinalVolume:			23	36		478		112	205	38	731	123		
Saturation F														
Sat/Lane:			1900	1900	1900	1900	1900	1900	1900	1900	1900	1900		
Adjustment:				0.92		0.92		1.00	0.92		1.00	0.92		
Lanes:		0.51	0.03		1.00	1.00		1.00	1.00		2.00	1.00		
Final Sat.:			48		1900	1750		1900	1750		3800	1750		
Capacity Ana						'						'		
Vol/Sat:	-			0.02	0.04	0.27	0.03	0.06	0.12	0.02	0.19	0.07		
Crit Moves:		***				***					****			
Green Time:	44.3	44.3	44.3	25.0	25.0	25.0	17.6	17.6	17.6	17.6	17.6	17.6		
Volume/Cap:			1.05	0.08	0.14	1.05		0.32	0.64		1.05	0.38		
Delay/Veh:			65.3	26.9	27.4	90.6		34.2	39.0		86.3	35.2		
User DelAdj:			1.00			1.00	1.00		1.00		1.00	1.00		
AdjDel/Veh:					27.4			34.2	39.0		86.3	35.2		
LOS by Move:			E	С		F	C-		D+	C-		D+		
HCM2k95thQ:	25		60	2		39	3	6	13	2	30	7		
Note: Queue			the n	umber	of ca		lane							

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



Street Name: Approach:			E Gish			und	N 10th Street East Bound West Bour						
Movement:	T INO.	- T	unu _ D	J J	שם ווטג - ייי	– R	T.	авс во _ т	ulla _ D	т -	- T		
Min. Green:													
Y+R:		4.0				4.0					4.0		
			1	1		1	1			1			
Volume Module				29 Ma	ay 201	4 << 7			'	'		ı	
Base Vol:	612	354	21	36	68	475	49	95	190	38	705	103	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Initial Bse:	612	354	21	36	68	475	49	95	190	38	705	103	
Added Vol:	0	0	0	5	0	0	0	0	0	0	0	2	
PasserByVol:	175	76	2	0	3	3	0	17	15	0	26	20	
Initial Fut:	787	430	23	41	71	478	49	112	205	38	731	125	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	787	430	23	41	71	478	49	112	205	38	731	125	
Reduct Vol:	0	0	0	0	0	0	0		0	0	0	0	
Reduced Vol:			23	41	71	478	49	112	205	38	731	125	
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	
FinalVolume:	787	430	23	41	71	478	49	112	205	38	731	125	
Saturation Fl	Low Mo	odule:											
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.92	0.92	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	
Lanes:	1.46	0.51	0.03	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	1.00	
Final Sat.:			48			1750		1900			3800	1750	
Capacity Anal													
Vol/Sat:			0.48	0.02	0.04	0.27	0.03	0.06	0.12	0.02	0.19	0.07	
Crit Moves: Green Time:			11 2	25 0	25.0	25.0	17 6	17.6	17.6	17 6	17.6	17.6	
						1.05		0.32	0.64			0.39	
Volume/Cap: Uniform Del:			1.05 25.8		0.14 27.2	35.5		34.0	36.2		1.05 39.2	34.4	
IncremntDel:			39.5	0.1		55.1	0.2		2.8		47.1	0.8	
InitQueuDel:			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Delay Adj: Delay/Veh:			1.00 65.3		1.00	1.00 90.6		1.00	1.00 39.0		1.00	35.2	
-												1.00	
User DelAdj: AdjDel/Veh:			1.00 65.3		1.00 27.4	1.00		1.00	1.00		1.00		
_					27.4 C	90.6 F		34.2 C-	39.0			35.2 D+	
LOS by Move: HCM2k95thQ:			E 60	2		39		6		C- 2			
									13	2	30	8	
Note: Queue r	-ehor	rea IS	the n	unner	or ca	ıs per	тапе	•					

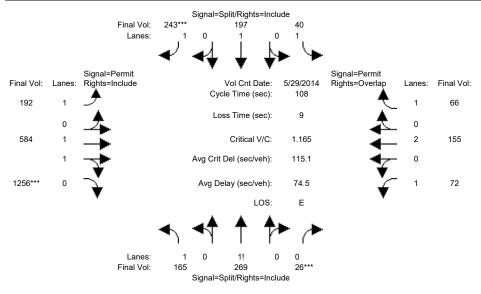
Summary Scenario Comparison Report (With Average Critical Delay)

Future Volume Alternative																		
1	??? Background (AM)							Background (AM) Plus Project						???				
		Avg Del	Crit	Avg Crit Del	Avg Crit Del Crit Del			Del Crit V/C Del Del						Avg Del	Crit	Avg Crit Del		
Intersection	LOS	(sec)	V/C	(sec)	LOS	(sec)	V/C	(sec)	LOS	(sec)	V/C	Change	(sec)	Change	LOS	(sec)	V/C	(sec)
#1	?	XX.X	x.xxx	XX.X	E+	56.6	1.047	76.5	E+	56.5	1.047	+ 0.000	76.5	+ 0.0	?	XX.X	X.XXX	XX.X
						30.0	1.047	70.5			1.047		70.5					

City of San Jose
Citywide Traffix Database

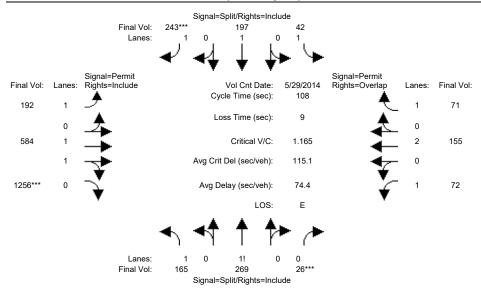
(updated Jun 5, 2015)

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



Street Name:		E Gish	n Road]	N 10th	Stree	t	
Approach:	North	Bound	Son	uth B	ound	Εć	ast B	ound	We	est Bo	ound
Movement: L	- 5	Г – R	L ·	- T	- R	L ·	- T	- R	L ·	- T	
 Min. Green:		LO 10									
Y+R: 4	.0 4	.0 4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
						•					
Volume Module:				_						100	- 4
Base Vol: 1				191				1237			54
Growth Adj: 1.							1.00			1.00	1.00
Initial Bse: 1		12 15	40			192		1237	72	137	54
Added Vol:			0				0	0	0		0
ATI:			0			0			0		12
Initial Fut: 1	55 26	59 26	40	197	243	192	584	1256	72	155	66
User Adj: 1.	00 1.0	00 1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj: 1.	00 1.0	00 1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume: 1		59 26	40	197	243	192	584	1256	72	155	66
Reduct Vol:	0		0	0	0	0	0	0	0	0	0
Reduced Vol: 1	55 26	59 26	40	197	243	192	584	1256	72	155	66
PCE Adj: 1.	00 1.0	00 1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
MLF Adj: 1.	00 1.0	00 1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume: 1	55 26	59 26	40	197	243	192	584	1256	72	155	66
Saturation Flow											
Sat/Lane: 19								1900		1900	
Adjustment: 0.			0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes: 1.	22 0.	71 0.07	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	1.00
Final Sat.: 21					1750			1750		3800	1750
Capacity Analys											
Vol/Sat: 0.			0.02	0.10		0.11	0.31		0.04	0.04	0.04
Crit Moves:		***			****			****			
Green Time: 19	6 19	.6 19.6	12.9	12.9	12.9	66.6	66.6	66.6	66.6	66.6	79.4
Volume/Cap: 0.	13 1.1	1.16	0.19	0.87	1.16	0.18	0.50	1.16	0.07	0.07	0.05
Delay/Veh: 39	.5 14	13 142.6	43.3	75.0	161.4	9.0	11.6	102.2	8.3	8.3	3.9
User DelAdj: 1.						1.00			1.00	1.00	1.00
AdjDel/Veh: 39	.5 14	43 142.6	43.3	75.0	161.4	9.0	11.6	102.2	8.3	8.3	3.9
AdjDel/Veh: 39 LOS by Move:	D	F F	D	E-	F	А	B+	F	А	А	А
HCM2k95thQ:	9 3	39 39	3		29	6	20	107	2	2	1
Note: Queue rep			number	of ca							

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



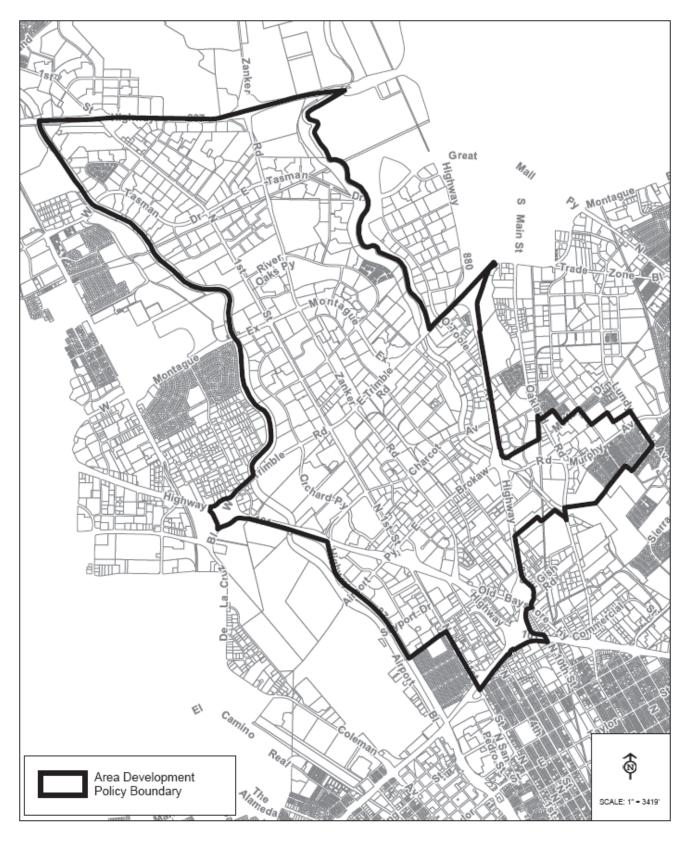
Street Name: E Gish Road N 10th Street	N 10th Street										
Approach: North Bound South Bound East Bound West Bo	East Bound West Bound										
Movement: L - T - R L - T - R L - T	- R										
Min. Green: 10 10 10 10 10 10 10 10 10 10 10											
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0	4.0										
Volume Module: >> Count Date: 29 May 2014 << 4:45-5:45											
Base Vol: 106 212 15 40 191 237 192 560 1237 72 137	54										
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	1.00										
Initial Bse: 106 212 15 40 191 237 192 560 1237 72 137	54										
Added Vol: 0 0 0 2 0 0 0 0 0 0	5										
ATI: 59 57 11 0 6 6 0 24 19 0 18	12										
Initial Fut: 165 269 26 42 197 243 192 584 1256 72 155	71										
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	1.00										
PHF Adi: 1 00 1 00 1 00 1 00 1 00 1 00 1 00 1	1.00										
PHF Volume: 165 269 26 42 197 243 192 584 1256 72 155	71										
PHF Volume: 165 269 26 42 197 243 192 584 1256 72 155 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0										
Reduced Vol: 165 269 26 42 197 243 192 584 1256 72 155	71										
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	1.00										
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	1.00										
FinalVolume: 165 269 26 42 197 243 192 584 1256 72 155	71										
Saturation Flow Module:											
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 190	1900										
Adjustment: 0.92 0.95 0.95 0.92 1.00 0.92 0.92 1.00 0.92 0.92 1.00	0.92										
Lanes: 1.22 0.71 0.07 1.00 1.00 1.00 1.00 1.00 1.00	1.00										
Final Sat.: 2141 1275 123 1750 1900 1750 1750 1900 1750 1750 3800	1750										
Capacity Analysis Module:	·										
Vol/Sat: 0.08 0.21 0.21 0.02 0.10 0.14 0.11 0.31 0.72 0.04 0.04	0.04										
Crit Moves: **** **** ****											
Green Time: 19.6 19.6 19.6 12.9 12.9 12.9 66.6 66.6 66.6 66.6	79.4										
Volume/Cap: 0.43 1.16 1.16 0.20 0.87 1.16 0.18 0.50 1.16 0.07 0.07	0.06										
Delay/Veh: 39.5 143 142.6 43.4 75.0 161.4 9.0 11.6 102.2 8.3 8.3	4.0										
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	1.00										
AdjDel/Veh: 39.5 143 142.6 43.4 75.0 161.4 9.0 11.6 102.2 8.3 8.3	4.0										
	A										
HCM2k95thQ: 9 39 39 3 17 29 6 20 107 2 2	1										
Note: Queue reported is the number of cars per lane.	_										

Summary Scenario Comparison Report (With Average Critical Delay)

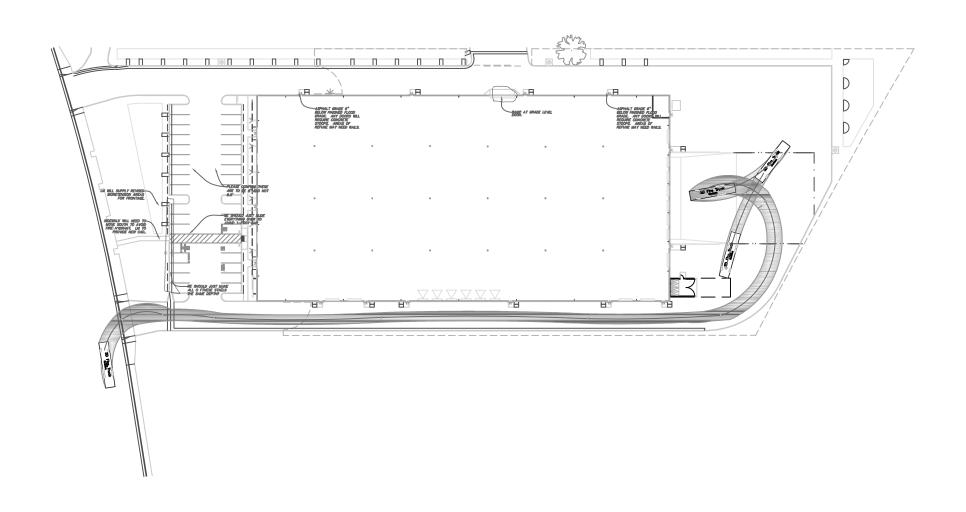
Future Volume Alternative																			
	???					Background (PM)				Background (PM) Plus Project						???			
		Avg Del	Crit	Avg Crit Del		Avg Del	Crit	Avg Crit Del		Avg Del	Crit	Crit V/C	Avg Crit Del	Avg Crit Del		Avg Del	Crit	Avg Crit Del	
Intersection	LOS	(sec)	V/C	(sec)	LOS	(sec)	V/C	(sec)	LOS	(sec)	V/C	Change	(sec)	Change	LOS	(sec)	V/C	(sec)	
#1	2		V/C x.xxx		E		V/C 1.165		E			Change + 0.000		+ 0.0	LOS ?	(sec) XX.X	V/C x.xxx		

Appendix D

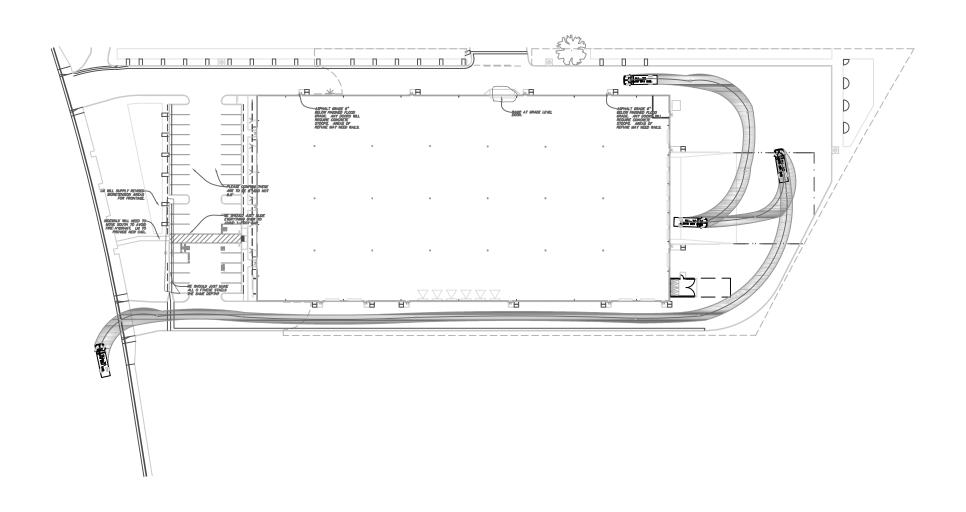
Figure 1 Policy Area Boundaries



Appendix E



Appendix F



Appendix G

