

## **TRANSPORTATION ANALYSIS**

**231 WEST CAPITOL EXPRESSWAY PUBLIC STORAGE  
SAN JOSÉ, CALIFORNIA**

**PLANNING NUMBER H18-018  
CASE FILE NUMBER: 3-02070**

This Transportation Analysis has been prepared under the supervision of  
Ambarish Mukherjee, P.E.



# **LSA**

July 2019

## **TRANSPORTATION ANALYSIS**

**231 WEST CAPITOL EXPRESSWAY PUBLIC STORAGE  
SAN JOSÉ, CALIFORNIA**

**PLANNING NUMBER H18-048  
CASE FILE NUMBER: 3-02070**

Submitted to:

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Project No. PUB1705

**LSA**

July 2019

## EXECUTIVE SUMMARY

LSA has prepared this Transportation Analysis to identify traffic impacts resulting from the development of the proposed Public Storage Project (project) at 231 West Capitol Expressway in San José, California. LSA has prepared this analysis based on the objectives and methodologies set forth in the *Transportation Analysis Handbook* (City of San José 2018), the *Envision San José 2040 General Plan* (City of San José 2011 [as amended 2018]), and applicable provisions of the California Environmental Quality Act (CEQA). Appendix A provides the Workscope approved by the City of San José (City).

The project site is on the north side of West Capitol Expressway, on the northwest corner of Snell Avenue/West Capitol Expressway, west of the Valero gas station. The project proposes a total of approximately 427,395 square feet (sf) of mini-warehouse (self-storage) use. Two new self-storage buildings will provide 359,232 sf of new self-storage use, while only 68,163 sf of existing self-storage use will remain. The project will be constructed in two phases (Phase 1 and Phase 2). Phase 1 of the project will demolish approximately 31,522 sf on the western portion of the property (retaining approximately 37,753 sf) and construct a new 179,616 sf four-story facility (Building 1). Phase 1 will also demolish approximately 2,935 sf of existing building on the eastern portion. Phase 2 of the project will demolish approximately 31,081 sf on the eastern portion of the property (retaining approximately 37,753 sf on the western portion and 30,410 sf on the eastern portion for a total of 68,163 sf) and construct a new 179,616 sf four-story facility (Building 2). Although a Site Development Permit has been filed for the first phase only, this Transportation Analysis has been prepared to evaluate the potential transportation impacts of both phases. Access to the project site will be provided via an existing right-in/right-out driveway and an existing emergency-access driveway on West Capitol Expressway and an existing fire-access driveway on Snell Avenue. Phase 1 of the project will maintain all existing driveways. Phase 2 will remove an existing right-in/right-out driveway on Snell Avenue located south of the fire-access driveway.

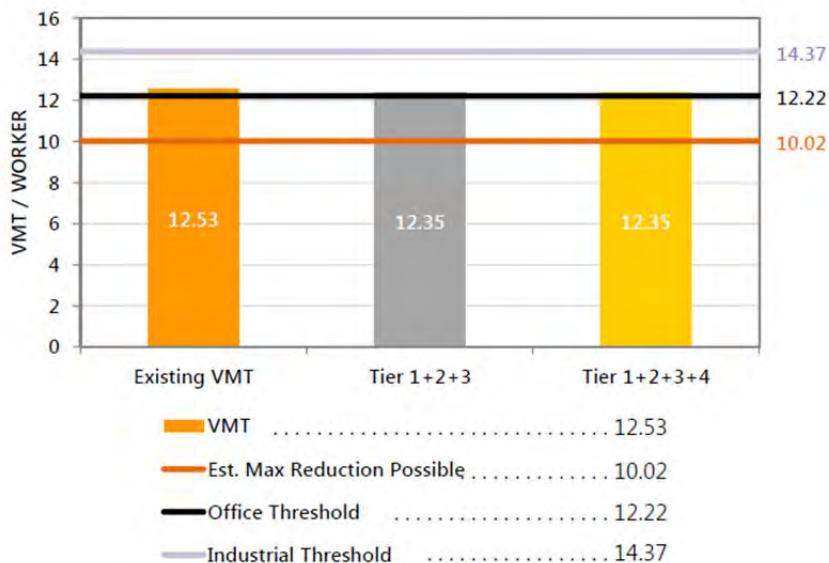
This study satisfies the City's requirements for a CEQA analysis and a Local Transportation Analysis (LTA). The CEQA analysis analyzes the project's vehicle miles traveled (VMT) against the City's standardized thresholds. VMT projections were calculated using the San José VMT Evaluation Tool. Based on the location and characteristics of this project, the project is anticipated to have 12.35 VMT. As shown in the graph below, the project's VMT is below the City's established industrial VMT threshold of 14.37 VMT.

The LTA evaluates the a.m. and p.m. peak-hour levels of service (LOS) during a typical weekday at the study area intersections. Project impacts were determined based on the analysis of the following scenarios, consistent with the City's requirements:

- Existing LOS (Environmental Baseline)
- Background Scenario: Existing plus Approved Projects
- Project Scenario: Existing plus Approved Projects plus Project

### EMPLOYMENT ONLY

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



Based on the results of this Transportation Analysis, the proposed project would not exceed the City's threshold for VMT and would not significantly affect the study area intersections in either the background or project scenarios, based on the City's performance criteria.

Based on results of the queuing analysis, it is recommended that the project lengthen the westbound left-turn lane at the Vistapark Drive/West Capitol Expressway intersection.

The County of Santa Clara has recommended that the project extend the existing dashed striping (California Department of Transportation Detail 37B) from the westbound right-turn lane at the Vista Roma Way/West Capitol Expressway intersection east toward the project frontage and the westbound acceleration lane.

Pedestrian, bicycle, and transit facilities were analyzed within the surrounding area. The project will incorporate bicycle parking and pedestrian sidewalks on site that will provide access to public streets and align with the City's goals and policies for alternative transportation.

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## LIST OF ABBREVIATIONS AND ACRONYMS

ADT	average daily traffic/trips
ATI	Approved Trip Inventory
Caltrans	California Department of Transportation
CAMUTCD	California Manual on Uniform Traffic Control Devices
CEQA	California Environmental Quality Act
City	City of San José
ft	foot/feet
HCM 2000	Highway Capacity Manual 2000
ITE	Institute of Transportation Engineers
LOS	Level of Service
LTA	Local Transportation Analysis
project	Public Storage Project at 231 West Capitol Expressway
SB	Senate Bill
sf	square foot/feet
v/c	volume-to-capacity
VMT	vehicle miles travelled
VTA	Santa Clara Valley Transportation Authority

## TRANSPORTATION ANALYSIS 231 WEST CAPITOL EXPRESSWAY PUBLIC STORAGE

### INTRODUCTION

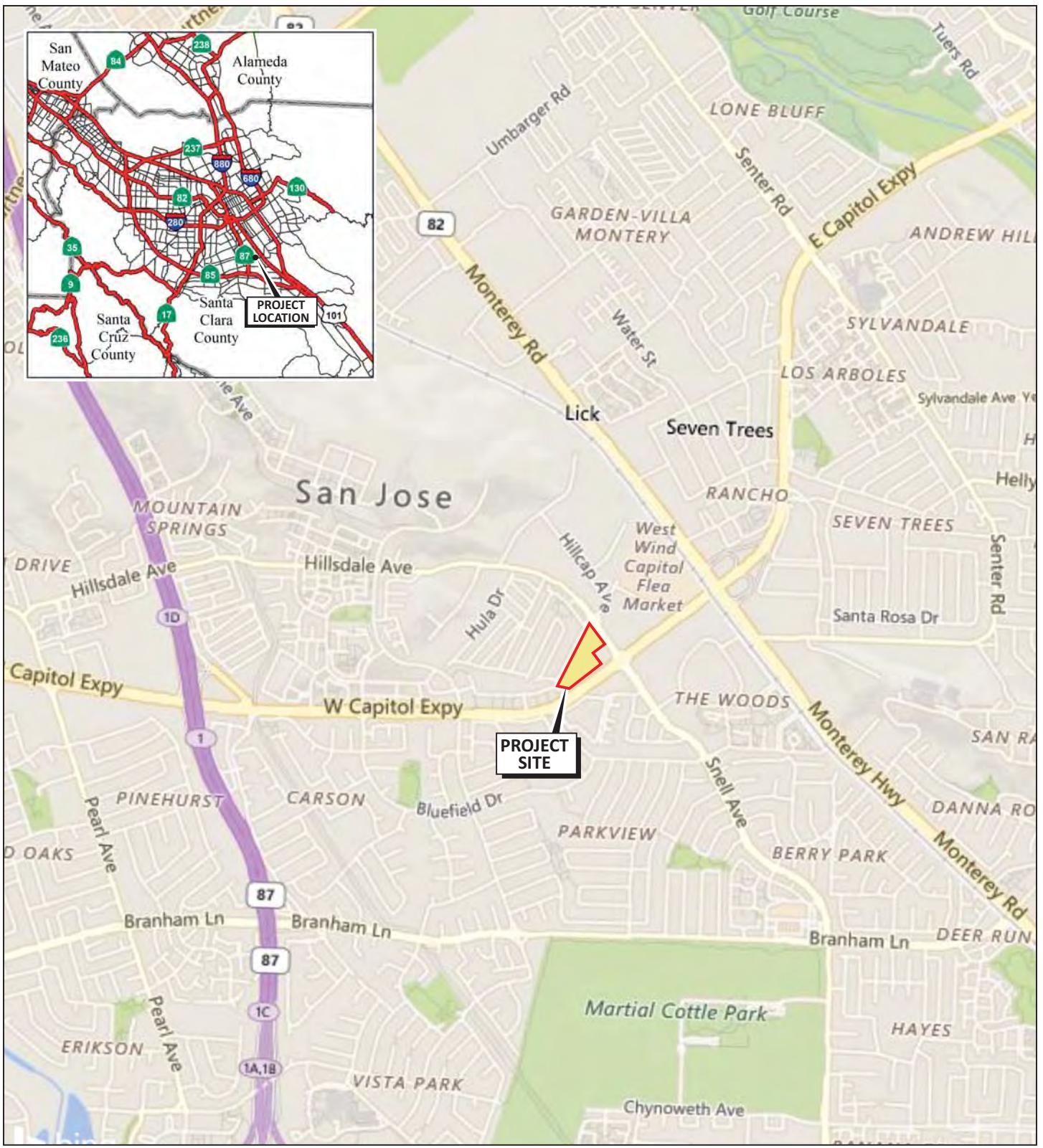
This Transportation Analysis was conducted for the purpose of identifying potential traffic impacts associated with the development of the proposed Public Storage Project (project) at 231 West Capitol Expressway in San José, California. The proposed project will be developed in two phases (Phase 1 and Phase 2). Although a Site Development Permit has been filed for the first phase only, the potential transportation impacts of the full project (both phases) were evaluated following the standards and methodologies set forth in the *Transportation Analysis Handbook (City of San José 2018)*. Because the project would not generate more than 100 peak-hour trips, an analysis in accordance with the Santa Clara Valley Transportation Authority (VTA) Congestion Management Program guidelines is not required. The study determined the potential traffic impacts of the proposed development on three signalized intersections within the vicinity of the project site during the weekday a.m. and p.m. peak periods of traffic.

### Project Description

The proposed project site is at 231 West Capitol Expressway in San José, California (Figure 1). The project will demolish 65,538 square feet (sf) of existing mini-warehouse (self-storage) use (leaving 68,163 sf) and construct a new 359,232 sf Public Storage facility with two climate-controlled buildings (Building 1, 179,616 sf; Building 2, 179,616 sf). A total of 427,395 sf of mini-warehouse (self-storage) use will be provided at project completion. As shown on Figure 2, the project will be constructed in two phases (Phase 1 and Phase 2). Phase 1 of the project will demolish approximately 31,522 sf on the western portion of the property (retaining approximately 37,753 sf) and construct the new 179,616 sf four-story facility (Building 1). Phase 1 will also demolish approximately 2,935 sf of existing building on the eastern portion. Phase 2 of the project will demolish approximately 31,081 sf on the eastern portion of the property (retaining approximately 37,753 sf on the western portion and 30,410 sf on the eastern portion for a total of 68,163 sf) and construct the new 179,616 sf four-story facility (Building 2). Access to the project site will be provided via an existing right-in/right-out driveway and an existing emergency-access driveway on West Capitol Expressway and an existing fire-access driveway on Snell Avenue. Phase 1 of the project will maintain all existing driveways. Phase 2 will remove an existing right-in/right-out driveway on Snell Avenue located south of the fire-access driveway.

### CEQA Transportation Analysis Scope

Consistent with Senate Bill (SB) 743, Council Policy 5-1 has established a new threshold for transportation impacts under the California Environmental Quality Act (CEQA) by replacing level of service (LOS) with vehicle miles traveled (VMT) or other measures that promote “the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses.” VMT shall be used as the basis for determining significant transportation impacts in California.



**LSA**



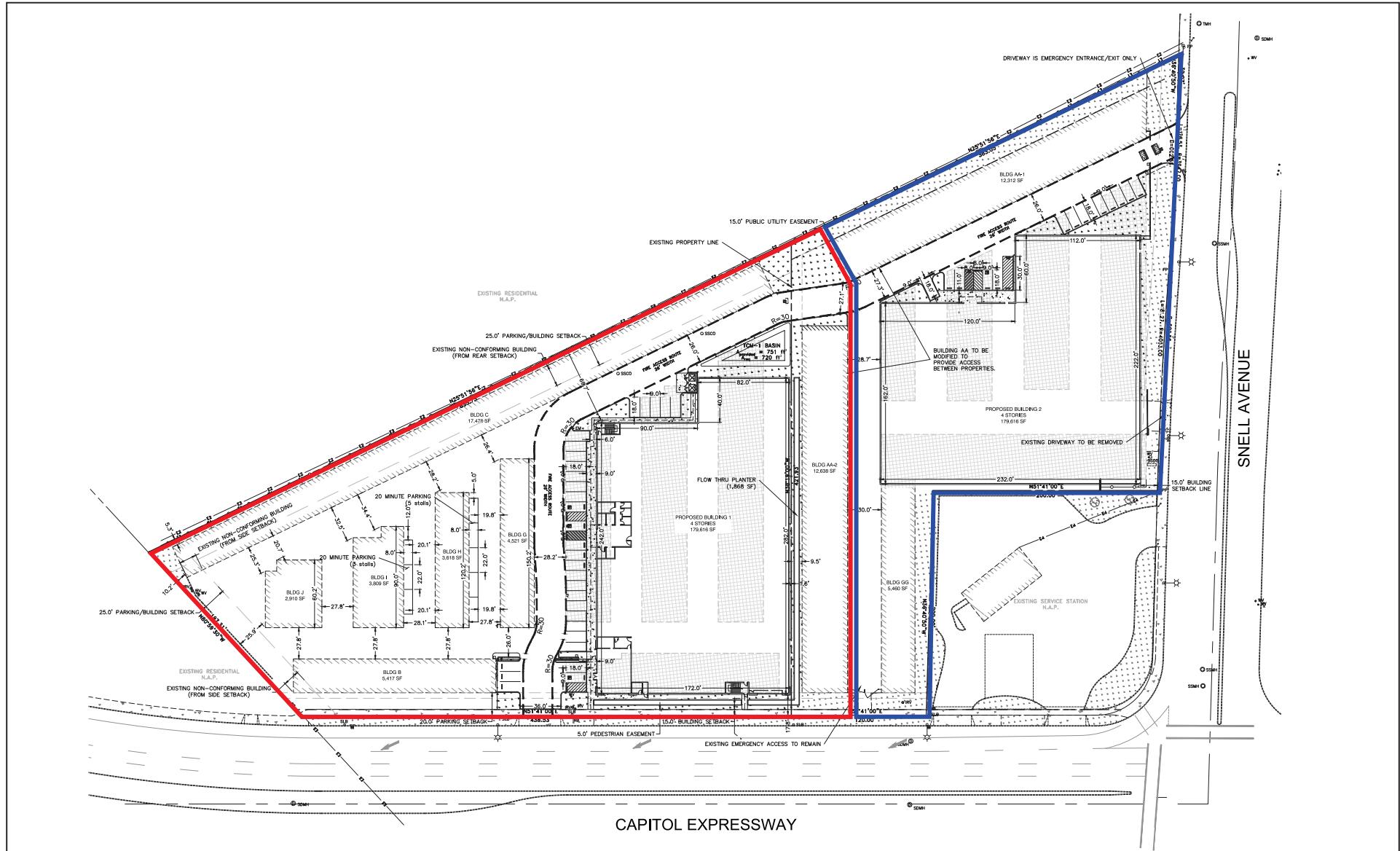
0 1000 2000  
FEET

SOURCE: Bing Maps

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231 West Capitol Expressway Public Storage  
Regional Project Location

FIGURE 1



LSA



0 60 120  
FEET

SOURCE: KSP Studio

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#### LEGEND

- Phase 1
- Phase 2

231 West Capitol Expressway Public Storage  
Conceptual Site Plan

FIGURE 2

The City of San José (City) has established VMT thresholds for each land use depending on location. As shown on Figure 3, a VMT heat map indicates that the project is in a threshold VMT area, which means the project is not required to provide improvements or mitigation measures because the project VMT does not exceed the City's VMT threshold.

Appendix B provides the San José VMT Evaluation Tool output sheets.

The project does not meet the City's industrial project screening criteria and is required to perform a VMT analysis. Based on the land use type of the project, the proposed Public Storage (industrial) development is expected to have a VMT of 12.35, which is less than the City threshold VMT of 14.37.

### Local Transportation Analysis Scope

A Local Transportation Analysis (LTA) was prepared to evaluate the effects of the proposed project on transportation, access, and circulation in the proximate area of the project. The LTA evaluates the following three project scenarios per the approved Workscope:

1. Existing LOS (Environmental Baseline)
2. Background Scenario: Existing plus Approved Projects
3. Project Scenario: Existing plus Approved Projects plus Project

Based on the approved Workscope, the following intersections are required for analysis:

1. Project Driveway/West Capitol Expressway
2. Snell Avenue/West Capitol Expressway
3. Vistapark Drive/West Capitol Expressway

The evaluation of these three intersections for the three scenarios determines whether the project would create an impact on the local circulation system. Figure 4 illustrates the study area intersections and a 0.5-mile-radius buffer from the project's property line.

## EXISTING TRANSPORTATION CONDITIONS

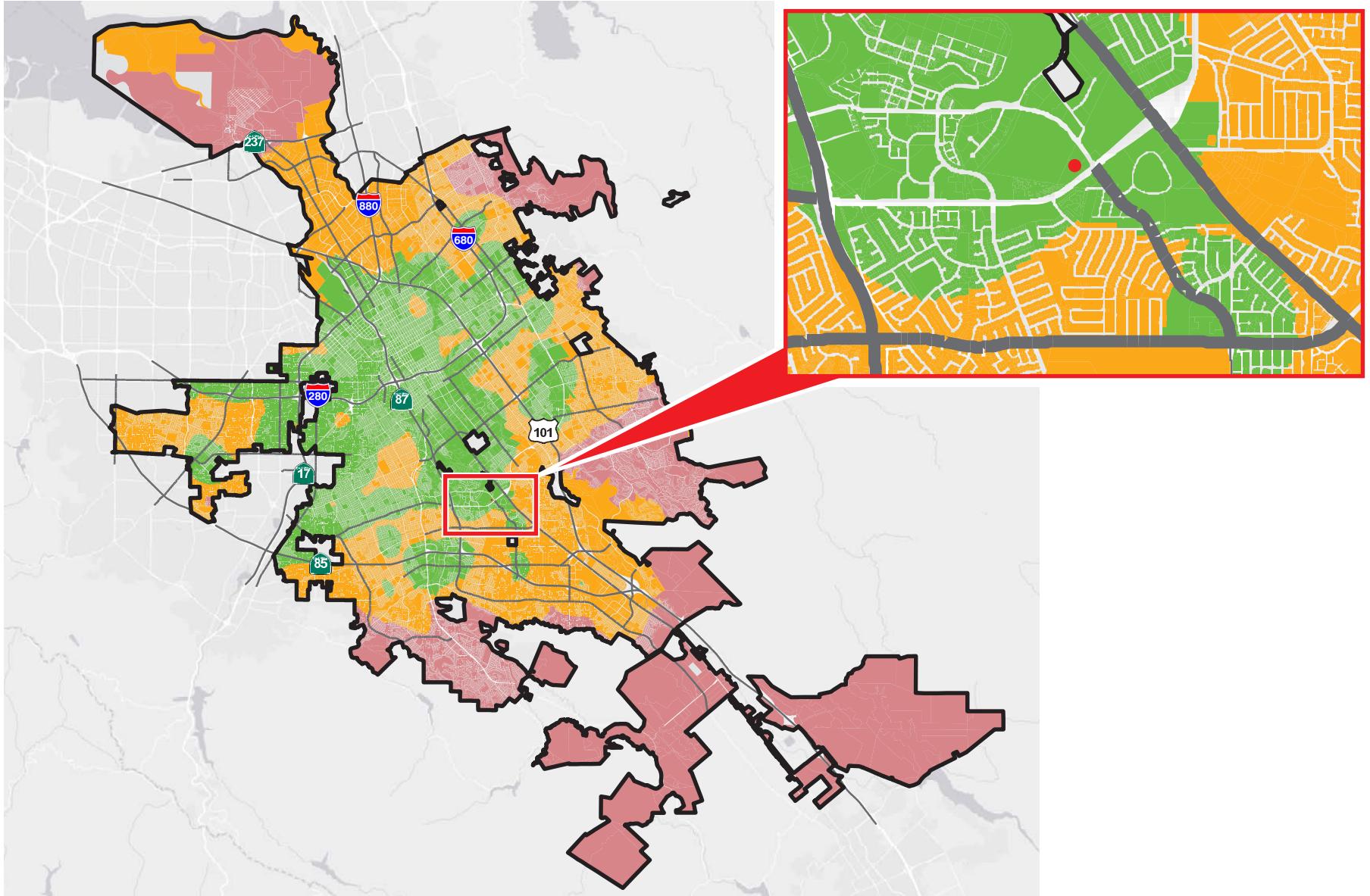
### Vehicle Miles Traveled

LSA used the San José VMT Evaluation Tool to assess the existing 133,701 sf Self-Storage facility's VMT based on its description and attributes. Based on this tool, the existing VMT is 12.53 VMT.

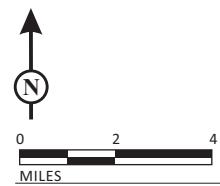
### Roadway Network

Key roadways and intersections in the vicinity of the project are as follows:

- **West Capitol Expressway** is a six-lane, divided, east-west City Connector Street with three lanes in each direction. Regionally, West Capitol Expressway extends throughout the majority of the center of San José and has various connections to residential, commercial, and employment land uses. Local to the project site, West Capitol Expressway provides many amenities for alternative modes of transportation. The roadway includes sidewalks on both sides of the street. VTA transit stops are provided approximately every 0.5 mile through Bus Route 70.



**LSA**



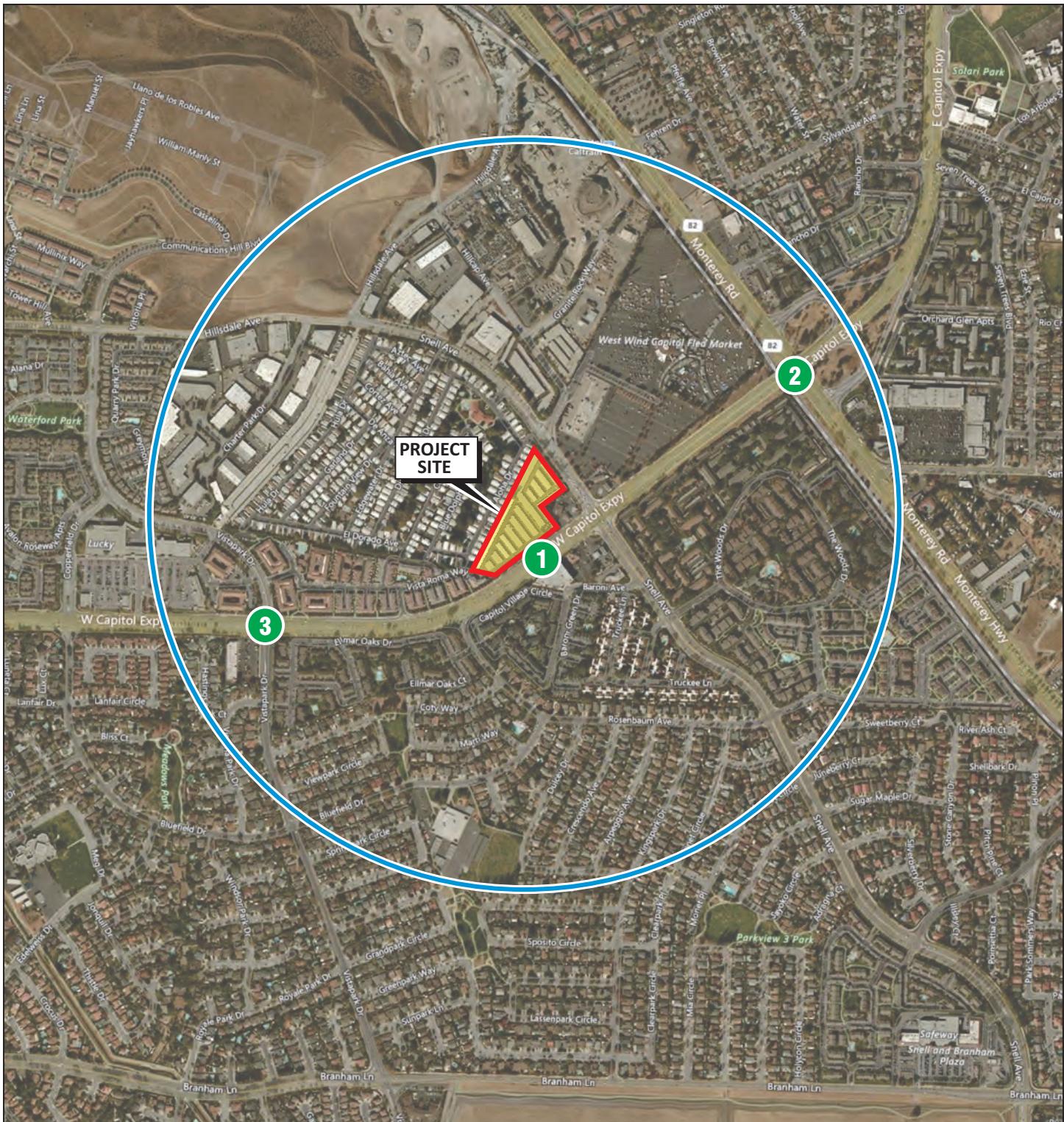
**LEGEND**

- Threshold VMT Areas
- Mitigatable VMT Areas
- Immitigatable VMT Areas

● Project Site

**FIGURE 3**

*231 West Capitol Expressway Public Storage*  
San Jose VMT per Industrial Job Heat Map



**LSA**

**LEGEND**

- 0.5 Mile Buffer
- # Study Area Intersection



0 500 1000  
FEET

SOURCE: Bing Maps

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**FIGURE 4**

**231 West Capitol Expressway Public Storage**  
**Study Area Intersections and**  
**0.5 Mile Radius Buffer from Project Site**

- **Snell Avenue** is a four-lane, undivided, north-south Local Connector Street with two northbound lanes and three southbound lanes. Regionally, Snell Avenue extends throughout the majority of the southern part of San José and ends at the city's southern border. Local to the project site, Snell Avenue provides many amenities for alternative modes of transportation. The roadway includes sidewalks and Class II bikeways to the south of West Capitol Expressway on both sides of the street. Class II bikeways are planned for Snell Avenue north of West Capitol Expressway by 2020.
- **Vistapark Drive** is a two-lane, undivided Residential Street that extends from Hillsdale Avenue to West Capitol Expressway. Vistapark Drive is to the west of the project site. This roadway provides access to and from residential housing and apartment complexes. Sidewalks are provided on both sides of the street. Class II bikeways are planned for both sides of the street by 2020.

The existing study area intersection geometrics and traffic controls are provided on Figure 5.

### Traffic Volumes

Existing (November 2018) traffic counts for the study area intersections were obtained from the City and a third party (i.e., Counts Unlimited). Traffic conditions at the study intersections were analyzed for the weekday a.m. and p.m. peak hours of traffic. The a.m. peak hour is generally between 7:00 a.m. and 9:00 a.m., and the p.m. peak hour is typically between 4:00 p.m. and 6:00 p.m. It is during these periods on an average weekday that the most congested traffic conditions occur. Existing traffic counts for all study area intersections are provided on Figure 6.

Appendix C provides the existing traffic counts.

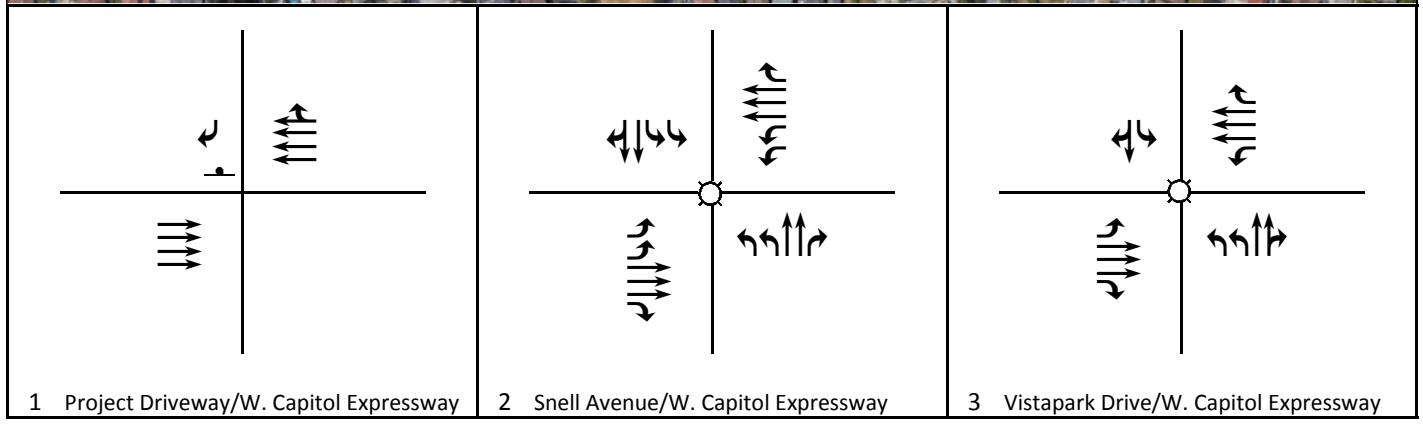
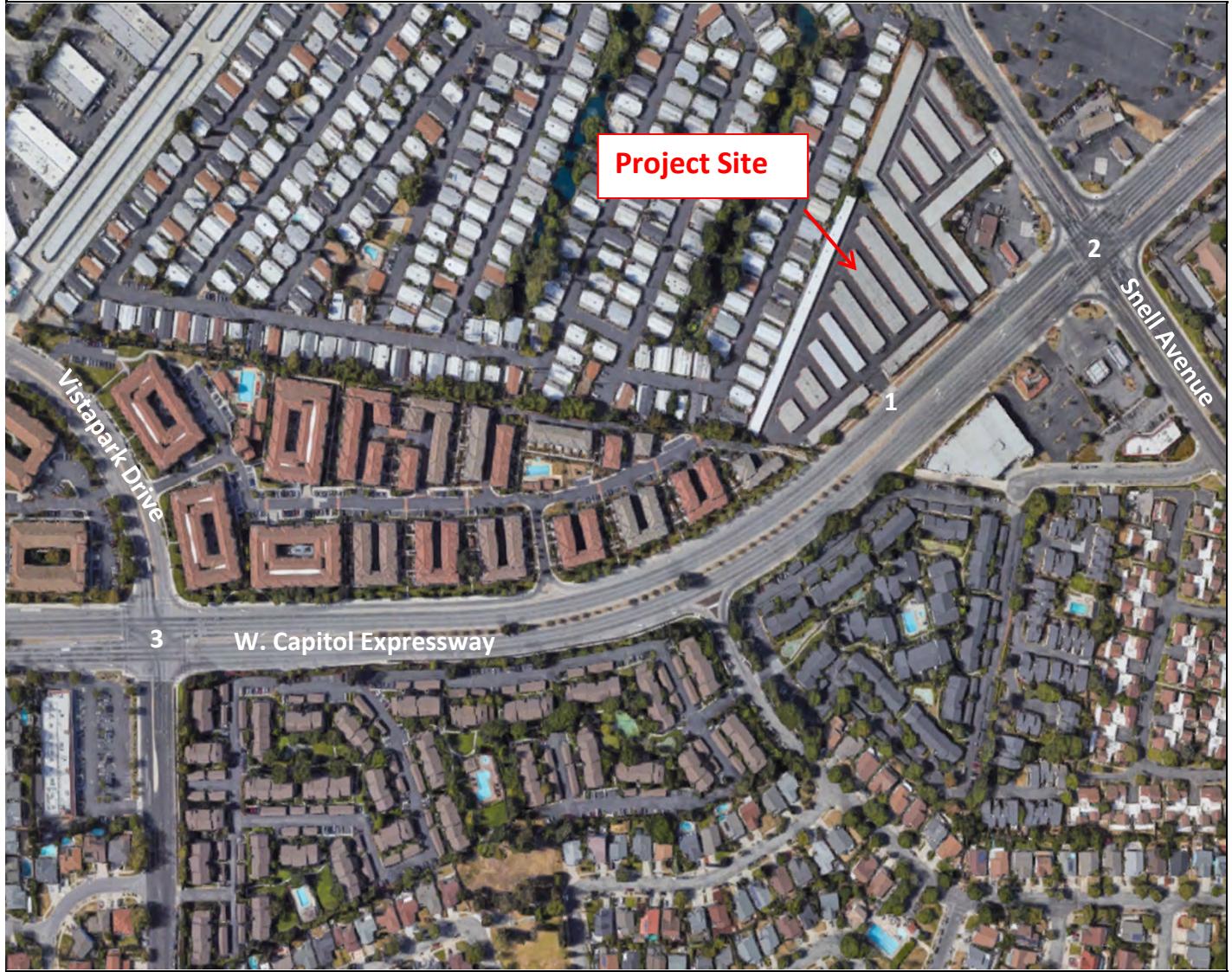
### Pedestrian and Bicycle Facilities

The existing pedestrian and bicycle system in the project vicinity is shown on Figure 7. The pedestrian and bicycle facilities provide opportunities for the public to use alternative modes of transportation and connections to a variety of commercial, residential, and employment designations. All sidewalks and bikeways provide access to transit stops and incorporate the last-mile goals set forth by the City.

### Transit Facilities and Services

The existing transit system provides transit stops within a 0.5-mile buffer from the project site and is serviced through VTA, as shown on Figure 8. Two bus routes, Routes 70 and 122, intersect at one of the project study intersections on West Capitol Expressway/Snell Avenue. A third bus route, Route 73, begins/ends on Snell Avenue within a 0.5-mile buffer. Routes 70 and 122 provide transit stops along West Capitol Expressway, and Routes 73 and 122 provide transit stops along Snell Avenue. All routes connect residential land uses with employment opportunities and are vital to the surrounding area.

Similar mini-warehouse/self-storage land uses within a 0.5-mile, 1-mile, and 5-mile buffer are provided in Figure 9.



**LSA**

**LEGEND**

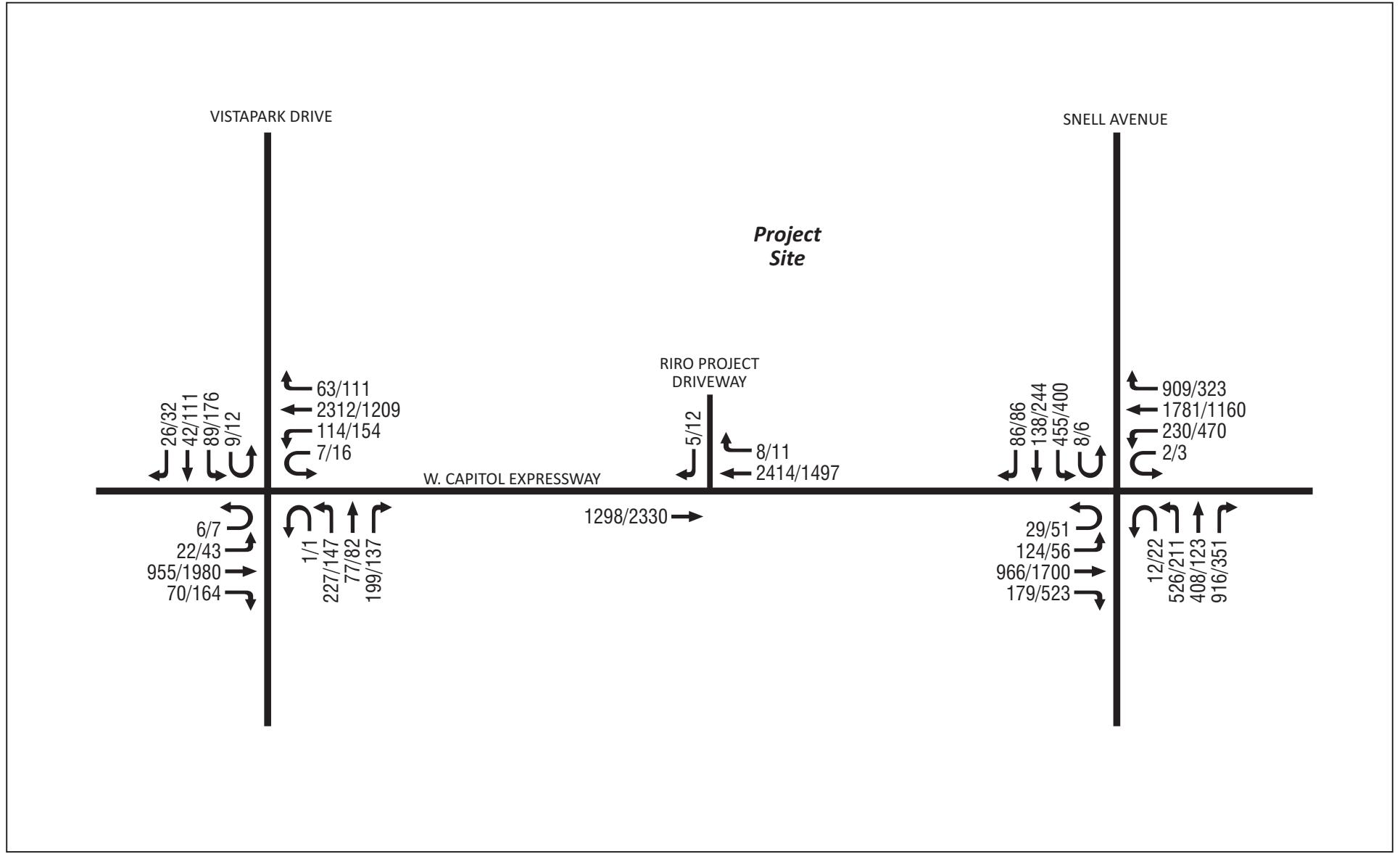
○ Signal

— Stop Sign

FIGURE 5

231 W. Capitol Expressway Public Storage  
Existing Intersection Geometrics

Source: Google Maps (2019)



**LSA**

**LEGEND**

**XX/YY** - AM/PM Peak Hour Trips

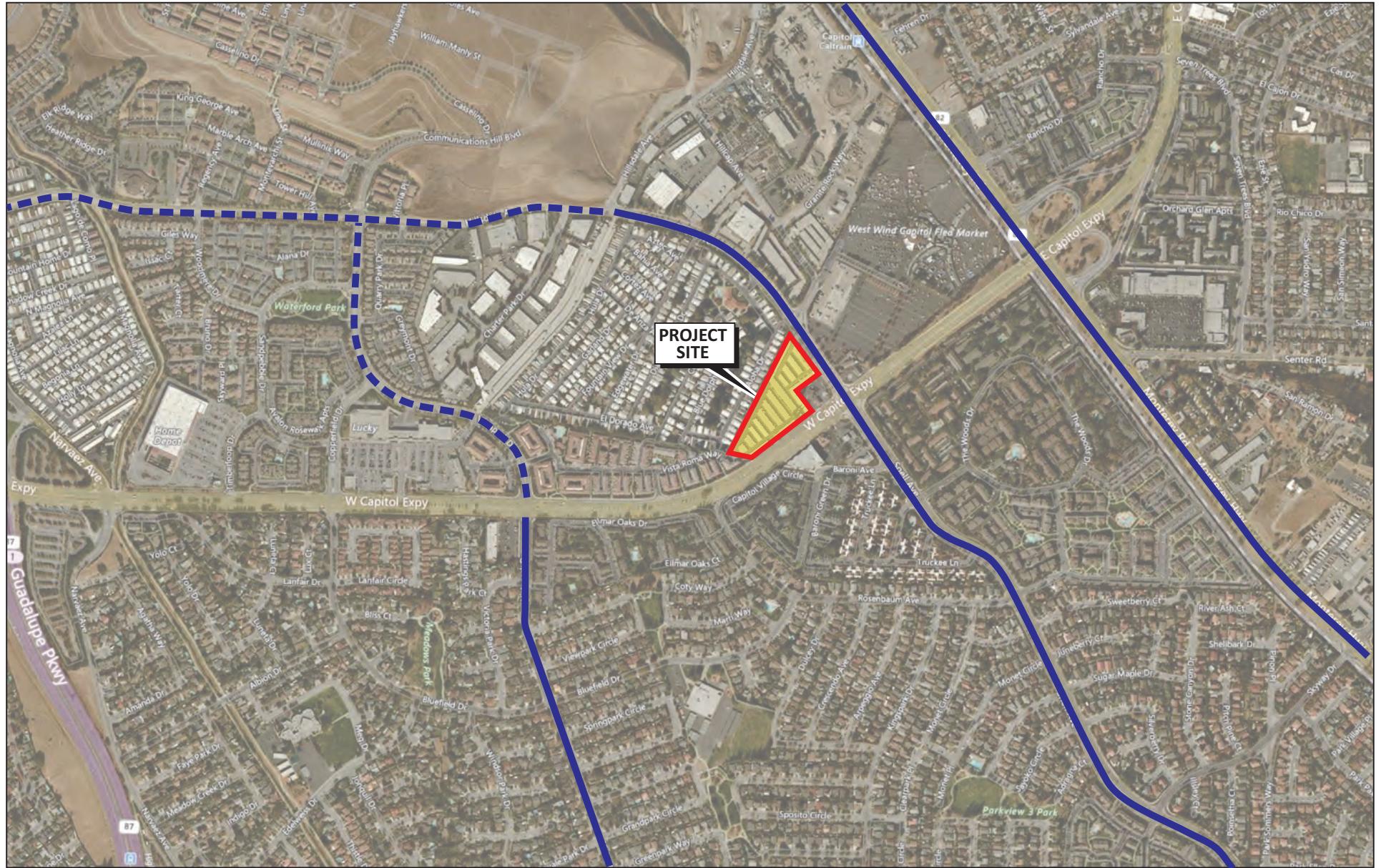


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**FIGURE 6**

**231 West Capitol Expressway Public Storage  
Existing Traffic Volumes**



**LSA**  
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#### LEGEND

- Proposed Class II Bike Route
- Class II Bike Route

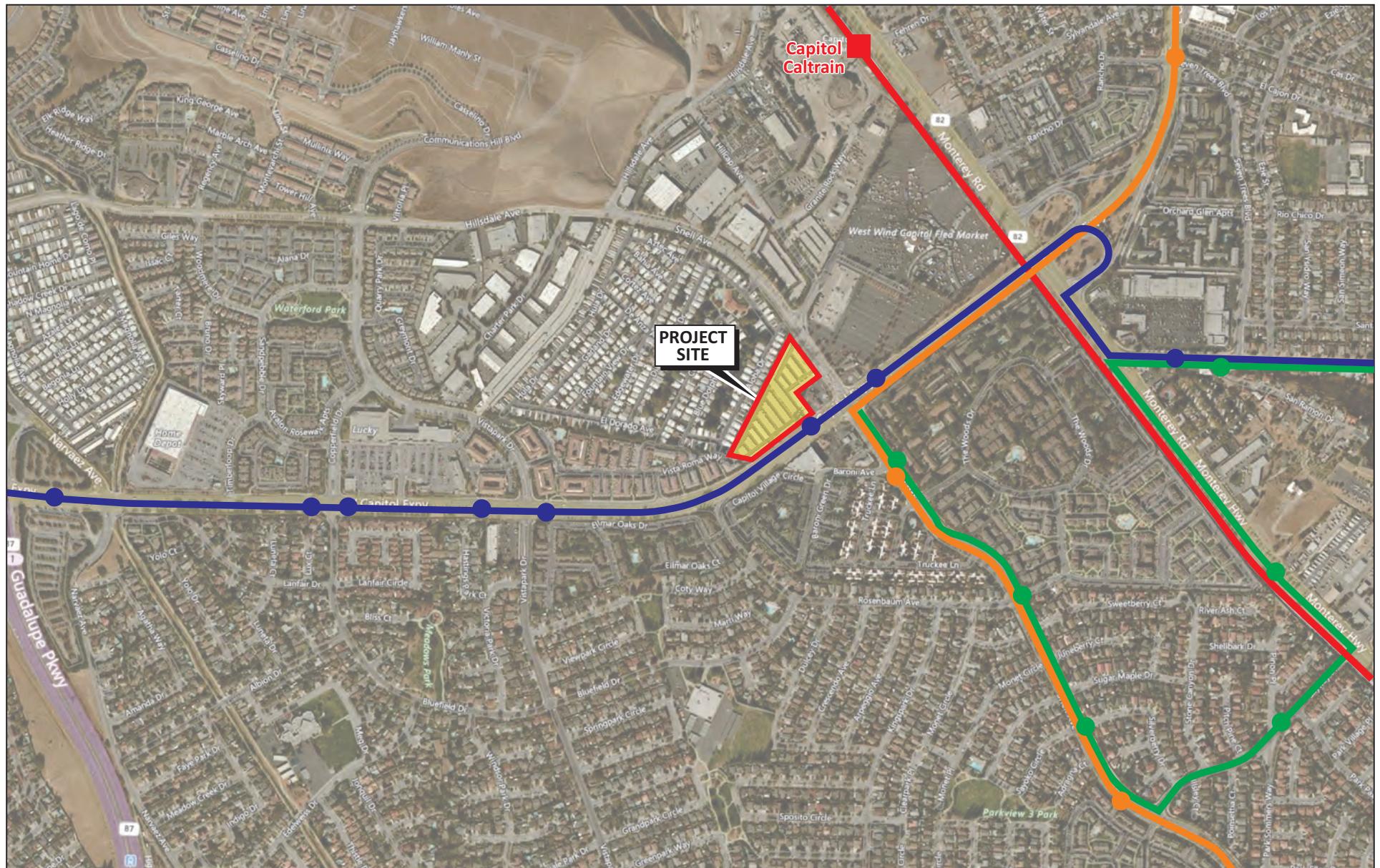
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FEET

SOURCE: Bing Maps, San Jose Bike Plan 2020 (November 2009)

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FIGURE 7

231 West Capitol Expressway Public Storage  
Bicycle and Pedestrian Facilities



**LSA**  
N  
0 500 1000  
FEET

SOURCE: Bing Maps

- LEGEND**
- Route 122
  - Route 73
  - Route 70
  - Bus Stop
  - Caltrain

**231 West Capitol Expressway Public Storage  
Transit Routes**

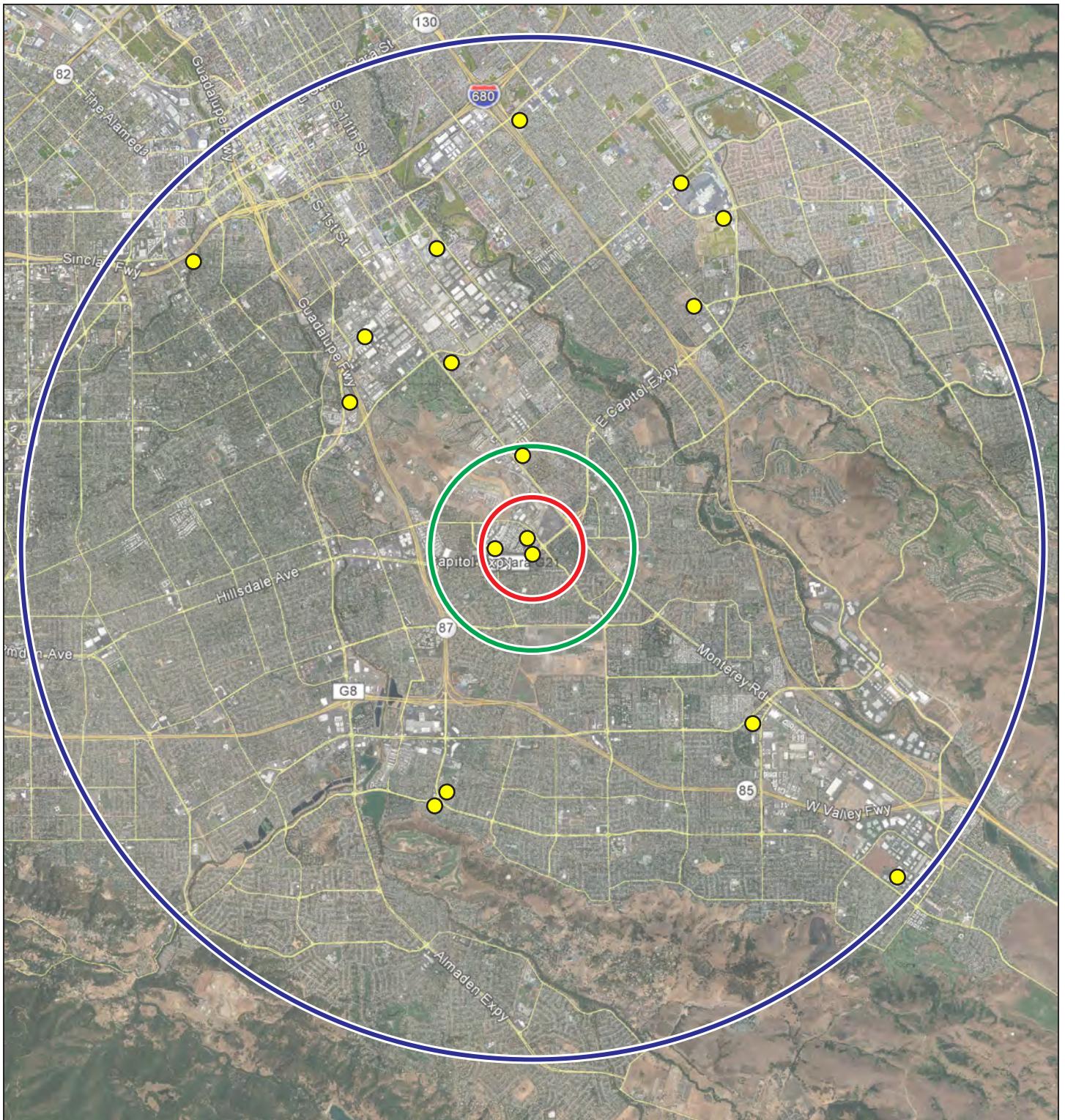


FIGURE 9

**LSA**

LEGEND

- - 0.5 Mile Buffer
- - 1 Mile Buffer
- - 5 Mile Buffer
- - Storage Facility

0 0.7 1.4  
MILES

SOURCE: Google Earth

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231 West Capitol Expressway Public Storage

Similar Land Uses

## CEQA TRANSPORTATION ANALYSIS

On September 27, 2013, Governor Jerry Brown signed SB 743 into law and started a process that changes the methodology of a transportation impact analysis as part of CEQA requirements. SB 743 directed the California Office of Planning and Research to establish new CEQA guidance for jurisdictions that removes automobile vehicle delay and other similar measures of vehicular capacity or traffic congestion from CEQA transportation analysis. Rather, VMT, or other measures that promote “the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses,” shall now be used as the basis for determining significant transportation impacts in California.

Consistent with SB 743, the City (Council Policy 5-1) has established a new threshold for transportation impacts under CEQA by replacing LOS with VMT. As such, VMT has been analyzed for this project.

### VMT Analysis

According to the transportation analysis guidelines, a detailed CEQA transportation analysis would not be required if a project meets the City’s screening criteria. Small infill projects and other projects of sufficiently small size (i.e., 30,000 sf or less of industrial use) would meet the City’s screening criteria for a detailed CEQA transportation analysis. Based on the current site plan, the proposed Public Storage project of 427,395 sf of self-storage (industrial) use does not meet the City’s industrial project VMT screening criteria. Therefore, a CEQA transportation analysis is required to evaluate the project’s VMT against the appropriate thresholds of significance established in Council Policy 5-1.

#### *Methodology*

The City has developed the San José VMT Evaluation Tool to streamline the analysis for residential, office, and industrial (including self-storage) projects by assessing a project’s potential VMT based on the project’s description, location, and attributes. This tool is used to determine the existing VMT and the project’s VMT impacts, and suggests potential mitigation measures (if necessary).

#### *Significance Criteria*

Under direction from City staff, the proposed self-storage project has been analyzed under the thresholds for Council Policy 5-1, Project Type, and Industrial Employment Uses. An Industrial Employment Use is determined to have an impact if the project VMT per employee would exceed the regional average VMT per employee. Currently, there are 14.37 VMT per industrial employee in the region.

Figure 3 illustrates the proposed project location on the City’s VMT per the Industrial Job Heat Map. As shown on Figure 3, the project is within the Threshold VMT Area per the Industrial Job Heat Map. Therefore, a significant VMT impact would only occur if the project exceeds 14.37 VMT per industrial employee.

### *Project VMT*

LSA used the San José VMT Evaluation Tool to assess the project's potential VMT. The VMT Evaluation Tool evaluates a list of VMT reduction measures that can be applied to a project to reduce its VMT. There are four VMT strategy tiers:

- **Tier 1:** Project Characteristics
- **Tier 2:** Multimodal Improvements
- **Tier 3:** Parking
- **Tier 4:** Transportation Demand Management

Tier 1–3 strategies are physical design features that can be incorporated into the project description. Tier 4 strategies are programmatic measures that aim to reduce VMT by decreasing personal motorized vehicle mode share and encouraging alternative transportation modes (i.e., walking, biking, and transit). Due to the nature of self-storage projects, the majority of trips are made by passenger vehicles. As such, Tier 2–4 strategies would not apply to this project.

Based on the San José VMT Evaluation Tool, the project is anticipated to have 12.35 VMT per employee, which is within the City's threshold of 14.37 VMT per employee. Therefore, the project does not result in a VMT impact. The VMT Evaluation Tool outputs are provided in Appendix B.

### *Project Impacts and Mitigation Measures*

Based on the results of the San José VMT Evaluation Tool, the 427,395 sf Public Storage project would not exceed City thresholds for VMT. Therefore, mitigation is not required.

## **LOCAL TRANSPORTATION ANALYSIS**

The primary goal of an LTA is to establish a local transportation system that is reflective of both land use context and multimodal functions. An LTA will ensure that the type, character, and intensity of land uses along a street are appropriate to the primary function of the street, and that all people travel safely on city streets. The project will demolish 65,538 sf of existing self-storage use (leaving 68,163 sf) and construct a new 359,232 sf Public Storage facility with two buildings (Building 1, 179,616 sf; Building 2, 179,616 sf), for a total of 427,395 sf. Access to the project site will be provided via an existing right-in/right-out driveway and an existing emergency-access driveway on West Capitol Expressway and an existing fire-access driveway on Snell Avenue.

### **Bicycle and Pedestrian**

The project was evaluated on its ability to support bicycling and walking through analyzing bicycle and pedestrian infrastructure, bicycle and pedestrian access, and conformance to existing plans and policies.

With the construction of the Public Storage project, the existing sidewalk along West Capitol Expressway will be widened to 15 ft. There will be no other changes to the existing pedestrian and bicycle system. The project will maintain the existing Class II bikeways on Snell Avenue, Vistapark Drive, and Monterey Road. Extensions to the Class II bikeways on Snell Avenue and Vistapark Drive are planned for the year 2020. Additionally, there would be no changes to the project's existing

sidewalk infrastructure. Consistent with the policies from the American with Disabilities Act, ramps are currently provided at the project right-in/right-out driveway as well as at the surrounding intersections of Snell Avenue/West Capitol Expressway and Vistapark Drive/West Capitol Expressway. To accommodate bicycle commuting, the project will provide bicycle storage at the project entry.

Bicycle and pedestrian access to the project site will be provided at the existing right-in/right-out driveway on West Capitol Expressway as shown on Figure 2. The access driveway includes a pedestrian sidewalk that allows for pedestrian circulation on-site. The pedestrian path will lead visitors and bicyclists to internal paths and bicycle storage along the proposed (Building 1 and Building 2) site.

#### *Vision Zero*

The City has incorporated the Vision Zero program into its General Plan policies. The Vision Zero program has been acknowledged as a commitment to prioritize street safety and ensure all road users—people who walk, bicycle, ride transit, drive, or carpool—are safe. West Capitol Expressway has been identified as Vision Zero Corridors. The project is consistent with the City's goals set for these streets. Because the existing Self-Storage land use will be replaced by the Public Storage project, there will be no impacts to the existing operations or safety of the corridors. The project has incorporated pedestrian and bicycle paths that connect to the public sidewalks to allow for safe circulation for pedestrians and bicyclists.

#### **Transit**

The project was also evaluated based on its ability to support transit facilities, services, and access to transit.

With construction of the Public Storage project, there will be no changes to the transit system and transit stops that exist today. The existing transit system is serviced through the VTA and provides three bus routes with transit stops within a 0.5-mile buffer from the project site. Bus routes include Route 70 that provides service on West Capitol Expressway, Route 122 that provides service on West Capitol Expressway and Snell Avenue, and Route 73 that provides service on Snell Avenue. All routes connect residential land uses with employment opportunities.

#### **Intersection Operations Analysis**

An intersection operations analysis is required to identify and address any adverse operations to the study area intersections. As previously described, three analysis scenarios are included (Existing, Existing plus Approved Projects, and Existing plus Approved Projects plus Project) for the study area intersections (Project Driveway/West Capitol Expressway, Snell Avenue/West Capitol Expressway, and Vistapark Drive/West Capitol Expressway).

#### *Trip Generation*

The proposed project trips were generated using trip rates referenced from the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 10th Edition (2017). Table A shows the vehicle trip generation for the project.

**Table A: 231 Capitol Expressway Trip Generation**

Land Use	Size	Unit	ADT	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
<b>Trip Rates<sup>1</sup></b>									
Mini-Warehouse (Self-Storage) (151)		TSF	1.51	0.06	0.04	0.10	0.08	0.09	0.17
<b>Project Trip Generation</b>									
Self-Storage	427.395	TSF	645	26	17	43	34	39	73
<b>Existing Trip Generation</b>									
Self-Storage	133.701	TSF	202	8	5	13	11	12	23
<b>Net Trip Generation (Proposed - Existing)</b>				<b>443</b>	<b>18</b>	<b>30</b>	<b>23</b>	<b>27</b>	<b>50</b>

<sup>1</sup> Trip rates referenced from the Institute of Transportation Engineers (ITE) *Trip Generation* Manual, 10th Edition (2017).

TSF = thousand square feet

The 427,395 sf of mini-warehouse (self-storage) use is forecast to generate 645 average daily traffic (ADT), including 43 a.m. peak-hour (i.e., 26 inbound and 17 outbound) trips and 73 p.m. peak-hour (i.e., 34 inbound and 39 outbound) trips.

Taking into account the existing 133,701 sf Self-Storage use, the net trip generation is 443 ADT, 30 a.m. peak-hour (i.e., 18 inbound and 12 outbound) trips, and 50 p.m. peak-hour (i.e., 23 inbound and 27 outbound) trips. Consistent with the approved Workscope, no trip reductions or adjustments were applied.

#### *Project Trip Distribution and Assignment*

It is expected that the self-storage facility would attract new customers from the surrounding region. Based on the location of the project in relation to regional transportation facilities and residential areas, project trips were distributed 20 percent west on West Capitol Expressway, 20 percent east on West Capitol Expressway, 25 percent south on Vistapark Drive, 25 percent south on Snell Avenue, and 10 percent north on Vistapark Drive.

Figure 10 illustrates the project trip distribution and assignment at the two adjacent signalized intersections: West Capitol Expressway/Snell Avenue and West Capitol Expressway/Vistapark Drive.

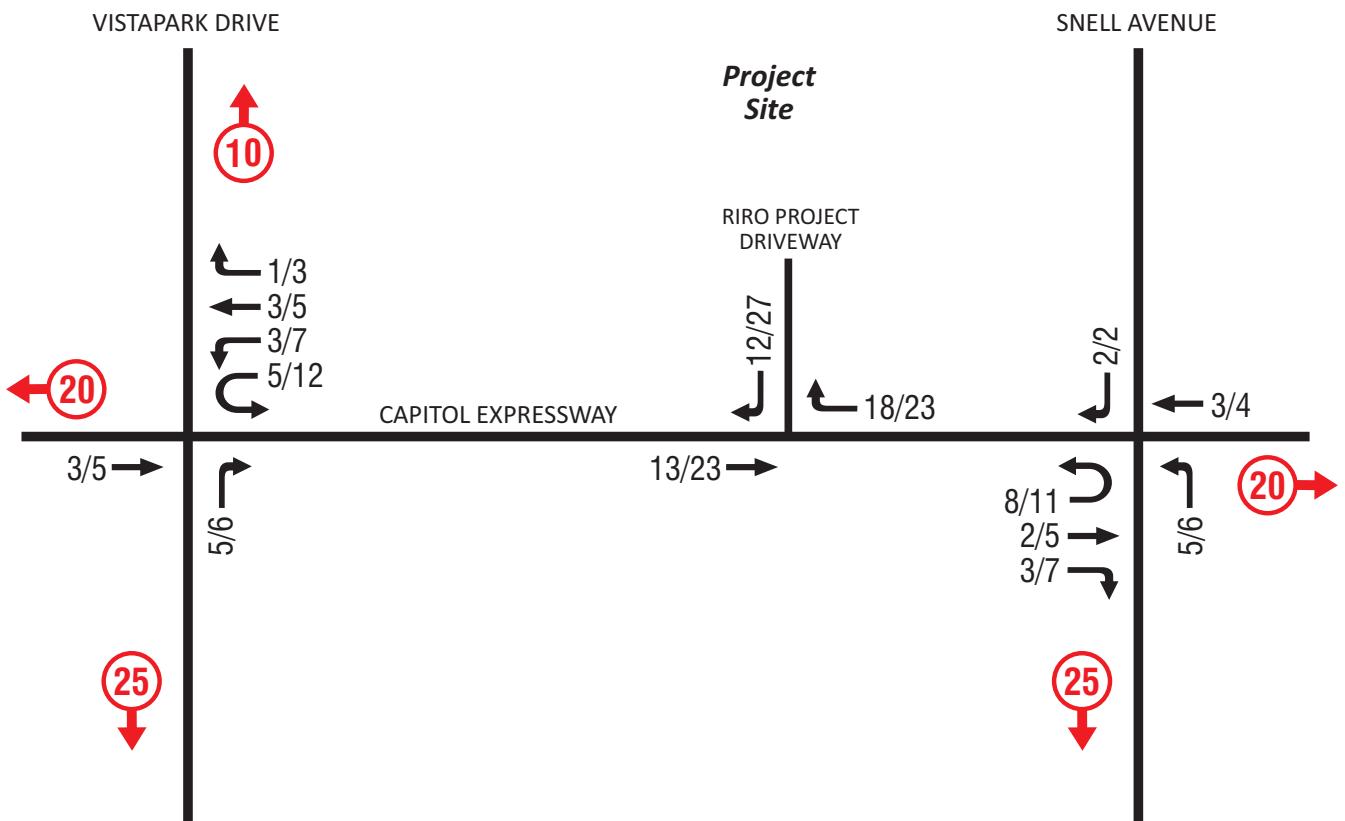
#### *Methodology and Significance Criteria*

To determine the peak-hour operations at signalized intersections within the study area, LSA used *Highway Capacity Manual* (HCM) 2000 methodology using the Traffix software. According to the City's Transportation Analysis Guidelines and consistent with the City's General Plan, LOS at an intersection or roadway is considered to be unsatisfactory when the HCM 2000 delay exceeds 55.0 (i.e., LOS D). The following table demonstrates the relationship of HCM 2000 to LOS.

Operation Standard	Descriptions	Average Control Delay (seconds/vehicle)
A	Operations with very low delay occurring with favorable progression and/or short cycle lengths	10.0 or less
B	Operations with low delay occurring with good progression and/or short cycle length	10.1–20.0
C	Operations with longer delays due to a combination of unfavorable progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.1–35.0
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, and high volume-to-capacity (v/c) ratios. Individual cycle failures are noticeable	35.1–55.0
E	Operations with high delays indicating poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent occurrences.	55.1–80.0
F	Operations with delays unacceptable to most drivers occurring due to over-saturation, poor progression, or very long cycle lengths.	> 80.0

Source: *Transportation Analysis Handbook* (City of San José 2018).

An adverse effect on intersection operations would occur when the analysis demonstrates that a project would cause the operations standard at a study intersection to fall below LOS D with the addition of project vehicle trips to baseline conditions.



LSA

LEGEND

**XX/YY** - AM/PM Peak Hour Trips

**←(XX)** - Project Trip Distribution Percentage



SCHEMATIC - NOT TO SCALE

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231 West Capitol Expressway Public Storage  
Project Trip Distribution and Assignment

FIGURE 10

It should be noted that for intersections already operating at LOS E or F under baseline conditions, an adverse effect can occur and is defined as:

- An increase in average critical delay by 4.0 seconds or more AND an increase in the critical volume-to-capacity (v/c) ratio of 0.010 or more; OR
- A decrease in average critical delay AND an increase in critical V/C ratio of 0.010 or more.

#### *Existing Conditions*

Existing conditions were analyzed based on the current geometry of the study area intersections and traffic volumes collected by a third party (i.e., Counts Unlimited). Traffic conditions at the study intersections were analyzed for the weekday a.m. and p.m. peak hours of traffic. The HCM 2000 LOS worksheets are provided in Appendix E.

Table B presents a summary of existing intersection LOS. As Table B indicates, all study area intersections currently operate at satisfactory LOS, with the exception of Snell Avenue/West Capitol Expressway (LOS F in the a.m. peak hour).

**Table B: Existing Intersection Operations Summary**

Intersection	Existing					
	AM Peak Hour			PM Peak Hour		
	V/C	Delay (sec/veh)	LOS	V/C	Delay (sec/veh)	LOS
1 Project Driveway/W. Capitol Expressway	0.010	13.2	B	0.020	10.9	B
2 Snell Avenue/W. Capitol Expressway	0.946	96.5	F	0.659	45.9	D
3 Vistapark Drive/W. Capitol Expressway	0.461	42.3	D	0.502	41.4	D

Source: Compiled by LSA Associates, Inc. (2018).

LOS = level of service

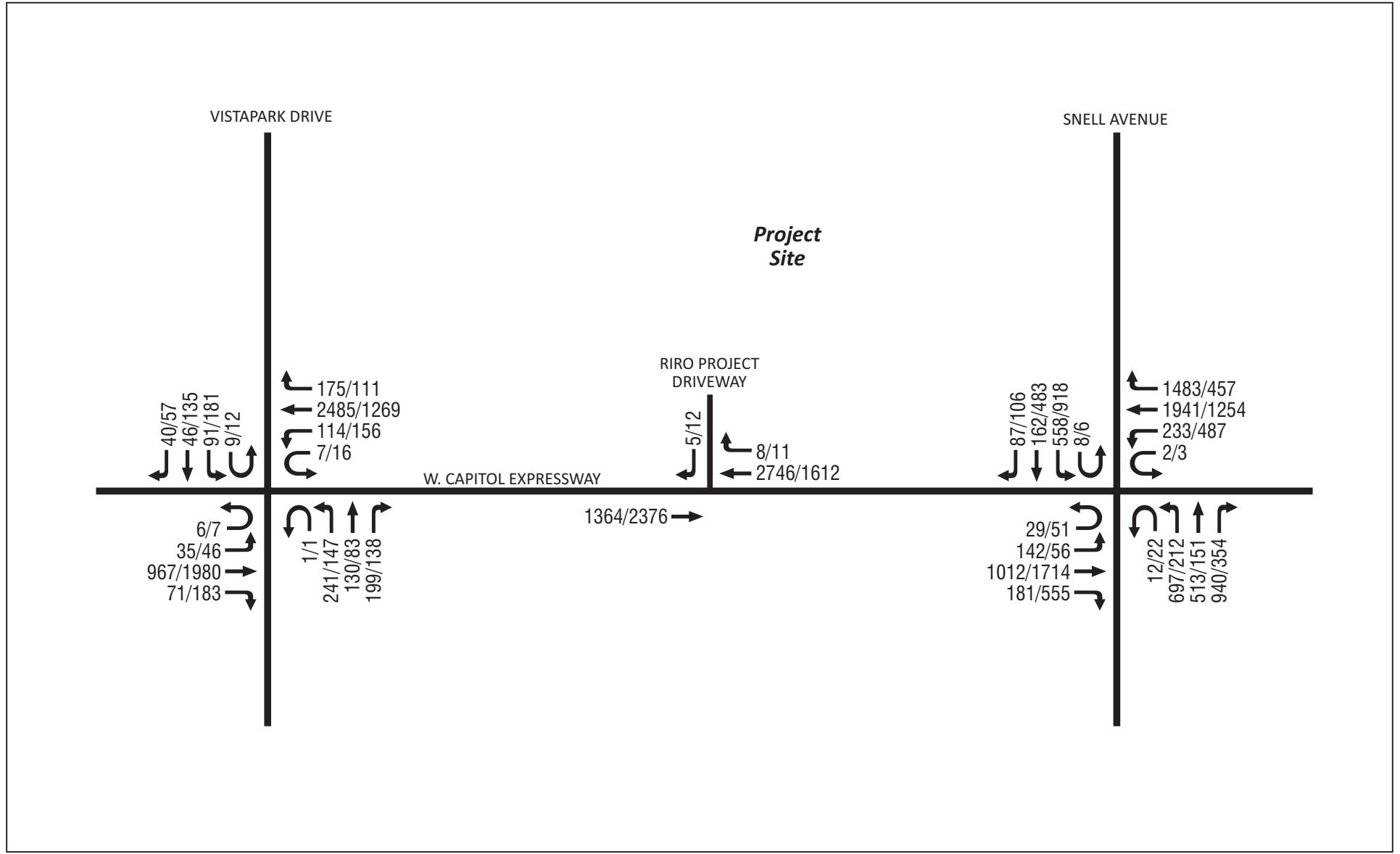
sec/veh = seconds per vehicle

V/C = volume-to-capacity

#### *Background Conditions*

The Approved Trip Inventory (ATI), a database of vehicle trips of approved but not yet constructed projects, was provided by the City for this analysis. The ATI sheets are provided in Appendix D. ATI volumes were added to existing intersection volumes to represent Background conditions, as shown on Figure 11.

Table C presents a summary of background intersection LOS. As Table C indicates, all study area intersections would operate at satisfactory LOS, with the exception of Snell Avenue/West Capitol Expressway (LOS F in both the a.m. and p.m. peak hours).



**LSA**

**LEGEND**

**XX/YY** - AM/PM Peak Hour Trips



SCHEMATIC - NOT TO SCALE

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**FIGURE 11**

**231 West Capitol Expressway Public Storage  
Background Traffic Volumes**

**Table C: Background Intersection Operations Summary**

Intersection	Existing Plus Approved Projects					
	AM Peak Hour			PM Peak Hour		
	V/C	Delay (sec/veh)	LOS	V/C	Delay (sec/veh)	LOS
1 Project Driveway/W. Capitol Expressway	0.010	14.3	B	0.020	11.1	B
2 Snell Avenue/W. Capitol Expressway	1.583	127.4	F	0.834	105.1	F
3 Vistapark Drive/W. Capitol Expressway	0.462	45.5	D	0.520	41.6	D

Source: Compiled by LSA Associates, Inc. (2018).

LOS = level of service

sec/veh = seconds per vehicle

V/C = volume-to-capacity

**Background Plus Project Conditions**

Background Plus Project conditions were developed by incorporating existing counts, ATI volumes, and the proposed project trips, as shown on Figure 12. Table D provides a summary of Background Plus Project intersection LOS. As Table D indicates, study area intersections would continue to operate at satisfactory LOS with the project, with the exception of Snell Avenue/West Capitol Expressway (LOS F in the both a.m. and p.m. peak hours). However, the project would not add 4.0 or more seconds of delay to this intersection. Therefore, the project would not result in a significant intersection impact.

**Table D: Background Plus Project Intersection Operations Summary**

Intersection	Existing Plus Approved Projects Plus Project					
	AM Peak Hour			PM Peak Hour		
	V/C	Delay (sec/veh)	LOS	V/C	Delay (sec/veh)	LOS
1 Project Driveway/W. Capitol Expressway	0.040	14.7	B	0.060	11.6	B
2 Snell Avenue/W. Capitol Expressway	1.586	127.3	F	0.835	104.9	F
3 Vistapark Drive/W. Capitol Expressway	0.471	45.7	D	0.532	41.9	D

Source: Compiled by LSA Associates, Inc. (2018).

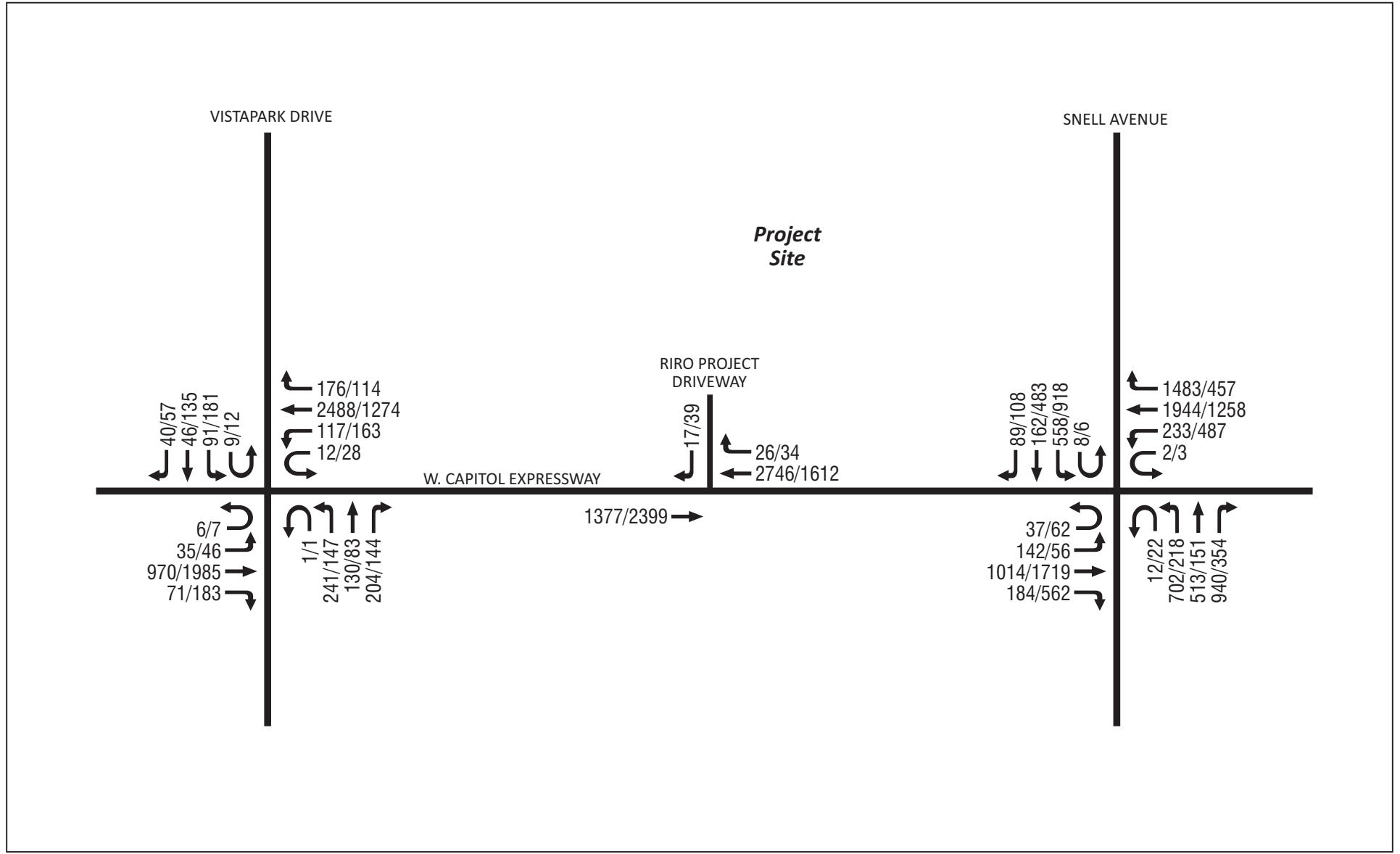
LOS = level of service

sec/veh = seconds per vehicle

V/C = volume-to-capacity

**Intersection Queuing Analysis**

Based on the HCM methodology, LSA analyzed the study area intersections' 95th percentile queuing and storage lengths to assess the effectiveness of the storage lengths/queuing and identify potential for vehicle spillback out of the turn lanes. Table E provides a summary of queuing and at the three study area intersections. As Table E indicates, the right-in/right-out project driveway will not have any queues for the inbound westbound right-in movement for any scenario.



**LSA**

SCHEMATIC - NOT TO SCALE

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231 West Capitol Expressway Public Storage  
Background Plus Project Traffic Volumes

FIGURE 12

**Table E: Queueing and Storage Length Operations**

Intersection		Lane Movement	Storage Lengths Per Lane	Existing			
				AM		PM	
				Volume	Queue <sup>2</sup>	Volume	Queue <sup>2</sup>
1	Project Driveway/W. Capitol Expressway	WBR <sup>1</sup>	320 ft	8	-	11	-
2	Snell Avenue/W. Capitol Expressway	Dual NBL	300 ft	538	825	233	300
		Dual EBL	469 ft	153	225	107	150
3	Vistpark Drive/W. Capitol Expressway	SBL	300 ft	98	250	188	450
		WBL	370 ft	121	350	170	400

Intersection		Lane Movement	Storage Lengths Per Lane	Background			
				AM		PM	
				Volume	Queue <sup>2</sup>	Volume	Queue <sup>2</sup>
1	Project Driveway/W. Capitol Expressway	WBR <sup>1</sup>	320 ft	8	-	11	-
2	Snell Avenue/W. Capitol Expressway	Dual NBL	300 ft	709	1050	234	300
		Dual EBL	469 ft	171	250	107	150
3	Vistpark Drive/W. Capitol Expressway	SBL	300 ft	100	250	193	475
		WBL	370 ft	121	350	172	400

Intersection		Lane Movement	Storage Lengths Per Lane	Background Plus Project			
				AM		PM	
				Volume	Queue <sup>2</sup>	Volume	Queue <sup>2</sup>
1	Project Driveway/W. Capitol Expressway	WBR <sup>1</sup>	320 ft	26	-	34	-
2	Snell Avenue/W. Capitol Expressway	Dual NBL	300 ft	714	1050	240	325
		Dual EBL	469 ft	179	275	118	150
3	Vistpark Drive/W. Capitol Expressway	SBL	300 ft	100	250	193	475
		WBL	370 ft	129	375	191	450

queue exceeds storage length

Source: Compiled by LSA Associates, Inc. (2018).

<sup>1</sup> Westbound right storage length (320 ft) represents the distance from the right-in/right-out project driveway to the adjacent driveway at the Valero gas station

<sup>2</sup> One vehicle is approximately 25 ft.

ft = feet

NBL = northbound left

SBL = southbound left

EBL = eastbound left

WBL = westbound left

Furthermore, the dual (300-foot [ft]) northbound left-turn lanes at Snell Avenue/West Capitol Expressway are exceeded under Existing conditions (825 ft) and would be exceeded under Background and Background Plus Project conditions (1,050 ft). However, the project would not increase the northbound left-turn queue from Background conditions.

The (300 ft) southbound left-turn lane at Vistapark Drive/West Capitol Expressway are exceeded under the Existing conditions (400 ft) and would be exceeded under Background and Background Plus Project conditions (475 ft). However, the project would not increase the southbound left-turn queue from Background conditions.

The (370 ft) westbound left-turn lane at Vistapark Drive/West Capitol Expressway is exceeded under Existing conditions and Background conditions (400 ft) and would be exceeded under Background Plus Project conditions by an additional 50 ft (450 ft).

The HCM 2000 LOS and queuing Traffix worksheets are provided in Appendix E.

#### *Recommendations*

Based on the intersection operations analysis, the project is anticipated to have no adverse effects on the circulation system. Based on the intersection queuing analysis, the project would increase the westbound left-turn volumes and queues at Vistapark Drive/West Capitol Expressway. As such, it is recommended that the project extend the existing 370 ft westbound left-turn lane 80 ft for a revised left-turn lane of 450 ft, as shown on Figure 13. This improvement, to be completed in coordination with the County of Santa Clara (County), could accommodate all existing, project, and future vehicles at this location.

In addition, the County has recommended that the project extend the existing dashed striping (California Department of Transportation [Caltrans] Detail 37B) from the westbound right-turn lane at Vista Roma Way/West Capitol Expressway 400 ft east toward the project frontage and the westbound acceleration lane. The recommended striping improvement along West Capitol Expressway is shown on Figure 14.

#### **Site Circulation and Access Analysis**

There will be no changes to the existing right-in/right-out driveway on West Capitol Expressway; thus, the project driveway will continue to accommodate vehicles entering and exiting the project site. The project will maintain the existing driveways on Snell Avenue and West Capitol Expressway to provide fire access to and from the project site.

It should be noted that Phase 1 of the project will maintain all existing driveways. Phase 2 will remove an existing right-in/right-out driveway on Snell Avenue located south of the fire-access driveway.

The southbound right-turn lane at Snell Avenue/West Capitol Expressway transitions to the existing westbound acceleration lane along West Capitol Expressway. This acceleration lane is approximately 1,195 ft from the Snell Avenue intersection to the westbound right-turn lane for Vista Roma Way. This acceleration lane will provide access to and from the project site.

## **EXISTING CONDITIONS**



## **RECOMMENDED IMPROVEMENTS**



**LSA**



0 40 80

FEET

SOURCE: Google Earth

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**FIGURE 13**

*231 West Capitol Expressway Public Storage*  
Recommended Westbound Left Turn Improvements  
at Vistapark Drive/Capitol Expressway



LSA  
N

0 50 100  
FEET

SOURCE: Google Earth

LEGEND

- Lane Striping Addition  
(Caltrans Detail 37B)

FIGURE 14

231 West Capitol Expressway Public Storage  
Recommended Striping Improvements Along Capitol Expressway

The Background traffic volumes for the southbound right-turn lane at Snell Avenue/West Capitol Expressway (and the West Capitol Expressway acceleration lane) are 87 a.m. and 106 p.m. peak-hour vehicles. At completion of the project, the westbound right-turn demand into the self-storage facility is anticipated to be 26 a.m. and 34 p.m. peak-hour vehicles. The low project volumes at the right-in/right-out project driveway would not significantly affect the existing or future (Background) operations of the West Capitol Expressway acceleration lane currently located along the project frontage.

As the existing self-storage land use is the same as the proposed project and the existing driveway location and configuration will remain, all passenger vehicles and trucks will continue to turn into and out of the project through the main project driveway in a similar manner. Any driveway or public improvements along the Capitol Expressway frontage will be consistent with the County requirements and standards to accommodate access for all vehicles, while the on-site circulation will be consistent with the City's requirements and standards in order to accommodate circulation for all vehicles.

Gate access will be provided at the project driveway on West Capitol Expressway. The main gate will be controlled by a keypad (i.e., an individual must input a key code for entering and exiting the property). The gate will be located approximately 73 ft from the back of the West Capitol Expressway sidewalk to provide the appropriate clearance. The project is anticipated to generate low inbound and outbound peak-hour volumes (26 a.m. and 34 p.m. inbound vehicle trips and 17 a.m. and 39 p.m. outbound vehicle trips). Gates are also provided at both fire-access-only driveways on Snell Avenue and West Capitol Expressway. The fire-access driveway on Snell Avenue would provide approximately 29 ft of clearance from the back of the Snell Avenue sidewalk. The fire-access driveway on West Capitol Expressway would provide approximately 12 ft of clearance from the back of the West Capitol Expressway sidewalk. Due to the low volumes, the gates are not anticipated to impact the public streets.

## Parking

According to City Municipal Code Chapter 20.90.060, mini-warehouse/mini-storage establishments require 1 parking space per 5,000 sf of floor area plus 1 space per residential manager. Floor area is defined as 85 percent of gross floor area. Applied to Phase 1 of the proposed project (179,616 sf of gross floor area), the Public Storage use would require 31 parking spaces ( $[179,616 \times 0.85] / 5,000$ ). The project will not include a resident manager. At completion of Phase 1, the project will provide the required 31 spaces. Upon completion of Phase 2, the project will provide 73 parking spaces for the 427,395 sf of total mini-warehouse (self-storage) use on site. As such, the project will provide parking consistent with the City Municipal Code.

Per City Municipal Code Chapter 20.90.060, mini-warehouse/ministorage establishments are required to provide one bicycle parking space/rack for every 10 employees. The project will provide two bicycle parking stalls to serve the two on-site employees.

## Sight Distance

A sight distance analysis was conducted along West Capitol Expressway at the proposed location of the main right-in/right-out project driveway to ensure driver visibility and safety. In the project

vicinity, the West Capitol Expressway speed limit is 50 mph. According to Table 6C-2 of the California Manual on Uniform Traffic Control Devices (CAMUTCD), the stopping sight distance for a roadway with the speed limit of 50 mph is 425 ft.

Figure 15 illustrates the sight distances along West Capitol Expressway. As shown in this figure, there are no sight distance obstructions at the proposed West Capitol Expressway project driveway (i.e., east and west side of West Capitol Expressway).

The sight distances at the right-in/right-out project driveway exceed 500 ft looking to the east (left) and looking to the west (right). Therefore, the project driveway would meet the minimum sight distance requirements (425 ft) specified in the CAMUTCD.

### Construction Operations

The proposed westbound left-turn lane improvement at Vistapark Drive/West Capitol Expressway (i.e., an 80 ft extension from 370 ft to 450 ft) could require temporary lane closures. Construction equipment and vehicles will be staged on site. With the exception of potential utility improvements and right-of-way improvements (i.e., driveway, curb, and/or gutter), construction activities are not anticipated to take place within the public right-of-way that could result in temporary sidewalk and bicycle lane closures and detours. As such, there would be no impact to off-site pedestrian, bicycle, and transit facilities.

### CONCLUSIONS

Based on the results of this Transportation Analysis, the proposed project could be implemented without impacting the surrounding roadway system. The evaluation of the project's total VMT and study area intersections' LOS shows that the addition of project traffic would not create any significant adverse CEQA or local transportation impacts, according to the City's performance criteria.

Based on the intersection queuing analysis, the project would increase the westbound left-turn volumes and queues at Vistapark Drive/West Capitol Expressway. As such, it is recommended that the project extend the existing 370 ft westbound left-turn lane 80 ft for a revised left-turn lane of 450 ft. This improvement will be coordinated with the County.

The County has also recommended that the project extend the existing dashed striping (Caltrans Detail 37B) from the westbound right-turn lane at the Vista Roma Way/West Capitol Expressway intersection 400 ft east toward the project frontage and the westbound acceleration lane.

LSA conducted a site access analysis for the project consistent with the City's requirements provided from the *Transportation Analysis Handbook (City of San José 2018)*. Based on this analysis, all requirements have been met.



LSA  
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0 100 200  
FEET

SOURCE: Google Earth

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FIGURE 15

231 West Capitol Expressway Public Storage  
Sight Distance

The project would incorporate design features to support alternative modes of transportation (i.e., pedestrian, bicycle, and public transportation). Within the project limits, the project would widen the existing West Capitol Expressway sidewalk to 15 ft. Pedestrian and bicycle traffic would be afforded safe travel via sidewalks throughout the site that would connect to the public street system and existing transit facilities. Bicycle transportation will be accommodated for visitors and employees with the addition of bicycle parking. With these amenities, the project incorporates the goals of the City in the reduction of VMT and compliance with SB 743.

## REFERENCES

- City of San José. 2011, as amended 2018. *Envision San José 2040 General Plan*. Website: <http://www.sanjoseca.gov/DocumentCenter/View/474> (accessed November 2018).
- \_\_\_\_\_. 2018. *Transportation Analysis Handbook*. Website: <https://www.sanjoseca.gov/DocumentCenter/View/76537> (accessed November 2018).
- \_\_\_\_\_. Municipal Code, Chapter 20.90.060. Website: [https://library.municode.com/ca/san\\_jose/codes/code\\_of\\_ordinances?nodeId=TIT20ZO\\_CH20.90PALO](https://library.municode.com/ca/san_jose/codes/code_of_ordinances?nodeId=TIT20ZO_CH20.90PALO) (accessed November 2018).
- Institute of Transportation Engineers (ITE). 2017. *Trip Generation Manual*, 10th Edition.
- Transportation Research Board (TRB). 2000. *Highway Capacity Manual*.

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## APPENDIX A

### APPROVED WORKSCOPE



*Department of Public Works*

DEVELOPMENT SERVICES DIVISION

December 19, 2018

Mr. Dean Arizabal  
LSA Associates, Inc.  
20 Executive Park, Suite 200  
Irvine, CA 92614

Dear Mr. Arizabal:

SUBJECT: TRANSPORTATION ANALYSIS WORKSCOPE  
231 WEST CAPITOL EXPRESSWAY PUBLIC STORAGE (H18-048)  
(3-16967) (APN: 462-19-013)

**PROJECT DESCRIPTION**

Enclosed is the information necessary to complete the transportation analysis (TA) for the proposed public storage project located at 231 West Capitol Expressway. The existing site includes 133,701 square-feet (sf) of self-storage use. The proposed project will demolish 65,538 sf of existing use and construct two new storage facility buildings totaling 359,232 sf. A total of 427,395 sf of self-storage use will be provided at project completion. The project is proposing one right-in/right-out driveway along the project frontage on Capitol Expressway and a fire-access driveway on Snell Avenue.

In order to assist you in completing the transportation analysis, we are forwarding the following data and requirements to be included in the transportation analysis.

**CEQA TRANSPORTATION ANALYSIS**

In alignment with State of California Senate Bill 743 (SB743), the City of San Jose's Transportation Impact Policy, Council Policy 5-3 has been replaced with a new Transportation Analysis Policy, Council Policy 5-1. The new transportation policy establishes the thresholds for transportation impact under California Environmental Quality Act (CEQA) removing Level of Service (LOS) and replacing with Vehicle Miles Traveled (VMT). The new Transportation Analysis Policy is in effect on March 29, 2018.

This project, consistent with the goals of the General Plan and the objectives of the Senate Bill 743, is required to analyze transportation impacts using VMT metric and conform to Council Policy 5-1. A new "*Transportation Analysis Handbook 2018*" has been adopted in order to assist with the City's new transportation analysis standards and should be referenced when developing this report.

## **CEQA Transportation Requirements**

The VMT analysis is used to evaluate the project's VMT against the appropriate thresholds of significance established in Council Policy 5-1. As proposed, the project does not meet the City's industrial project screening criteria and will be required to perform a VMT analysis. However, based on the City's initial review, the employment area VMT is 12.53 which is below the City's Industrial threshold of 14.37. Therefore, the project as proposed, does not have VMT impact. However, a Local Transportation Analysis (LTA) will still be required.

## **CEQA Project Impact Analysis**

- Analyze the area VMT using the San Jose VMT Evaluation Tool (Sketch Tool). The tool is provided by the City and is available for download on the VMT website <http://www.sanjoseca.gov/vmt>.
- Include the San Jose VMT Evaluation Summary Report in your submittal.
- Include the City's Heat Maps and a VMT discussion based on employment area VMT.
- Include a detailed discussion on the VMT requirements and implications of the proposed land use/VMT bar chart.
- Provide a  $\frac{1}{2}$ -mile, 1-mile, and 5-mile buffer radius map showing local land uses similar to the proposed project.
- Attached is a sample format for TA reports (See Attachment).

## **CEQA Cumulative Analysis**

Projects must demonstrate consistency with the Envision San José 2040 General Plan to address cumulative impacts. If a project is determined to be consistent with the General Plan, the project will be considered part of the cumulative solution to meet the General Plan's long-range goals, and it will result in a less-than-significant cumulative impact. Factors that contribute to a determination of consistency with the General Plan include a project's density, design, and conformance to the goals and policies set forth in the General Plan.

If a project is determined to be inconsistent with the General Plan, a cumulative impact analysis will be required to determine the project's cumulative effect on the regional air quality and greenhouse gas emissions targets and general plan consistency.

## **County of Santa Clara Coordination**

Staff has forwarded the draft workscope to the County of Santa Clara. Comments will be forthcoming and forwarded to the consultant.

- Conduct Level of Service analysis at two (2) intersections in the County of Santa Clara. (See Attachment A)
- Contact the County of Santa Clara for the most recent data for two (2) County of Santa Clara intersections (See Attachment A).
- Conform to the County of Santa Clara's impact criteria in analyzing intersections in the County of Santa Clara.

### **LOCAL TRANSPORTATION ANALYSIS (LTA)**

The primary goal of a Local Transportation Analysis (LTA) is to establish a local transportation system that is reflective of both land use context and multi-modal functions. An LTA will ensure that the type, character, and intensity of land uses along a street are appropriate to the primary function of the street, and that all people travel safely on city streets, with trade-offs guided by the street's General Plan typology.

The trip generation estimate aligns the VMT output with the trip generation of the proposed project. This ensures consistency between the CEQA analysis and the Local Transportation Analysis (LTA).

### **Project Assumptions**

- Include the most updated site plan for the proposed development.

### **Trip Generation Estimate**

- Submit project trip generation estimates for review and approval prior to preparing the Transportation Analysis report. Trip estimates should include the following:
  1. *Estimate Baseline Vehicle-Trips:* This step is the base estimation of gross vehicle-trips generated by a project. Use the ITE Trip Generation Manual or other approved source(s) to estimate the project's vehicle-trips. This establishes a project's baseline vehicle-trips before any trip adjustments are applied.
  2. *Apply Internal Trip Adjustments:* If the project is a mixed-use project, the internal capture trips should be estimated prior to applying the external trip adjustments. Refer to the VTA Transportation Impact Analysis Guidelines for the vehicle-trip reduction rates for mixed-use projects.
  3. *Apply Location-based Adjustments:* This is the first external trip adjustment. Based on the location of the project, the estimated vehicle mode share is applied to the adjusted vehicle-trips from Step 2. Refer to the "Location-based Adjustments" section below for more information. This results in an estimated project external vehicle-trips based on location.

*4. Apply Project Trip Adjustments: The project external vehicle-trips can be further reduced if the project includes conditions that would result in fewer vehicle-trips than a typical site in a similar context. This is the second external trip adjustment to be applied and is based on the VMT reduction. This results in an estimated project external vehicle-trips based on both location and project conditions.*

*5. Apply Other Adjustments: The project external vehicle-trips can also be further reduced based on trip type (e.g. pass-by, primary, diverted, and existing uses). Refer to the “Pass-by and Diverted Link Trips” and “Existing Uses” sections below for more information. This results in the net external vehicle-trips generated by the project.*

Adjusting the baseline project vehicle-trips accounts for mode shares in San Jose which differ from the ITE mode share estimates. The project mode share is estimated based on the place type where the project is located. Location-based vehicle mode share is estimated for five place types (Transportation Analysis Handbook - Table 5) and three uses (residential projects, office or industrial projects, and retail projects). Use the San José VMT Evaluation Tool to obtain the place type for a project.

- Include project-trip adjustments (VMT reduction) to the trip generation estimate.
- Do not apply location-based adjustments to the trip generation table.
- Provide project trip assignment and trip distribution at the studied intersections and proposed driveways.

### **Project Study Scenarios**

The existing plus project scenario is no longer required since the new policy establishes a VMT CEQA baseline. The following intersection operations analysis should include the following scenarios:

- Existing Level of Service (Environmental Baseline)
- Background Scenario: Existing + Approved Projects
- Project Scenario: Existing + Approved Projects + Project

### **Intersection Operation Analysis**

The new TA handbook outlines the parameters for intersection required for analysis. *A signalized intersection should be included in the transportation analysis if it meets any of the following conditions:*

- *The intersection is within a ½-mile buffer from the project;*
- *The intersection is outside of a ½-mile buffer but within a one-mile buffer from the project’s property line AND currently operates at D or worse;*

- *The intersection is a designated Congestion Management Program facility outside of the City's Infill Opportunity Zone (defined in Section 4.3) and has the potential to be effected by the project;*
- *The intersection is outside of the City limits and has the potential to be effected by the project, per the transportation standards of the external jurisdictions;*
- *The intersection is included in the analysis based on engineering judgement of City staff.*

*If a project is not expected to add a measurable number of vehicle-trips to a study intersection, the project would not need to include the intersection in the operations analysis.*

- Based on the above criteria, the following signalized intersections are required for analysis:
  - Capitol Expressway / Snell Avenue
  - Capitol Expressway / Vistapark Drive
- Analyze the intersection operations, including multi-modal accomodations, of the two (2) signalized intersections. (See Attachment A).

### **Adverse Intersection Operations Effects**

Intersection operations analysis is intended to measure the existing intersection operations and the effect of adding project traffic on the study intersection(s). A potential adverse effect is not a CEQA measure.

An adverse effect on intersection operations occurs when the analysis demonstrates that a project would cause the operations standard at a study intersection to fall below D with the addition of project vehicle-trips to baseline conditions. For intersections already operating at E or F under the baseline conditions, an adverse effect is defined as:

- An increase in average critical delay by 4.0 seconds or more AND an increase in the critical V/C ratio of 0.010 or more; OR
- A decrease in average critical delay AND an increase in critical V/C ratio of 0.010 or more.

### **Addressing Adverse Intersection Operations Effects**

There are three possible approaches to address negative effects at signalized intersections:

- The transportation consultant can propose to reduce project vehicle-trips to eliminate the adverse effects and bring the intersections back to the background conditions by using the VMT Evaluation Tool to select additional measure(s) that would achieve the reduction.
- The project can propose to construct improvements to the study intersection(s) or other roadway segments of the citywide transportation system to improve overall capacity;
- The project can implement a trip cap, the maximum number of daily vehicle-trips allowed to be generated by a project. This will require a monitoring program to ensure conformance to the set trip cap.

### **Site Circulation and Access Analysis**

- The following requirements should be included in the analysis for the project:
  - Analyze all driveways entering/exiting the site. Describe the project vehicle interaction for ingress/egress movements within acceleration lane on W. Capitol Expressway.
  - Include truck turning templates to analyze truck (e.g. project trucks, garbage, moving, delivery, and emergency vehicle) access and on-site circulation.
  - Evaluate the number of parking spaces required per the City of San Jose's Zoning Code.
  - Perform sight distance analysis for all project driveways.
- Perform left-turn storage analysis at the following locations:
  - Project Driveways
  - Capitol Expressway / Snell Avenue
  - Capitol Expressway / Vistapark Drive
  - Any other left-turn pockets where stacking from the project will be significant.
- Provide 50' clearance from any proposed gate entry from the back-of-walk.

### **Field Observations**

- Field observations within the ½ mile of the project should document existing conditions including but not limited to the following areas:
  - Pedestrian facilities and operations;
  - Bicycle facilities and operations;
  - Transit stations, routes, schedules, and operations;
  - Ramp meter queues and spill back onto local streets;
  - Uneven lane demand and usage;
  - Sight distance;
  - Intersection operations;
  - Queuing and storage length;

### **Transit**

A project should be evaluated based on its ability to support transit ridership. The report should discuss how this project meets the transit requirements as listed in the Transportation Handbook. Provide an assessment of (1) transit facilities and services, (2) access to transit, and (3) transit operations and include any improvements proposed by the project that will improvement access to transit and ridership.

### **Bicycle and Pedestrian:**

A project should be evaluated for its ability to support bicycling and walking. This evaluation should include the effects and benefits of site development and associated roadway modifications on: (1) bicycle and pedestrian infrastructure, (2) bicycle and pedestrian access; and (3) conformance to existing plans and policies.

- Any missing ADA ramps within the ½ mile radius of the project. A project may be required to construct or reconstruct ADA ramps within the project's sphere;
- The availability and adequacy of bike parking and bike share facilities;
- West Capitol Expressway has been identified as a Vision Zero Corridors. The program encourages the design and improvements of the roadway system to be safe for all users, modes of transportation, communities, and people of all ages. Describe how the project can contribute towards the goals of the Vision Zero Program.

### **Mitigations and Improvements**

All proposed mitigation and transportation improvements must include a feasibility analysis, which includes an aerial photo overlaid with the proposed mitigation. All buildings and right-of-way lines should be shown. When aerial photos are not available, a drawing may be submitted based on accurate topography, striping plans, or improvement plans.

### **Construction Operations**

Include a discussion on the possible closure of vehicular lanes, bicycle lanes, or pedestrian facilities during construction.

### **General**

- The base conditions for the TRAFFIX and CSJ LOS intersections have been determined by Public Works staff. If any changes need to be made to the calculation sheets, contact Public Works staff prior to modifying.
- The Approved Trips Inventory (ATI), TRAFFIX LOS calculations for existing and background conditions and list of ATI projects are enclosed for your use.

- The project traffic assignments and new traffic counts must be submitted for review and approval prior to preparation of the transportation analysis report. Adhere to the City of San Jose's Transportation Analysis Handbook and "Council Policy 5-1," and the Santa Clara Valley Transportation Authority "Transportation Impact Analysis Guidelines" for the preparation of the report.
  - Traffic counts shall include vehicular and bicycle turning movements for each approach, and pedestrian volumes by crosswalk. Please submit traffic counts in spreadsheet file format (csv, xls or xlsx) and pdf.

### Traffic Report Fees

Fees totaling \$6,232 are due. This includes the Traffic Report Workscope Fee in the amount of \$1,623 a DOT Traffic Workscope Review fee in the amount of \$318, and the Traffic Report Review Fee in the amount of \$3,570 based on 50 p.m. peak-hour trips generated by the project prior to any deductions, as well as a \$424 DOT Geometric Design Fee, and a Record Retention Fee of \$297. These fees must be paid to the Department of Public Works when the draft traffic impact analysis is submitted for review.

If you have any questions, please contact myself at [Jason.Yan@sanjoseca.gov](mailto:Jason.Yan@sanjoseca.gov) or (408) 793-5399. You may also reach the Senior Engineer overseeing the project, Samuel Yung at [Samuel.Yung@sanjoseca.gov](mailto:Samuel.Yung@sanjoseca.gov) or (408) 975-7136 or Karen Mack, Traffic Management at [Karen.Mack@sanjoseca.gov](mailto:Karen.Mack@sanjoseca.gov) or (408) 535-6816.

Sincerely,



Jason Yan

Project Engineer  
Development Services Division

SY:KM:JY:cc  
Enclosures  
Workscope, Attachment A, TRAFFIX, ATI, Project ATI Template

C: Karen Mack, PW  
Florin Lapustea, DOT

## APPENDIX B

### SAN JOSÉ VMT EVALUATION TOOL OUTPUT SHEET

# CITY OF SAN JOSE VEHICLE MILES TRAVELED EVALUATION TOOL SUMMARY REPORT

## PROJECT:

Name: Public Storage San Jose Tool Version: 3/14/2018  
Location: 231 West Capitol Expressway Date: 12/6/2018  
Parcel: 46219013 Parcel Type: Suburb with Multifamily Housing  
Proposed Parking: Vehicles: 0 Bicycles: 0

## LAND USE:

Residential:	Percent of All Residential Units	
Single Family	0 DU	Extremely Low Income ( $\leq$ 30% MFI)
Multi Family	0 DU	Very Low Income ( $>$ 30% MFI, $\leq$ 50% MFI)
<u>Subtotal</u>	0 DU	Low Income ( $>$ 50% MFI, $\leq$ 80% MFI)
Office:	0 KSF	0 % Affordable
Retail:	0 KSF	0 % Affordable
Industrial:	427.4 KSF	0 % Affordable

## VMT REDUCTION STRATEGIES

### Tier 1 - Project Characteristics

#### Increase Residential Density

Existing Density (DU/Residential Acres in half-mile buffer) .....	9
With Project Density (DU/Residential Acres in half-mile buffer) .....	9

#### Increase Development Diversity

Existing Activity Mix Index .....	0.42
With Project Activity Mix Index .....	0.47

#### 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) .....	54
With Project Density (Jobs/Commercial Acres in half-mile buffer) .....	70

### Tier 2 - Multimodal Infrastructure

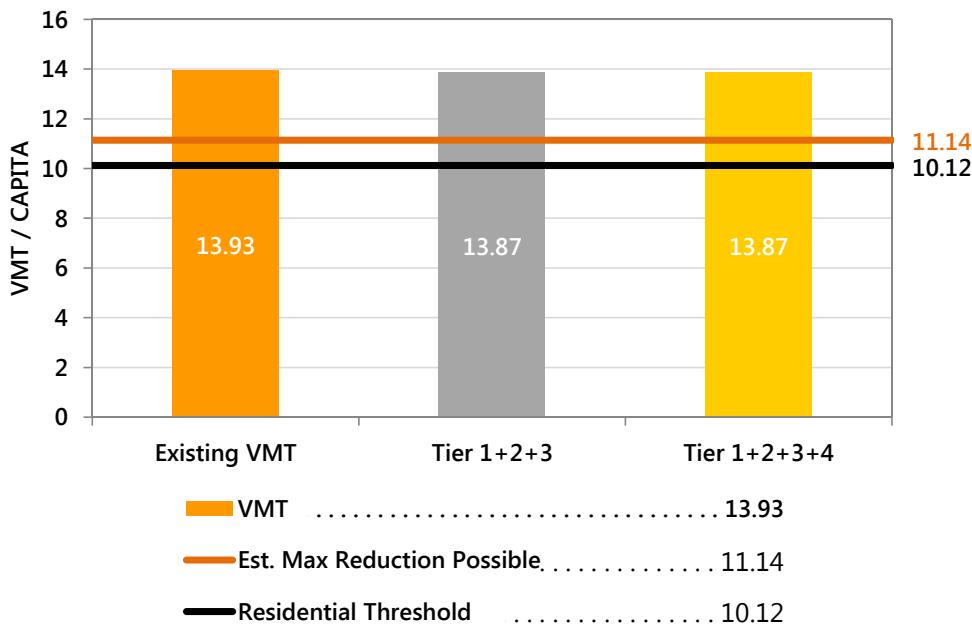
### Tier 3 - Parking

### Tier 4 - TDM Programs

## CITY OF SAN JOSE VEHICLE MILES TRAVELED EVALUATION TOOL SUMMARY REPORT

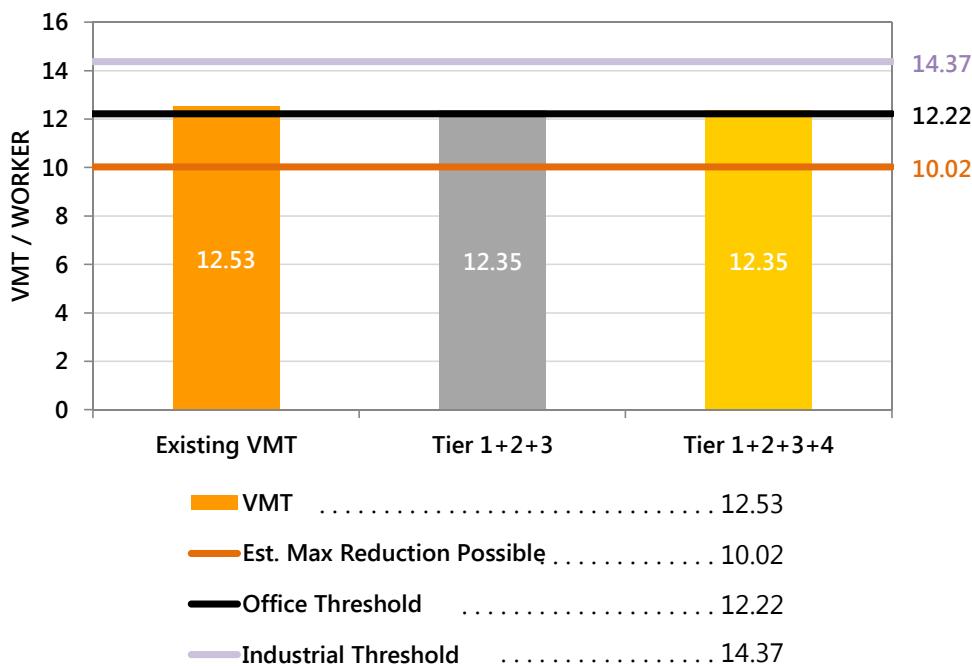
### RESIDENTIAL ONLY

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



### EMPLOYMENT ONLY

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

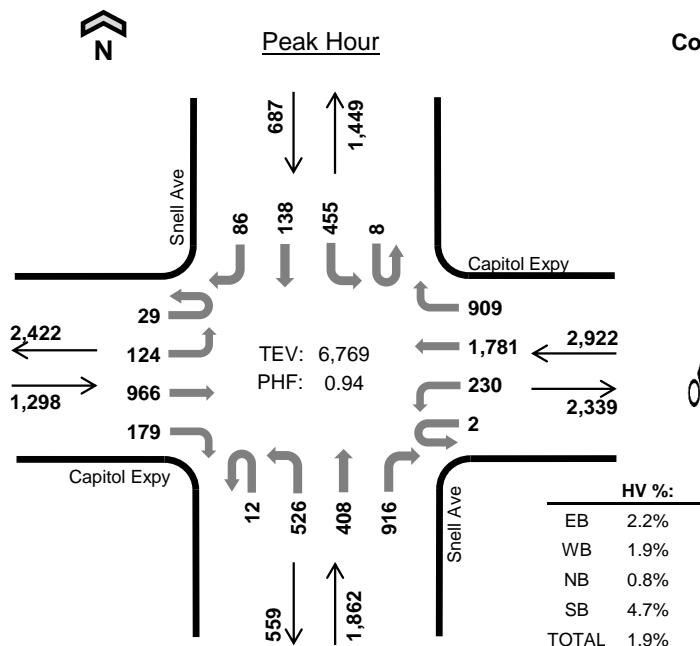


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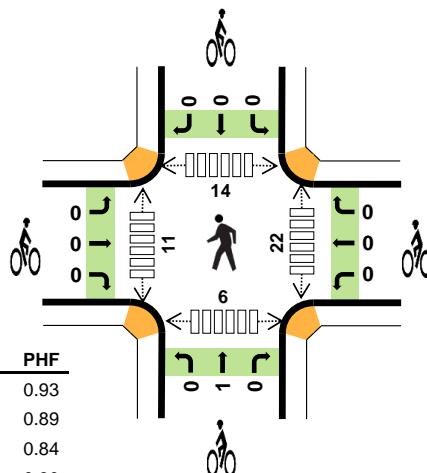
## APPENDIX C

### TRANSPORTATION COUNTS

## Snell Ave Capitol Expy



Date: 09-06-2018  
 Count Period: 7:00 AM to 9:00 AM  
 Peak Hour: 7:15 AM to 8:15 AM



### Two-Hour Count Summaries

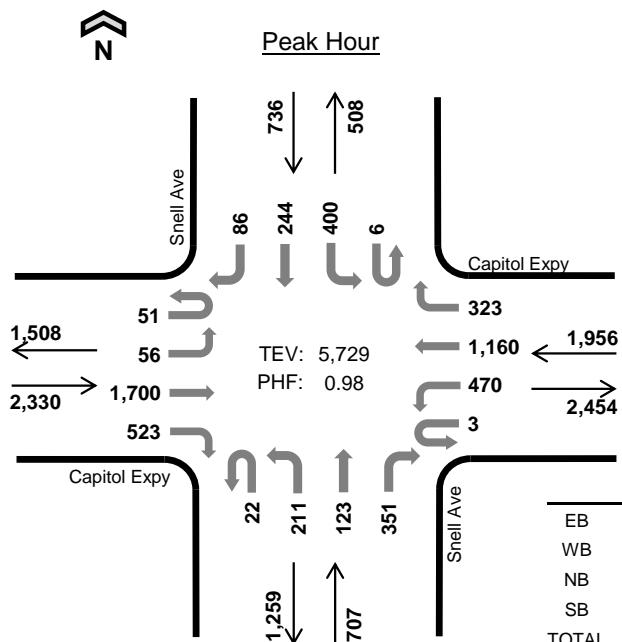
Interval Start	Capitol Expy				Capitol Expy				Snell Ave				Snell Ave				15-min Total	Rolling One Hour							
	Eastbound		Westbound		Northbound		Southbound		UT		LT		TH		RT		UT		LT		TH		RT		
7:00 AM	7	33	231	59	0	33	365	173	0	107	73	209	1	86	21	21	1,419	0							
7:15 AM	7	26	264	51	0	52	432	210	3	149	108	292	1	114	31	18	1,758	0							
7:30 AM	12	39	261	37	1	70	515	236	4	131	82	225	5	132	29	24	1,803	0							
7:45 AM	3	31	232	41	0	48	409	230	3	134	116	204	2	105	50	18	1,626	6,606							
8:00 AM	7	28	209	50	1	60	425	233	2	112	102	195	0	104	28	26	1,582	6,769							
8:15 AM	6	42	236	41	1	73	489	210	3	110	113	176	3	68	22	32	1,625	6,636							
8:30 AM	9	52	256	44	0	45	396	205	5	137	112	162	2	116	33	32	1,606	6,439							
8:45 AM	4	40	222	48	1	45	468	230	9	104	75	129	3	100	33	29	1,540	6,353							
<b>Count Total</b>	<b>55</b>	<b>291</b>	<b>1,911</b>	<b>371</b>	<b>4</b>	<b>426</b>	<b>3,499</b>	<b>1,727</b>	<b>29</b>	<b>984</b>	<b>781</b>	<b>1,592</b>	<b>17</b>	<b>825</b>	<b>247</b>	<b>200</b>	<b>12,959</b>	<b>0</b>							
<b>Peak Hour</b>	<b>All</b>	<b>29</b>	<b>124</b>	<b>966</b>	<b>179</b>	<b>2</b>	<b>230</b>	<b>1,781</b>	<b>909</b>	<b>12</b>	<b>526</b>	<b>408</b>	<b>916</b>	<b>8</b>	<b>455</b>	<b>138</b>	<b>86</b>	<b>6,769</b>	<b>0</b>						
	<b>HV</b>	<b>0</b>	<b>5</b>	<b>20</b>	<b>4</b>	<b>0</b>	<b>10</b>	<b>27</b>	<b>19</b>	<b>0</b>	<b>7</b>	<b>3</b>	<b>4</b>	<b>0</b>	<b>18</b>	<b>4</b>	<b>10</b>	<b>131</b>	<b>0</b>						
	<b>HV%</b>	<b>0%</b>	<b>4%</b>	<b>2%</b>	<b>2%</b>	<b>0%</b>	<b>4%</b>	<b>2%</b>	<b>2%</b>	<b>0%</b>	<b>1%</b>	<b>1%</b>	<b>0%</b>	<b>0%</b>	<b>4%</b>	<b>3%</b>	<b>12%</b>	<b>2%</b>	<b>0</b>						

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

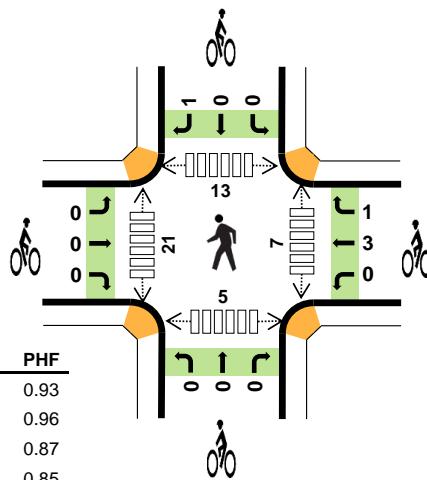
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	6	20	2	11	39	0	0	0	0	0	3	0	6	0	9
7:15 AM	5	17	5	13	40	0	0	0	0	0	5	2	4	0	11
7:30 AM	6	14	2	5	27	0	0	0	0	0	1	3	1	0	5
7:45 AM	8	11	4	8	31	0	0	1	0	1	12	4	5	4	25
8:00 AM	10	14	3	6	33	0	0	0	0	0	4	2	4	2	12
8:15 AM	13	22	2	3	40	0	0	0	0	0	5	2	18	0	25
8:30 AM	9	15	3	6	33	0	0	0	0	0	8	1	4	0	13
8:45 AM	13	19	9	5	46	0	0	1	0	1	5	5	6	1	17
<b>Count Total</b>	<b>70</b>	<b>132</b>	<b>30</b>	<b>57</b>	<b>289</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>43</b>	<b>19</b>	<b>48</b>	<b>7</b>	<b>117</b>
<b>Peak Hour</b>	<b>29</b>	<b>56</b>	<b>14</b>	<b>32</b>	<b>131</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>22</b>	<b>11</b>	<b>14</b>	<b>6</b>	<b>53</b>

Two-Hour Count Summaries - Heavy Vehicles																				
Interval Start	Capitol Expy				Capitol Expy				Snell Ave				Snell Ave				15-min Total	Rolling One Hour		
	Eastbound				Westbound				Northbound				Southbound							
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT				
7:00 AM	0	1	5	0	0	2	10	8	0	0	1	1	0	7	1	3	39	0		
7:15 AM	0	2	2	1	0	2	6	9	0	3	0	2	0	8	1	4	40	0		
7:30 AM	0	0	6	0	0	5	5	4	0	1	1	0	0	1	3	1	27	0		
7:45 AM	0	2	5	1	0	1	8	2	0	2	0	2	0	5	0	3	31	137		
8:00 AM	0	1	7	2	0	2	8	4	0	1	2	0	0	4	0	2	33	131		
8:15 AM	0	2	9	2	0	3	12	7	0	1	1	0	0	1	0	2	40	131		
8:30 AM	0	4	5	0	0	3	9	3	0	1	1	1	0	1	3	2	33	137		
8:45 AM	0	4	9	0	0	1	10	8	1	1	3	4	0	1	1	3	46	152		
Count Total	0	16	48	6	0	19	68	45	1	10	9	10	0	28	9	20	289	0		
Peak Hour	0	5	20	4	0	10	27	19	0	7	3	4	0	18	4	10	131	0		
Two-Hour Count Summaries - Bikes																				
Interval Start	Capitol Expy				Capitol Expy				Snell Ave				Snell Ave				15-min Total	Rolling One Hour		
	Eastbound				Westbound				Northbound				Southbound							
	LT	TH	RT		LT	TH	RT		LT	TH	RT		LT	TH	RT					
7:00 AM	0	0	0		0	0	0		0	0	0		0	0	0		0	0		
7:15 AM	0	0	0		0	0	0		0	0	0		0	0	0		0	0		
7:30 AM	0	0	0		0	0	0		0	0	0		0	0	0		0	0		
7:45 AM	0	0	0		0	0	0		0	1	0		0	0	0		1	1		
8:00 AM	0	0	0		0	0	0		0	0	0		0	0	0		0	1		
8:15 AM	0	0	0		0	0	0		0	0	0		0	0	0		0	1		
8:30 AM	0	0	0		0	0	0		0	0	0		0	0	0		0	1		
8:45 AM	0	0	0		0	0	0		0	1	0		0	0	0		1	1		
Count Total	0	0	0		0	0	0		0	2	0		0	0	0		2	0		
Peak Hour	0	0	0		0	0	0		0	1	0		0	0	0		1	0		
Note: U-Turn volumes for bikes are included in Left-Turn, if any.																				

## Snell Ave Capitol Expy



Date: 09-06-2018  
Count Period: 4:00 PM to 6:00 PM  
Peak Hour: 4:45 PM to 5:45 PM



### Two-Hour Count Summaries

Interval Start	Capitol Expy				Capitol Expy				Snell Ave				Snell Ave				15-min Total	Rolling One Hour	
	Eastbound		Westbound		Northbound		Southbound		UT		LT		TH		RT				
4:00 PM	6	13	408	127	1	100	276	63	5	53	21	76	1	88	59	21	1,318	0	
4:15 PM	9	18	461	131	1	91	275	61	4	41	15	64	5	94	34	18	1,322	0	
4:30 PM	8	6	341	116	0	94	290	79	8	56	36	91	4	112	65	24	1,330	0	
<b>4:45 PM</b>	<b>16</b>	<b>20</b>	<b>439</b>	<b>132</b>	<b>0</b>	<b>123</b>	<b>294</b>	<b>94</b>	<b>12</b>	<b>43</b>	<b>15</b>	<b>70</b>	<b>2</b>	<b>103</b>	<b>39</b>	<b>16</b>	<b>1,418</b>	<b>5,388</b>	
5:00 PM	9	14	377	119	2	131	299	74	5	53	31	91	0	96	84	26	1,411	5,481	
5:15 PM	14	6	423	133	0	99	259	78	3	58	40	102	2	136	57	22	1,432	5,591	
<b>5:30 PM</b>	<b>12</b>	<b>16</b>	<b>461</b>	<b>139</b>	<b>1</b>	<b>117</b>	<b>308</b>	<b>77</b>	<b>2</b>	<b>57</b>	<b>37</b>	<b>88</b>	<b>2</b>	<b>65</b>	<b>64</b>	<b>22</b>	<b>1,468</b>	<b>5,729</b>	
5:45 PM	9	5	380	125	2	127	301	116	3	66	23	81	0	82	59	17	1,396	5,707	
Count Total	83	98	3,290	1,022	7	882	2,302	642	42	427	218	663	16	776	461	166	11,095	0	
Peak Hour	All	51	56	1,700	523	3	470	1,160	323	22	211	123	351	6	400	244	86	5,729	0
	HV	0	6	15	4	0	8	10	3	0	0	0	5	1	10	1	2	65	0
	HV%	0%	11%	1%	1%	0%	2%	1%	1%	0%	0%	0%	1%	17%	3%	0%	2%	1%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	12	11	2	6	31	0	0	0	1	1	1	5	0	1	7
4:15 PM	8	8	0	4	20	0	0	0	1	1	0	3	0	1	4
4:30 PM	7	8	1	2	18	0	0	1	1	2	4	9	5	2	20
<b>4:45 PM</b>	<b>9</b>	<b>9</b>	<b>3</b>	<b>4</b>	<b>25</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>5</b>
5:00 PM	3	3	1	6	13	0	0	0	0	0	4	3	1	0	8
5:15 PM	7	2	1	3	13	0	1	0	0	1	0	13	7	3	23
<b>5:30 PM</b>	<b>6</b>	<b>7</b>	<b>0</b>	<b>1</b>	<b>14</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>10</b>
5:45 PM	2	3	0	1	6	0	0	0	0	0	2	9	1	0	12
Count Total	54	51	8	27	140	0	4	1	4	9	14	47	19	9	89
Peak Hour	25	21	5	14	65	0	4	0	1	5	7	21	13	5	46

Two-Hour Count Summaries - Heavy Vehicles																				
Interval Start	Capitol Expy				Capitol Expy				Snell Ave				Snell Ave				15-min Total	Rolling One Hour		
	Eastbound				Westbound				Northbound				Southbound							
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT				
4:00 PM	0	5	6	1	0	2	9	0	0	1	0	1	0	2	2	2	31	0		
4:15 PM	0	2	4	2	0	1	4	3	0	0	0	0	0	3	0	1	20	0		
4:30 PM	0	2	4	1	0	0	5	3	0	0	1	0	0	0	0	2	18	0		
4:45 PM	0	3	5	1	0	3	3	3	0	0	0	3	0	3	1	0	25	94		
5:00 PM	0	1	2	0	0	0	3	0	0	0	0	1	0	5	0	1	13	76		
5:15 PM	0	1	6	0	0	2	0	0	0	0	0	1	1	1	0	1	13	69		
5:30 PM	0	1	2	3	0	3	4	0	0	0	0	0	0	1	0	0	14	65		
5:45 PM	0	0	2	0	0	1	2	0	0	0	0	0	0	1	0	0	6	46		
Count Total	0	15	31	8	0	12	30	9	0	1	1	6	1	16	3	7	140	0		
Peak Hour	0	6	15	4	0	8	10	3	0	0	0	5	1	10	1	2	65	0		
Two-Hour Count Summaries - Bikes																				
Interval Start	Capitol Expy				Capitol Expy				Snell Ave				Snell Ave				15-min Total	Rolling One Hour		
	Eastbound				Westbound				Northbound				Southbound							
	LT	TH	RT		LT	TH	RT		LT	TH	RT		LT	TH	RT					
4:00 PM	0	0	0		0	0	0		0	0	0		0	0	1		1	0		
4:15 PM	0	0	0		0	0	0		0	0	0		0	0	1		1	0		
4:30 PM	0	0	0		0	0	0		0	1	0		0	0	1		2	0		
4:45 PM	0	0	0		0	1	0		0	0	0		0	0	1		2	6		
5:00 PM	0	0	0		0	0	0		0	0	0		0	0	0		0	5		
5:15 PM	0	0	0		0	1	0		0	0	0		0	0	0		1	5		
5:30 PM	0	0	0		0	1	1		0	0	0		0	0	0		2	5		
5:45 PM	0	0	0		0	0	0		0	0	0		0	0	0		0	3		
Count Total	0	0	0		0	3	1		0	1	0		0	0	4		9	0		
Peak Hour	0	0	0		0	3	1		0	0	0		0	0	1		5	0		
Note: U-Turn volumes for bikes are included in Left-Turn, if any.																				

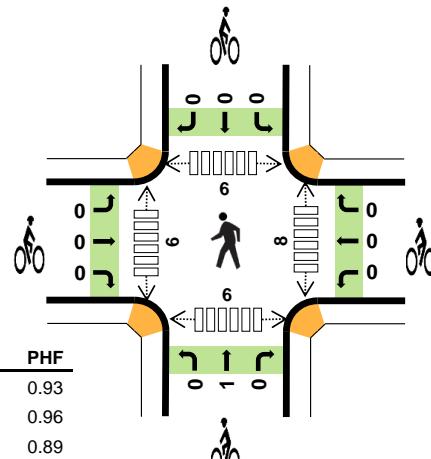
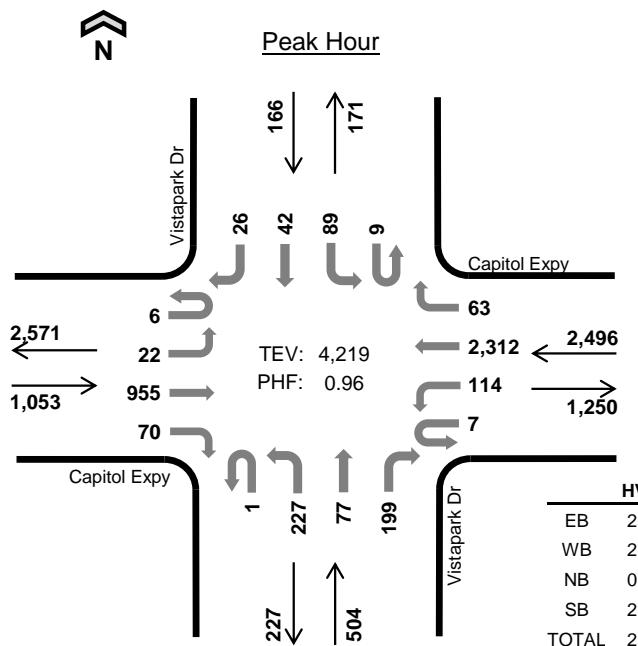
# Vistapark Dr Capitol Expy



Date: 09-06-2018

Count Period: 7:00 AM to 9:00 AM

Peak Hour: 7:15 AM to 8:15 AM



## Two-Hour Count Summaries

Interval Start	Capitol Expy				Capitol Expy				Vistapark Dr				Vistapark Dr				15-min Total	Rolling One Hour							
	Eastbound		Westbound		Northbound		Southbound		UT		LT		TH		RT		UT		LT		TH		RT		
7:00 AM	2	1	224	12	2	18	487	8	0	68	12	41	1	21	6	6	909	0							
7:15 AM	0	1	259	14	3	20	612	13	0	53	14	56	5	28	14	7	1,099	0							
7:30 AM	0	6	228	11	1	35	566	14	0	61	27	53	2	22	12	12	1,050	0							
7:45 AM	3	8	222	17	2	37	577	17	0	45	9	46	0	18	8	1	1,010	4,068							
8:00 AM	3	7	246	28	1	22	557	19	1	68	27	44	2	21	8	6	1,060	4,219							
8:15 AM	3	4	221	31	1	27	548	17	0	68	17	43	1	12	18	5	1,016	4,136							
8:30 AM	5	6	275	8	4	13	623	28	0	53	28	41	2	26	12	3	1,127	4,213							
8:45 AM	2	4	226	14	3	26	515	27	0	46	15	40	0	21	14	6	959	4,162							
Count Total	18	37	1,901	135	17	198	4,485	143	1	462	149	364	13	169	92	46	8,230	0							
Peak Hour	All	6	22	955	70	7	114	2,312	63	1	227	77	199	9	89	42	26	4,219	0						
	HV	0	2	29	0	1	0	46	4	0	2	1	1	1	0	2	1	90	0						
	HV%	0%	9%	3%	0%	14%	0%	2%	6%	0%	1%	1%	1%	11%	0%	5%	4%	2%	0						

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	7	10	1	1	19	0	0	0	0	0	1	4	0	0	5
7:15 AM	5	17	0	1	23	0	0	0	0	0	1	3	1	1	6
7:30 AM	7	5	2	1	15	0	0	1	0	1	2	3	2	1	8
7:45 AM	9	13	1	0	23	0	0	0	0	0	2	0	1	3	6
8:00 AM	10	16	1	2	29	0	0	0	0	0	3	0	2	1	6
8:15 AM	11	14	2	0	27	0	0	0	0	0	6	0	0	0	6
8:30 AM	11	12	0	0	23	0	0	0	0	0	1	3	2	0	6
8:45 AM	10	14	1	3	28	0	0	0	0	0	3	1	1	1	6
Count Total	70	101	8	8	187	0	0	1	0	1	19	14	9	7	49
Peak Hour	31	51	4	4	90	0	0	1	0	1	8	6	6	6	26

Two-Hour Count Summaries - Heavy Vehicles																				
Interval Start	Capitol Expy				Capitol Expy				Vistapark Dr				Vistapark Dr				15-min Total	Rolling One Hour		
	Eastbound				Westbound				Northbound				Southbound							
	UT	LT	TH	RT																
7:00 AM	0	0	6	1	0	0	10	0	0	0	1	0	0	0	0	1	19	0		
7:15 AM	0	1	4	0	0	0	17	0	0	0	0	0	0	0	1	0	23	0		
7:30 AM	0	0	7	0	0	0	5	0	0	1	1	0	0	0	0	1	15	0		
7:45 AM	0	1	8	0	1	0	11	1	0	1	0	0	0	0	0	0	23	80		
8:00 AM	0	0	10	0	0	0	13	3	0	0	0	1	1	0	1	0	29	90		
8:15 AM	0	0	11	0	0	0	14	0	0	1	0	1	0	0	0	0	27	94		
8:30 AM	0	0	11	0	0	0	11	1	0	0	0	0	0	0	0	0	23	102		
8:45 AM	0	0	10	0	0	0	12	2	0	0	0	1	0	1	1	1	28	107		
Count Total	0	2	67	1	1	0	93	7	0	3	2	3	1	1	3	3	187	0		
Peak Hour	0	2	29	0	1	0	46	4	0	2	1	1	1	0	2	1	90	0		
Two-Hour Count Summaries - Bikes																				
Interval Start	Capitol Expy				Capitol Expy				Vistapark Dr				Vistapark Dr				15-min Total	Rolling One Hour		
	Eastbound				Westbound				Northbound				Southbound							
	LT	TH	RT		LT	TH	RT		LT	TH	RT		LT	TH	RT					
7:00 AM	0	0	0		0	0	0		0	0	0		0	0	0		0	0		
7:15 AM	0	0	0		0	0	0		0	0	0		0	0	0		0	0		
7:30 AM	0	0	0		0	0	0		0	1	0		0	0	0		1	0		
7:45 AM	0	0	0		0	0	0		0	0	0		0	0	0		0	1		
8:00 AM	0	0	0		0	0	0		0	0	0		0	0	0		0	1		
8:15 AM	0	0	0		0	0	0		0	0	0		0	0	0		0	1		
8:30 AM	0	0	0		0	0	0		0	0	0		0	0	0		0	0		
8:45 AM	0	0	0		0	0	0		0	0	0		0	0	0		0	0		
Count Total	0	0	0		0	0	0		0	1	0		0	0	0		1	0		
Peak Hour	0	0	0		0	0	0		0	1	0		0	0	0		1	0		
Note: U-Turn volumes for bikes are included in Left-Turn, if any.																				

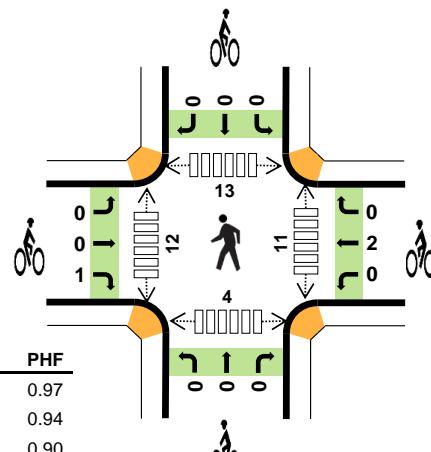
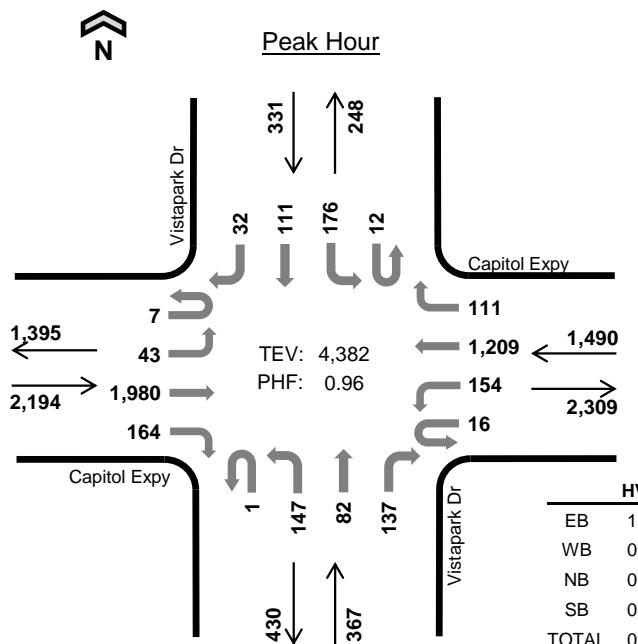
# Vistapark Dr Capitol Expy



Date: 09-06-2018

Count Period: 4:00 PM to 6:00 PM

Peak Hour: 4:45 PM to 5:45 PM



## Two-Hour Count Summaries

Interval Start	Capitol Expy				Capitol Expy				Vistapark Dr				Vistapark Dr				15-min Total	Rolling One Hour	
	Eastbound		Westbound		Northbound		Southbound		EB		WB		NB		SB				
UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	Rolling One Hour		
4:00 PM	3	6	467	38	4	37	271	21	0	34	7	34	10	35	25	12	1,004	0	
4:15 PM	5	17	523	42	7	34	338	19	0	27	14	29	4	40	17	8	1,124	0	
4:30 PM	5	6	431	43	6	47	303	21	1	32	15	25	8	44	27	6	1,020	0	
<b>4:45 PM</b>	<b>4</b>	<b>10</b>	<b>509</b>	<b>32</b>	<b>4</b>	<b>37</b>	<b>327</b>	<b>28</b>	<b>0</b>	<b>40</b>	<b>23</b>	<b>39</b>	<b>2</b>	<b>51</b>	<b>26</b>	<b>8</b>	<b>1,140</b>	<b>4,288</b>	
5:00 PM	2	12	473	33	5	35	283	23	0	34	18	26	2	38	31	5	1,020	4,304	
5:15 PM	0	10	487	54	4	37	307	25	1	40	19	40	3	50	33	11	1,121	4,301	
5:30 PM	1	11	511	45	3	45	292	35	0	33	22	32	5	37	21	8	1,101	4,382	
5:45 PM	7	14	468	38	6	38	306	31	0	39	13	39	7	47	35	11	1,099	4,341	
Count Total	27	86	3,869	325	39	310	2,427	203	2	279	131	264	41	342	215	69	8,629	0	
Peak Hour	All	7	43	1,980	164	16	154	1,209	111	1	147	82	137	12	176	111	32	4,382	0
HV	0	0	23	1	1	0	10	0	0	0	1	0	0	1	2	0	39	0	
HV%	0%	0%	1%	1%	6%	0%	1%	0%	0%	0%	1%	0%	0%	1%	2%	0%	1%	0	

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	10	7	0	0	17	0	0	0	0	0	0	3	2	0	5
4:15 PM	10	9	1	0	20	0	0	0	0	0	1	1	3	0	5
4:30 PM	8	6	0	0	14	0	0	0	0	0	1	7	3	2	13
<b>4:45 PM</b>	<b>9</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>3</b>	<b>4</b>	<b>2</b>	<b>10</b>
5:00 PM	5	2	0	1	8	0	1	0	0	1	5	1	1	1	8
5:15 PM	5	2	0	2	9	0	0	0	0	0	3	2	7	1	13
5:30 PM	5	3	0	0	8	1	1	0	0	2	2	6	1	0	9
5:45 PM	1	3	1	1	6	0	1	0	1	2	0	6	3	0	9
Count Total	53	36	3	4	96	1	3	0	1	5	13	29	24	6	72
Peak Hour	24	11	1	3	39	1	2	0	0	3	11	12	13	4	40

Two-Hour Count Summaries - Heavy Vehicles																				
Interval Start	Capitol Expy				Capitol Expy				Vistapark Dr				Vistapark Dr				15-min Total	Rolling One Hour		
	Eastbound				Westbound				Northbound				Southbound							
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT				
4:00 PM	0	0	10	0	0	0	7	0	0	0	0	0	0	0	0	0	17	0		
4:15 PM	0	1	9	0	0	0	9	0	0	0	1	0	0	0	0	0	20	0		
4:30 PM	0	0	7	1	0	1	4	1	0	0	0	0	0	0	0	0	14	0		
<b>4:45 PM</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>65</b>		
5:00 PM	0	0	4	1	0	0	2	0	0	0	0	0	0	1	0	0	8	56		
5:15 PM	0	0	5	0	1	0	1	0	0	0	0	0	0	1	1	0	9	45		
5:30 PM	0	0	5	0	0	0	3	0	0	0	0	0	0	0	0	0	8	39		
5:45 PM	0	0	1	0	0	0	2	1	0	0	0	1	0	1	0	0	6	31		
Count Total	0	1	50	2	1	1	32	2	0	0	2	1	0	2	2	0	96	0		
<b>Peak Hour</b>	<b>0</b>	<b>0</b>	<b>23</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>39</b>	<b>0</b>		
Two-Hour Count Summaries - Bikes																				
Interval Start	Capitol Expy				Capitol Expy				Vistapark Dr				Vistapark Dr				15-min Total	Rolling One Hour		
	Eastbound				Westbound				Northbound				Southbound							
	LT	TH	RT		LT	TH	RT		LT	TH	RT		LT	TH	RT					
4:00 PM	0	0	0		0	0	0		0	0	0		0	0	0		0	0		
4:15 PM	0	0	0		0	0	0		0	0	0		0	0	0		0	0		
4:30 PM	0	0	0		0	0	0		0	0	0		0	0	0		0	0		
<b>4:45 PM</b>	<b>0</b>	<b>0</b>	<b>0</b>		<b>0</b>	<b>0</b>	<b>0</b>		<b>0</b>	<b>0</b>	<b>0</b>		<b>0</b>	<b>0</b>	<b>0</b>		<b>0</b>	<b>0</b>		
5:00 PM	0	0	0		0	1	0		0	0	0		0	0	0		1	1		
5:15 PM	0	0	0		0	0	0		0	0	0		0	0	0		0	1		
5:30 PM	0	0	1		0	1	0		0	0	0		0	0	0		2	3		
5:45 PM	0	0	0		0	1	0		0	0	0		0	1	0		2	5		
Count Total	0	0	1		0	3	0		0	0	0		0	1	0		5	0		
<b>Peak Hour</b>	<b>0</b>	<b>0</b>	<b>1</b>		<b>0</b>	<b>2</b>	<b>0</b>		<b>0</b>	<b>0</b>	<b>0</b>		<b>0</b>	<b>0</b>	<b>0</b>		<b>3</b>	<b>0</b>		
<i>Note: U-Turn volumes for bikes are included in Left-Turn, if any.</i>																				

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## APPENDIX D

### APPROVED TRIP INVENTORY

**AM APPROVED TRIPS**

12/07/2018

*Intersection of: CAPITOL/VISTAPARK*

Page No: 1

Traffic Node Number: 5712

Permit No. / Description / Location	M09	M08	M07	M03	M02	M01	M12	M11	M10	M06	M05	M04
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
PDC13-009 (IND) COMMUNICATION HILL	10	34	0	2	4	10	9	9	1	0	111	72
PDC13-009 (RES) COMMUNICATIONS HILL	4	19	0	0	0	4	4	3	0	0	60	39
PDC13-009 (RET) COMMUNICATIONS HILL	0	0	0	0	0	0	0	0	0	0	2	1
<b>TOTAL:</b>	<b>14</b>	<b>53</b>	<b>0</b>	<b>2</b>	<b>4</b>	<b>14</b>	<b>13</b>	<b>12</b>	<b>1</b>	<b>0</b>	<b>173</b>	<b>112</b>
				LEFT	THRU	RIGHT						
				NORTH	2	4	14					
				EAST	0	173	112					
				SOUTH	14	53	0					
				WEST	13	12	1					

Intersection of: CAPITOL/VISTAPARK

Page No: 2

Traffic Node Number: 5712

Permit No. / Description / Location	M09 NBL	M08 NBT	M07 NBR	M03 SBL	M02 SBT	M01 SBR	M12 EBL	M11 EBT	M10 EBR	M06 WBL	M05 WBT	M04 WBR
PDC13-009 (IND) COMMUNICATION HILL	0	1	1	4	15	16	3	0	12	2	38	0
PDC13-009 (RES) COMMUNICATIONS HILL	0	0	0	1	8	9	0	0	6	0	21	0
PDC13-009 (RET) COMMUNICATIONS HILL	0	0	0	0	1	0	0	0	1	0	1	0
<b>TOTAL:</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>5</b>	<b>24</b>	<b>25</b>	<b>3</b>	<b>0</b>	<b>19</b>	<b>2</b>	<b>60</b>	<b>0</b>
		LEFT	THRU	RIGHT								
		NORTH	5	24	25							
		EAST	2	60	0							
		SOUTH	0	1	1							
		WEST	3	0	19							

**AM APPROVED TRIPS**

12/07/2018

*Intersection of: CAPITOL/SNELL*

Page No: 1

Traffic Node Number: 5715

Permit No. / Description / Location	M09 NBL	M08 NBT	M07 NBR	M03 SBL	M02 SBT	M01 SBR	M12 EBL	M11 EBT	M10 EBR	M06 WBL	M05 WBT	M04 WBR
NSJ NORTH SAN JOSE	11	5	17	1	0	0	2	24	2	0	2	0
PDC13-009 (IND) COMMUNICATION HILL	102	64	0	63	16	1	11	9	0	0	87	365
PDC13-009 (RES) COMMUNICATIONS HILL	56	35	0	35	8	0	5	3	0	0	47	200
PDC13-009 (RET) COMMUNICATIONS HILL	2	1	0	1	0	0	0	0	0	0	1	6
SP15-027 ROCKETSHIP SENTER 3167 SENTER ROAD	0	0	7	3	0	0	0	10	0	3	23	3

<b>TOTAL:</b>	171	105	24	103	24	1	18	46	2	3	160	574
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	LEFT	THRU	RIGHT
NORTH	103	24	1
EAST	3	160	574
SOUTH	171	105	24
WEST	18	46	2

Intersection of: CAPITOL/SNELL

Page No: 2

Traffic Node Number: 5715

Permit No. / Description / Location	M09 NBL	M08 NBT	M07 NBR	M03 SBL	M02 SBT	M01 SBR	M12 EBL	M11 EBT	M10 EBR	M06 WBL	M05 WBT	M04 WBR
NSJ NORTH SAN JOSE	1	0	1	0	0	0	0	4	1	13	34	9
PDC13-009 (IND) COMMUNICATION HILL	0	17	0	315	146	13	0	0	19	0	33	76
PDC13-009 (RES) COMMUNICATIONS HILL	0	10	0	191	88	7	0	0	11	0	20	45
PDC13-009 (RET) COMMUNICATIONS HILL	0	1	0	10	5	0	0	0	1	0	1	2
SP15-027 ROCKETSHIP SENTER 3167 SENTER ROAD	0	0	2	2	0	0	0	10	0	4	6	2

TOTAL:	1	28	3	518	239	20	0	14	32	17	94	134
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	LEFT	THRU	RIGHT
NORTH	518	239	20
EAST	17	94	134
SOUTH	1	28	3
WEST	0	14	32

## APPENDIX E

### INTERSECTION OPERATIONS ANALYSIS OUTPUT SHEETS

Existing AM

Thu Jan 31, 2019 14:02:26

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Scenario Report

Scenario: Existing AM

Command: Default Command  
Volume: Existing AM  
Geometry: Existing AM  
Impact Fee: Default Impact Fee  
Trip Generation: None  
Trip Distribution: None  
Paths: Default Path  
Routes: Default Route  
Configuration: Default Configuration

Level Of Service Computation Report  
2000 HCM Unsignalized Method (Base Volume Alternative)

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Intersection #1 Capitol Expressway/Project Driveway

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Average Delay (sec/veh): 0.0 Worst Case Level Of Service: B[ 13.2]

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Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Rights:	Include	Include	Include	Include
Lanes:	0 0 0 0 0	0 0 0 0 1	0 0 1 0 0	0 0 3 1 0

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Volume Module:

Base Vol:	0 0 0 0 0	5	0 1298	0 0 2414 8
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 1.00 1.00 1.00 1.00
Initial Bse:	0 0 0 0 0	5	0 1298	0 0 2414 8
User Adj:	1.00 1.00 1.00 1.00 1.00	1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00
PHF Adj:	1.00 1.00 1.00 1.00 1.00	1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00
PHF Volume:	0 0 0 0 0	5	0 1298	0 0 2414 8
Reduct Vol:	0 0 0 0 0	0	0 0	0 0 0 0
FinalVolume:	0 0 0 0 0	5	0 1298	0 0 2414 8

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Critical Gap Module:

Critical Gp:	xxxxxx xxxx xxxx xxxx xxxx xxxx	6.9	xxxxxx xxxx xxxx xxxx xxxx xxxx xxxx
FollowUpTim:	xxxxxx xxxx xxxx xxxx xxxx xxxx	3.3	xxxxxx xxxx xxxx xxxx xxxx xxxx

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Capacity Module:

Cnflict Vol:	xxxx xxxx xxxx xxxx xxxx	608	xxxx xxxx xxxx xxxx xxxx xxxx
Potent Cap.:	xxxx xxxx xxxx xxxx xxxx	444	xxxx xxxx xxxx xxxx xxxx xxxx
Move Cap.:	xxxx xxxx xxxx xxxx xxxx	444	xxxx xxxx xxxx xxxx xxxx xxxx
Volume/Cap:	xxxx xxxx xxxx xxxx	0.01	xxxx xxxx xxxx xxxx xxxx xxxx

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Level Of Service Module:

2Way95thQ:	xxxx xxxx xxxx xxxx xxxx	0.0	xxxx xxxx xxxx xxxx xxxx xxxx						
Control Del:	xxxxxx xxxx xxxx xxxx xxxx	13.2	xxxxxx xxxx xxxx xxxx xxxx xxxx						
LOS by Move:	*	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT					
Shared Cap.:	xxxx xxxx xxxx xxxx xxxx	xxxx xxxx xxxx xxxx	xxxx xxxx xxxx xxxx	xxxx xxxx xxxx xxxx					
SharedQueue:	xxxxxx xxxx xxxx xxxx xxxx	xxxx xxxx xxxx xxxx	xxxx xxxx xxxx xxxx	xxxx xxxx xxxx xxxx					
Shrd ConDel:	xxxxxx xxxx xxxx xxxx xxxx	xxxx xxxx xxxx xxxx	xxxx xxxx xxxx xxxx	xxxx xxxx xxxx xxxx					
Shared LOS:	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx	13.2	xxxxxx	xxxxxx					
ApproachLOS:	*	B	*	*					

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

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## Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #2 Snell Avenue/Capitol Expressway											
*****											
Cycle (sec):	176						Critical Vol./Cap.(X):	0.946			
Loss Time (sec):	12						Average Delay (sec/veh):	96.5			
Optimal Cycle:	188						Level Of Service:	F			
*****											
Street Name:	Snell Avenue			Capitol Expressway							
Approach:	North Bound		South Bound		East Bound		West Bound				
Movement:	L - T - R		L - T - R		L - T - R		L - T - R				
Control:	Protected		Protected		Protected		Protected				
Rights:	Ovl		Ovl		Ovl		Ovl				
Min. Green:	31	39	39	31	39	39	19	81	81	25	87
Y+R:	5.6	5.5	5.5	5.6	5.5	5.5	5.8	6.2	6.2	6.3	6.2
Lanes:	2	0	2	0	1	2	0	1	0	2	0
*****											
Volume Module:											
Base Vol:	538	408	916	463	138	86	153	966	179	232	1781
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:	538	408	916	463	138	86	153	966	179	232	1781
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
PHF Volume:	538	408	916	463	138	86	153	966	179	232	1781
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	538	408	916	463	138	86	153	966	179	232	1781
PCE Adj:	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:	538	408	916	463	138	86	153	966	179	232	1781
*****											
Saturation Flow Module:											
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	0.85	0.92	0.89	0.89	0.92	0.91	0.85	0.92	0.91
Lanes:	2.00	2.00	1.00	2.00	1.23	0.77	2.00	3.00	1.00	2.00	3.00
Final Sat.:	3502	3610	1615	3502	2095	1306	3502	5187	1615	3502	5187
*****											
Capacity Analysis Module:											
Vol/Sat:	0.15	0.11	0.57	0.13	0.07	0.07	0.04	0.19	0.11	0.07	0.34
Crit Moves:	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
Green/Cycle:	0.16	0.21	0.34	0.16	0.21	0.31	0.10	0.43	0.60	0.13	0.46
Volume/Cap:	0.93	0.54	1.67	0.80	0.32	0.21	0.43	0.43	0.19	0.50	0.74
Uniform Del:	77.5	66.6	62.0	75.5	63.2	48.1	79.4	37.4	17.3	75.7	41.3
IncremntDel:	22.1	0.8	307.7	7.9	0.3	0.1	0.8	0.1	0.1	0.8	1.3
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	99.5	67.4	369.7	83.5	63.5	48.2	80.3	37.6	17.4	76.5	42.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	99.5	67.4	369.7	83.5	63.5	48.2	80.3	37.6	17.4	76.5	42.6
LOS by Move:	F	E	F	F	E	D	F	D	B	E	D
HCM2k95thQ:	33	20	144	26	11	9	9	24	9	13	49
*****											

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

## Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #3 Vistapark Drive/Capitol Expressway
\*\*\*\*\*

Cycle (sec): 160 Critical Vol./Cap.(X): 0.461  
Loss Time (sec): 12 Average Delay (sec/veh): 42.3  
Optimal Cycle: 174 Level Of Service: D
\*\*\*\*\*

Street Name:	Vistapark Drive			Capitol Expressway		
Approach:	North Bound	South Bound	East Bound	West Bound		
Movement:	L - T - R	L - T - R	L - T - R	L - T - R		
Control:	Protected	Protected	Protected	Protected		
Rights:	Include	Include	Ovl	Ovl		
Min. Green:	28 36 36	22 29 29	15 86 86	18 87 87		
Y+R:	6.3 6.3 6.3	5.8 6.2 6.2	6.0 6.3 6.2	5.9 6.2 6.2		
Lanes:	2 0 1 1 0	1 0 1 1 0	1 0 3 0 1	1 0 3 0 1		

Volume Module:

Base Vol:	228	77	199	98	42	26	28	955	70	121	2312	63
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:	228	77	199	98	42	26	28	955	70	121	2312	63
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:	228	77	199	98	42	26	28	955	70	121	2312	63
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	228	77	199	98	42	26	28	955	70	121	2312	63
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	228	77	199	98	42	26	28	955	70	121	2312	63

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.85	0.85	0.95	0.90	0.90	0.95	0.91	0.85	0.95	0.91	0.85
Lanes:	2.00	1.00	1.00	1.00	1.24	0.76	1.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	3502	1610	1610	1805	2103	1302	1805	5187	1615	1805	5187	1615

Capacity Analysis Module:

Vol/Sat:	0.07	0.05	0.12	0.05	0.02	0.02	0.02	0.18	0.04	0.07	0.45	0.04
Crit Moves:	****	****					****		****			
Green/Cycle:	0.16	0.21	0.21	0.13	0.17	0.17	0.09	0.49	0.66	0.10	0.51	0.64
Volume/Cap:	0.40	0.23	0.60	0.43	0.12	0.12	0.18	0.37	0.07	0.65	0.87	0.06
Uniform Del:	65.1	57.5	62.4	70.2	61.2	61.2	73.5	27.3	10.6	75.0	37.7	12.0
IncremntDel:	0.5	0.1	2.1	1.3	0.1	0.1	0.5	0.1	0.0	7.7	3.6	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	65.5	57.6	64.6	71.5	61.3	61.3	74.1	27.4	10.7	82.7	41.3	12.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	65.5	57.6	64.6	71.5	61.3	61.3	74.1	27.4	10.7	82.7	41.3	12.0
LOS by Move:	E	E	E	E	E	E	E	C	B	F	D	B
HCM2k95thQ:	11	7	19	10	3	3	3	20	3	14	65	3

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

Existing PM

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Scenario Report

Scenario: Existing PM

Command: Default Command  
Volume: Existing PM  
Geometry: Existing PM  
Impact Fee: Default Impact Fee  
Trip Generation: None  
Trip Distribution: None  
Paths: Default Path  
Routes: Default Route  
Configuration: Default Configuration

Level Of Service Computation Report  
2000 HCM Unsignalized Method (Base Volume Alternative)

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Intersection #1 Capitol Expressway/Project Driveway

---

Average Delay (sec/veh): 0.0 Worst Case Level Of Service: B[ 10.9]

---

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Rights:	Include	Include	Include	Include
Lanes:	0 0 0 0 0	0 0 0 0 1	0 0 1 0 0	0 0 3 1 0

---

Volume Module:

Base Vol:	0 0 0 0 0	12 0 2330 0 0	1497 11
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 1.00 1.00 1.00
Initial Bse:	0 0 0 0 0	12 0 2330 0 0	1497 11
User Adj:	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00
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 1.00 1.00 1.00
PHF Volume:	0 0 0 0 0	12 0 2330 0 0	1497 11
Reduct Vol:	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0
FinalVolume:	0 0 0 0 0	12 0 2330 0 0	1497 11

---

Critical Gap Module:

Critical Gp:	xxxxxx xxxx xxxx xxxx xxxx xxxx	6.9 xxxx xxxx xxxx xxxx xxxx xxxx
FollowUpTim:	xxxxxx xxxx xxxx xxxx xxxx xxxx	3.3 xxxx xxxx xxxx xxxx xxxx xxxx

---

Capacity Module:

Cnflict Vol:	xxxx xxxx xxxx xxxx xxxx	380 xxxx xxxx xxxx xxxx xxxx
Potent Cap.:	xxxx xxxx xxxx xxxx xxxx	624 xxxx xxxx xxxx xxxx xxxx
Move Cap.:	xxxx xxxx xxxx xxxx xxxx	624 xxxx xxxx xxxx xxxx xxxx
Volume/Cap:	xxxx xxxx xxxx xxxx xxxx	0.02 xxxx xxxx xxxx xxxx xxxx

---

Level Of Service Module:

2Way95thQ:	xxxx xxxx xxxx xxxx xxxx	0.1 xxxx xxxx xxxx xxxx xxxx		
Control Del:	xxxxxx xxxx xxxx xxxx xxxx	10.9 xxxx xxxx xxxx xxxx xxxx		
LOS by Move:	* * * * *	B * * * * *		
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx xxxx xxxx xxxx xxxx	xxxx xxxx xxxx xxxx xxxx	xxxx xxxx xxxx xxxx xxxx	xxxx xxxx xxxx xxxx xxxx
SharedQueue:	xxxxxx xxxx xxxx xxxx xxxx	xxxx xxxx xxxx xxxx xxxx	xxxx xxxx xxxx xxxx xxxx	xxxx xxxx xxxx xxxx xxxx
Shrd ConDel:	xxxxxx xxxx xxxx xxxx xxxx	xxxx xxxx xxxx xxxx xxxx	xxxx xxxx xxxx xxxx xxxx	xxxx xxxx xxxx xxxx xxxx
Shared LOS:	* * * * *	* * * * *	* * * * *	* * * * *
ApproachDel:	xxxxxx	10.9	xxxxxx	xxxxxx
ApproachLOS:	*	B	*	*

---

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

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## Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #2 Snell Avenue/Capitol Expressway
\*\*\*\*\*

Cycle (sec): 160 Critical Vol./Cap.(X): 0.659  
Loss Time (sec): 12 Average Delay (sec/veh): 45.9  
Optimal Cycle: 173 Level Of Service: D
\*\*\*\*\*

Street Name:	Snell Avenue				Capitol Expressway											
Approach:	North Bound		South Bound		East Bound		West Bound									
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	
Control:	Protected				Protected				Protected				Protected			
Rights:	Ovl				Ovl				Ovl				Ovl			
Min. Green:	23	32	32	24	33	33	19	72	72	33	85	85				
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				
Lanes:	2	0	2	0	1	2	0	1	1	0	2	0	3	0	1	

Volume Module:

Base Vol:	233	123	351	406	244	86	107	1700	523	473	1160	323
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:	233	123	351	406	244	86	107	1700	523	473	1160	323
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:	233	123	351	406	244	86	107	1700	523	473	1160	323
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	233	123	351	406	244	86	107	1700	523	473	1160	323
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	233	123	351	406	244	86	107	1700	523	473	1160	323

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	0.85	0.92	0.91	0.91	0.92	0.91	0.85	0.92	0.91	0.85
Lanes:	2.00	2.00	1.00	2.00	1.48	0.52	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3502	3610	1615	3502	2565	904	3502	5187	1615	3502	5187	1615

Capacity Analysis Module:

Vol/Sat:	0.07	0.03	0.22	0.12	0.10	0.10	0.03	0.33	0.32	0.14	0.22	0.20
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.13	0.18	0.38	0.14	0.19	0.30	0.11	0.42	0.55	0.19	0.50	0.63
Volume/Cap:	0.50	0.18	0.58	0.84	0.50	0.32	0.28	0.79	0.59	0.71	0.45	0.32
Uniform Del:	69.7	59.5	43.1	72.6	62.6	46.6	70.5	43.9	26.0	65.5	28.3	14.4
IncremntDel:	0.9	0.1	1.4	12.0	0.6	0.2	0.4	2.0	1.1	3.5	0.1	0.2
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	70.5	59.6	44.5	84.5	63.2	46.8	70.9	45.9	27.1	69.0	28.4	14.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	70.5	59.6	44.5	84.5	63.2	46.8	70.9	45.9	27.1	69.0	28.4	14.6
LOS by Move:	E	E	D	F	E	D	E	D	C	E	C	B
HCM2k95thQ:	12	6	26	23	16	13	6	47	31	23	25	14

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

## Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #3 Vistapark Drive/Capitol Expressway
\*\*\*\*\*

Cycle (sec): 157 Critical Vol./Cap.(X): 0.502  
Loss Time (sec): 12 Average Delay (sec/veh): 41.4  
Optimal Cycle: 170 Level Of Service: D
\*\*\*\*\*

Street Name:	Vistapark Drive			Capitol Expressway		
Approach:	North Bound	South Bound	East Bound	West Bound		
Movement:	L - T - R	L - T - R	L - T - R	L - T - R		
Control:	Protected	Protected	Protected	Protected		
Rights:	Include	Include	Ovl	Ovl		
Min. Green:	24 30 30	28 34 34	19 72 72	28 80 80		
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		
Lanes:	2 0 1 1 0	1 0 1 1 0	1 0 3 1 1	1 0 3 0 1		

Volume Module:

Base Vol:	148	82	137	188	111	32	50	1980	164	170	1209	111
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	148	82	137	188	111	32	50	1980	164	170	1209	111
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	148	82	137	188	111	32	50	1980	164	170	1209	111
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	148	82	137	188	111	32	50	1980	164	170	1209	111
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	148	82	137	188	111	32	50	1980	164	170	1209	111

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.86	0.86	0.95	0.92	0.92	0.95	0.90	0.90	0.95	0.91	0.85
Lanes:	2.00	1.00	1.00	1.00	1.55	0.45	1.00	4.00	1.00	1.00	3.00	1.00
Final Sat.:	3502	1635	1635	1805	2707	780	1805	6840	1710	1805	5187	1615

Capacity Analysis Module:

Vol/Sat:	0.04	0.05	0.08	0.10	0.04	0.04	0.03	0.29	0.10	0.09	0.23	0.07
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.14	0.18	0.18	0.16	0.20	0.20	0.11	0.42	0.56	0.16	0.48	0.64
Volume/Cap:	0.30	0.28	0.47	0.63	0.21	0.21	0.25	0.68	0.17	0.57	0.49	0.11
Uniform Del:	65.5	60.7	62.9	66.2	56.7	56.7	68.8	39.8	17.8	65.5	30.5	11.8
IncremntDel:	0.3	0.2	0.8	4.4	0.1	0.1	0.6	0.6	0.0	2.7	0.2	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	65.8	60.9	63.7	70.6	56.9	56.9	69.4	40.4	17.8	68.1	30.7	11.9
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:	65.8	60.9	63.7	70.6	56.9	56.9	69.4	40.4	17.8	68.1	30.7	11.9
LOS by Move:	E	E	E	E	E	E	E	D	B	E	C	B
HCM2k95thQ:	7	8	13	18	6	6	5	38	8	16	27	4

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

Background AM

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Scenario Report

Scenario: Background AM

Command: Default Command  
Volume: Existing+Approved AM  
Geometry: Existing AM  
Impact Fee: Default Impact Fee  
Trip Generation: None  
Trip Distribution: None  
Paths: Default Path  
Routes: Default Route  
Configuration: Default Configuration

-----

Level Of Service Computation Report  
2000 HCM Unsignalized Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1 Capitol Expressway/Project Driveway  
\*\*\*\*\*

Average Delay (sec/veh): 0.0 Worst Case Level Of Service: B[ 14.3]  
\*\*\*\*\*

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Rights:	Include	Include	Include	Include
Lanes:	0 0 0 0 0	0 0 0 0 1	0 0 1 0 0	0 0 3 1 0

Volume Module:  
 Base Vol: 0 0 0 0 0 5 0 1364 0 0 2746 8  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Bse: 0 0 0 0 0 5 0 1364 0 0 2746 8  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Volume: 0 0 0 0 0 5 0 1364 0 0 2746 8  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 FinalVolume: 0 0 0 0 0 5 0 1364 0 0 2746 8  
 -----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

Critical Gap Module:  
 Critical Gp:xxxxx xxxx xxxx xxxx xxxx xxxx 6.9 xxxx xxxx xxxx xxxx xxxx xxxx  
 FollowUpTim:xxxxx xxxx xxxx xxxx xxxx 3.3 xxxx xxxx xxxx xxxx xxxx xxxx  
 -----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

Capacity Module:  
 Cnflct Vol: xxxx xxxx xxxx xxxx xxxx 691 xxxx xxxx xxxx xxxx xxxx xxxx  
 Potent Cap.: xxxx xxxx xxxx xxxx xxxx 392 xxxx xxxx xxxx xxxx xxxx xxxx  
 Move Cap.: xxxx xxxx xxxx xxxx xxxx 392 xxxx xxxx xxxx xxxx xxxx xxxx  
 Volume/Cap.: xxxx xxxx xxxx xxxx 0.01 xxxx xxxx xxxx xxxx xxxx xxxx  
 -----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

Level Of Service Module:  
 2Way95thQ: xxxx xxxx xxxx xxxx xxxx 0.0 xxxx xxxx xxxx xxxx xxxx xxxx  
 Control Del:xxxxx xxxx xxxx xxxx xxxx 14.3 xxxx xxxx xxxx xxxx xxxx xxxx  
 LOS by Move: \* \* \* \* \* B \* \* \* \* \* \* \* \* \* \* \* \*  
 Movement: LT - LTR - RT  
 Shared Cap.: xxxx  
 SharedQueue:xxxxx xxxx  
 Shrd ConDel:xxxxx xxxx  
 Shared LOS: \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \*  
 ApproachDel: xxxxxx 14.3 xxxxxx xxxxxx  
 ApproachLOS: \* B \* \*  
 \*\*\*\*\*

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

## Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #2 Snell Avenue/Capitol Expressway
\*\*\*\*\*

Cycle (sec): 176 Critical Vol./Cap.(X): 1.583  
Loss Time (sec): 12 Average Delay (sec/veh): 127.4  
Optimal Cycle: 188 Level Of Service: F
\*\*\*\*\*

Street Name:	Snell Avenue				Capitol Expressway														
Approach:	North Bound		South Bound		East Bound		West Bound												
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R				
Control:	Protected				Protected				Protected				Protected						
Rights:	Ovl				Ovl				Ovl				Ovl						
Min. Green:	31	39	39	31	39	39	19	81	81	25	87	87							
Y+R:	5.6	5.5	5.5	5.6	5.5	5.5	5.8	6.2	6.2	6.3	6.2	6.2							
Lanes:	2	0	2	0	1	2	0	1	0	2	0	3	0	1	2	0	3	0	1

Volume Module:

Base Vol:	709	513	940	566	162	87	171	1012	181	235	1941	1483
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:	709	513	940	566	162	87	171	1012	181	235	1941	1483
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:	709	513	940	566	162	87	171	1012	181	235	1941	1483
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	709	513	940	566	162	87	171	1012	181	235	1941	1483
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	709	513	940	566	162	87	171	1012	181	235	1941	1483

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	0.85	0.92	0.90	0.90	0.92	0.91	0.85	0.92	0.91	0.85
Lanes:	2.00	2.00	1.00	2.00	1.30	0.70	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3502	3610	1615	3502	2227	1196	3502	5187	1615	3502	5187	1615

Capacity Analysis Module:

Vol/Sat:	0.20	0.14	0.58	0.16	0.07	0.07	0.05	0.20	0.11	0.07	0.37	0.92
Crit Moves:	****	****					****					****
Green/Cycle:	0.21	0.25	0.37	0.16	0.21	0.31	0.10	0.40	0.60	0.12	0.46	0.63
Volume/Cap:	0.99	0.57	1.56	0.98	0.35	0.23	0.48	0.49	0.19	0.55	0.81	1.46
Uniform Del:	74.5	61.6	58.9	78.2	63.3	48.1	79.9	42.3	16.7	77.5	43.4	35.0
IncremntDel:	30.3	0.9	259.9	32.3	0.3	0.1	1.0	0.2	0.1	1.5	2.1	213.8
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	104.8	62.4	318.9	110.5	63.5	48.2	80.9	42.5	16.8	79.0	45.5	248.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	104.8	62.4	318.9	110.5	63.5	48.2	80.9	42.5	16.8	79.0	45.5	248.8
LOS by Move:	F	E	F	F	E	D	F	D	B	E	D	F
HCM2k95thQ:	42	24	141	35	12	10	10	27	9	13	56	209

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

## Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #3 Vistapark Drive/Capitol Expressway
\*\*\*\*\*

Cycle (sec): 160 Critical Vol./Cap.(X): 0.462  
Loss Time (sec): 12 Average Delay (sec/veh): 45.5  
Optimal Cycle: 174 Level Of Service: D
\*\*\*\*\*

Street Name: Vistapark Drive Capitol Expressway  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R
\*\*\*\*\*

Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Ovl	Ovl
Min. Green:	28 36 36	22 29 29	15 86 86	18 87 87
Y+R:	6.3 6.3 6.3	5.8 6.2 6.2	6.0 6.3 6.2	5.9 6.2 6.2
Lanes:	2 0 1 1 0	1 0 1 1 0	1 0 3 0 1	1 0 3 0 1

Volume Module:
Base Vol: 242 130 199 100 46 40 41 967 71 121 2485 175  
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: 242 130 199 100 46 40 41 967 71 121 2485 175  
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: 242 130 199 100 46 40 41 967 71 121 2485 175  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 242 130 199 100 46 40 41 967 71 121 2485 175  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 242 130 199 100 46 40 41 967 71 121 2485 175
\*\*\*\*\*

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.92 0.86 0.86 0.95 0.88 0.88 0.95 0.91 0.85 0.95 0.91 0.85  
Lanes: 2.00 1.00 1.00 1.00 1.07 0.93 1.00 3.00 1.00 1.00 3.00 1.00  
Final Sat.: 3502 1641 1641 1805 1796 1562 1805 5187 1615 1805 5187 1615
\*\*\*\*\*

Capacity Analysis Module:
Vol/Sat: 0.07 0.08 0.12 0.06 0.03 0.03 0.02 0.19 0.04 0.07 0.48 0.11  
Crit Moves: \*\*\*\*\* \*\*\*\*\* \*\*\*\*\* \*\*\*\*\* \*\*\*\*\* \*\*\*\*\* \*\*\*\*\* \*\*\*\*\* \*\*\*\*\* \*\*\*\*\* \*\*\*\*\*  
Green/Cycle: 0.16 0.21 0.21 0.13 0.17 0.17 0.09 0.49 0.66 0.10 0.51 0.64  
Volume/Cap: 0.42 0.38 0.59 0.44 0.15 0.15 0.26 0.38 0.07 0.65 0.94 0.17  
Uniform Del: 65.4 59.4 62.3 70.3 61.6 61.6 74.1 27.4 10.6 75.0 40.1 12.9  
IncremntDel: 0.5 0.3 1.6 1.3 0.1 0.1 0.9 0.1 0.0 7.7 7.5 0.1  
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0  
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Delay/Veh: 65.9 59.7 63.9 71.6 61.7 61.7 74.9 27.4 10.7 82.7 47.6 13.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 65.9 59.7 63.9 71.6 61.7 61.7 74.9 27.4 10.7 82.7 47.6 13.0  
LOS by Move: E E E E E E E C B F D B  
HCM2k95thQ: 12 12 19 10 4 4 4 20 3 14 75 7
\*\*\*\*\*

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

Background PM

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Scenario Report

Scenario: Background PM

Command: Default Command  
Volume: Existing+Approved PM  
Geometry: Existing PM  
Impact Fee: Default Impact Fee  
Trip Generation: None  
Trip Distribution: None  
Paths: Default Path  
Routes: Default Route  
Configuration: Default Configuration

Level Of Service Computation Report  
2000 HCM Unsignalized Method (Base Volume Alternative)

---

Intersection #1 Capitol Expressway/Project Driveway

---

Average Delay (sec/veh): 0.0 Worst Case Level Of Service: B[ 11.1]

---

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Rights:	Include	Include	Include	Include
Lanes:	0 0 0 0 0	0 0 0 0 1	0 0 1 0 0	0 0 3 1 0

---

Volume Module:

Base Vol:	0 0 0 0 0	12 0 2376 0 0	1612 11
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 1.00 1.00 1.00
Initial Bse:	0 0 0 0 0	12 0 2376 0 0	1612 11
User Adj:	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00
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 1.00 1.00 1.00
PHF Volume:	0 0 0 0 0	12 0 2376 0 0	1612 11
Reduct Vol:	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0
FinalVolume:	0 0 0 0 0	12 0 2376 0 0	1612 11

---

Critical Gap Module:

Critical Gp:	xxxxxx xxxx xxxx xxxx xxxx xxxx	6.9 xxxx xxxx xxxx xxxx xxxx xxxx
FollowUpTim:	xxxxxx xxxx xxxx xxxx xxxx xxxx	3.3 xxxx xxxx xxxx xxxx xxxx xxxx

---

Capacity Module:

Cnflict Vol:	xxxx xxxx xxxx xxxx xxxx	409 xxxx xxxx xxxx xxxx xxxx
Potent Cap.:	xxxx xxxx xxxx xxxx xxxx	598 xxxx xxxx xxxx xxxx xxxx
Move Cap.:	xxxx xxxx xxxx xxxx xxxx	598 xxxx xxxx xxxx xxxx xxxx
Volume/Cap:	xxxx xxxx xxxx xxxx	0.02 xxxx xxxx xxxx xxxx xxxx

---

Level Of Service Module:

2Way95thQ:	xxxx xxxx xxxx xxxx xxxx	0.1 xxxx xxxx xxxx xxxx xxxx		
Control Del:	xxxxxx xxxx xxxx xxxx xxxx	11.1 xxxx xxxx xxxx xxxx xxxx		
LOS by Move:	* * * * *	B * * * * *		
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx xxxx xxxx xxxx xxxx	xxxx xxxx xxxx xxxx xxxx	xxxx xxxx xxxx xxxx xxxx	
SharedQueue:	xxxxxx xxxx xxxx xxxx xxxx	xxxx xxxx xxxx xxxx xxxx	xxxx xxxx xxxx xxxx xxxx	
Shrd ConDel:	xxxxxx xxxx xxxx xxxx xxxx	xxxx xxxx xxxx xxxx xxxx	xxxx xxxx xxxx xxxx xxxx	
Shared LOS:	* * * * *	* * * * *	* * * * *	
ApproachDel:	xxxxxx	11.1	xxxxxx	xxxxxx
ApproachLOS:	*	B	*	*

---

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

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## Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #2 Snell Avenue/Capitol Expressway
\*\*\*\*\*

Cycle (sec): 160 Critical Vol./Cap.(X): 0.834  
Loss Time (sec): 12 Average Delay (sec/veh): 105.1  
Optimal Cycle: 173 Level Of Service: F
\*\*\*\*\*

Street Name: Snell Avenue Capitol Expressway  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R
-----|-----|-----|-----|-----|-----|-----|-----|

Control:	Protected	Protected	Protected	Protected
Rights:	Ovl	Ovl	Ovl	Ovl
Min. Green:	23 32 32	24 33 33	19 72 72	33 85 85
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
Lanes:	2 0 2 0 1	2 0 1 1 0	2 0 3 0 1	2 0 3 0 1

Volume Module:
-----|-----|-----|-----|-----|-----|-----|-----|

Base Vol:	234	151	354	924	483	106	107	1714	555	490	1254	457
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:	234	151	354	924	483	106	107	1714	555	490	1254	457
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:	234	151	354	924	483	106	107	1714	555	490	1254	457
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	234	151	354	924	483	106	107	1714	555	490	1254	457
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	234	151	354	924	483	106	107	1714	555	490	1254	457

Saturation Flow Module:
-----|-----|-----|-----|-----|-----|-----|-----|

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	0.85	0.92	0.92	0.92	0.92	0.91	0.85	0.92	0.91	0.85
Lanes:	2.00	2.00	1.00	2.00	1.64	0.36	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3502	3610	1615	3502	2880	632	3502	5187	1615	3502	5187	1615

Capacity Analysis Module:
-----|-----|-----|-----|-----|-----|-----|-----|

Vol/Sat:	0.07	0.04	0.22	0.26	0.17	0.17	0.03	0.33	0.34	0.14	0.24	0.28
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.13	0.18	0.38	0.14	0.19	0.30	0.11	0.42	0.55	0.19	0.50	0.63
Volume/Cap:	0.50	0.23	0.58	1.90	0.88	0.56	0.28	0.79	0.63	0.73	0.49	0.45
Uniform Del:	69.7	60.0	43.2	74.5	68.1	50.7	70.5	44.0	26.8	65.9	29.0	16.1
IncremntDel:	0.9	0.2	1.5	413.6	12.8	0.7	0.4	2.1	1.4	4.2	0.1	0.3
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	70.6	60.1	44.6	488.1	80.8	51.3	70.9	46.1	28.2	70.1	29.1	16.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	70.6	60.1	44.6	488.1	80.8	51.3	70.9	46.1	28.2	70.1	29.1	16.4
LOS by Move:	E	E	D	F	F	D	E	D	C	E	C	B
HCM2k95thQ:	12	7	26	81	32	24	6	48	34	24	27	22

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

## Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #3 Vistapark Drive/Capitol Expressway
\*\*\*\*\*

Cycle (sec): 157 Critical Vol./Cap.(X): 0.520  
Loss Time (sec): 12 Average Delay (sec/veh): 41.6  
Optimal Cycle: 170 Level Of Service: D
\*\*\*\*\*

Street Name: Vistapark Drive Capitol Expressway  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R
|-----|-----|-----|-----|-----|-----|-----|-----|

Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Ovl	Ovl
Min. Green:	24 30 30	28 34 34	19 72 72	28 80 80
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
Lanes:	2 0 1 1 0	1 0 1 1 0	1 0 3 1 1	1 0 3 0 1

Volume Module:
|-----|-----|-----|-----|-----|-----|-----|-----|

Base Vol:	148 83 138	193 135 57	53 1980 183	172 1269 111
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	148 83 138	193 135 57	53 1980 183	172 1269 111
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Volume:	148 83 138	193 135 57	53 1980 183	172 1269 111
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	148 83 138	193 135 57	53 1980 183	172 1269 111
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
FinalVolume:	148 83 138	193 135 57	53 1980 183	172 1269 111

Saturation Flow Module:
|-----|-----|-----|-----|-----|-----|-----|-----|

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.92 0.86 0.86	0.95 0.91 0.91	0.95 0.90 0.90	0.95 0.91 0.91	0.85
Lanes:	2.00 1.00 1.00	1.00 1.41 0.59	4.00 1.00 1.00	3.00 1.00 1.00	1.00
Final Sat.:	3502 1635 1635	1805 2424 1023	6826 1805 1707	5187 1805 1707	1615

Capacity Analysis Module:
|-----|-----|-----|-----|-----|-----|-----|-----|

Vol/Sat:	0.04 0.05 0.08	0.11 0.06 0.06	0.03 0.29 0.11	0.10 0.24 0.07
Crit Moves:	****	****	****	****
Green/Cycle:	0.14 0.18 0.18	0.16 0.20 0.20	0.11 0.42 0.56	0.16 0.48 0.64
Volume/Cap:	0.30 0.29 0.48	0.65 0.28 0.28	0.26 0.68 0.19	0.58 0.51 0.11
Uniform Del:	65.5 60.7 63.0	66.4 57.6 57.6	68.9 39.8 18.0	65.6 31.0 11.8
IncremntDel:	0.3 0.2 0.8	5.0 0.2 0.2	0.7 0.6 0.0	2.8 0.2 0.0
InitQueuDel:	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0
Delay Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Delay/Veh:	65.8 60.9 63.7	71.4 57.8 57.8	69.6 40.4 18.0	68.4 31.2 11.9
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:	65.8 60.9 63.7	71.4 57.8 57.8	69.6 40.4 18.0	68.4 31.2 11.9
LOS by Move:	E E E E E	E E D B E C B		
HCM2k95thQ:	7 8 13 19 9	9 5 38 10 16	28 4	

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

## Scenario Report

Scenario: Background+Project AM

Command: Default Command  
Volume: Exist+App+Project AM  
Geometry: Existing AM  
Impact Fee: Default Impact Fee  
Trip Generation: None  
Trip Distribution: None  
Paths: Default Path  
Routes: Default Route  
Configuration: Default Configuration

Level Of Service Computation Report  
2000 HCM Unsignalized Method (Base Volume Alternative)

---

Intersection #1 Capitol Expressway/Project Driveway

---

Average Delay (sec/veh): 0.1 Worst Case Level Of Service: B[ 14.7]

---

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Rights:	Include	Include	Include	Include
Lanes:	0 0 0 0 0	0 0 0 0 1	0 0 1 0 0	0 0 3 1 0

---

Volume Module:

Base Vol:	0 0 0 0 0	17 0 1377 0 0	2746 26
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 1.00 1.00 1.00
Initial Bse:	0 0 0 0 0	17 0 1377 0 0	2746 26
User Adj:	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00
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 1.00 1.00 1.00
PHF Volume:	0 0 0 0 0	17 0 1377 0 0	2746 26
Reduct Vol:	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0
FinalVolume:	0 0 0 0 0	17 0 1377 0 0	2746 26

---

Critical Gap Module:

Critical Gp:	xxxxxx xxxx xxxx xxxx xxxx xxxx	6.9 xxxx xxxx xxxx xxxx xxxx xxxx
FollowUpTim:	xxxxxx xxxx xxxx xxxx xxxx xxxx	3.3 xxxx xxxx xxxx xxxx xxxx xxxx

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Capacity Module:

Cnflict Vol:	xxxx xxxx xxxx xxxx xxxx	700 xxxx xxxx xxxx xxxx xxxx
Potent Cap.:	xxxx xxxx xxxx xxxx xxxx	387 xxxx xxxx xxxx xxxx xxxx
Move Cap.:	xxxx xxxx xxxx xxxx xxxx	387 xxxx xxxx xxxx xxxx xxxx
Volume/Cap:	xxxx xxxx xxxx xxxx xxxx	0.04 xxxx xxxx xxxx xxxx xxxx

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Level Of Service Module:

2Way95thQ:	xxxx xxxx xxxx xxxx xxxx	0.1 xxxx xxxx xxxx xxxx xxxx		
Control Del:	xxxxxx xxxx xxxx xxxx xxxx	14.7 xxxx xxxx xxxx xxxx xxxx		
LOS by Move:	* * * * *	B * * * * *		
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx xxxx xxxx xxxx xxxx	xxxx xxxx xxxx xxxx xxxx	xxxx xxxx xxxx xxxx xxxx	
SharedQueue:	xxxxxx xxxx xxxx xxxx xxxx	xxxx xxxx xxxx xxxx xxxx	xxxx xxxx xxxx xxxx xxxx	
Shrd ConDel:	xxxxxx xxxx xxxx xxxx xxxx	xxxx xxxx xxxx xxxx xxxx	xxxx xxxx xxxx xxxx xxxx	
Shared LOS:	* * * * *	* * * * *	* * * * *	
ApproachDel:	xxxxxx	14.7	xxxxxx	xxxxxx
ApproachLOS:	*	B	*	*

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

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## Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #2 Snell Avenue/Capitol Expressway
\*\*\*\*\*

Cycle (sec): 176 Critical Vol./Cap.(X): 1.586  
Loss Time (sec): 12 Average Delay (sec/veh): 127.3  
Optimal Cycle: 188 Level Of Service: F
\*\*\*\*\*

Street Name:	Snell Avenue			Capitol Expressway		
Approach:	North Bound	South Bound	East Bound	West Bound		
Movement:	L - T - R	L - T - R	L - T - R	L - T - R		
Control:	Protected	Protected	Protected	Protected		
Rights:	Ovl	Ovl	Ovl	Ovl		
Min. Green:	31 39 39	31 39 39	19 81 81	25 87 87		
Y+R:	5.6 5.5 5.5	5.6 5.5 5.5	5.8 6.2 6.2	6.3 6.2 6.2		
Lanes:	2 0 2 0 1	2 0 1 1 0	2 0 3 0 1	2 0 3 0 1		

Volume Module:

Base Vol:	714	513	940	566	162	89	179	1014	184	235	1944	1483
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:	714	513	940	566	162	89	179	1014	184	235	1944	1483
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:	714	513	940	566	162	89	179	1014	184	235	1944	1483
Reduct Vol:	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0
Reduced Vol:	714	513	940	566	162	89	179	1014	184	235	1944	1483
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	714	513	940	566	162	89	179	1014	184	235	1944	1483

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	0.85	0.92	0.90	0.90	0.92	0.91	0.85	0.92	0.91	0.85
Lanes:	2.00	2.00	1.00	2.00	1.29	0.71	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3502	3610	1615	3502	2206	1212	3502	5187	1615	3502	5187	1615

Capacity Analysis Module:

Vol/Sat:	0.20	0.14	0.58	0.16	0.07	0.07	0.05	0.20	0.11	0.07	0.37	0.92
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.21	0.25	0.37	0.16	0.21	0.31	0.10	0.40	0.60	0.12	0.46	0.63
Volume/Cap:	0.99	0.57	1.56	0.98	0.35	0.24	0.51	0.49	0.19	0.55	0.81	1.46
Uniform Del:	74.5	61.6	58.9	78.2	63.4	48.2	80.1	42.3	16.6	77.5	43.4	35.0
IncremntDel:	31.1	0.9	259.9	32.3	0.3	0.1	1.2	0.2	0.1	1.5	2.2	213.8
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	105.6	62.4	318.9	110.5	63.7	48.4	81.2	42.5	16.7	79.0	45.6	248.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	105.6	62.4	318.9	110.5	63.7	48.4	81.2	42.5	16.7	79.0	45.6	248.8
LOS by Move:	F	E	F	F	E	D	F	D	B	E	D	F
HCM2k95thQ:	42	24	141	35	12	11	11	27	9	13	56	209

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

## Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #3 Vistapark Drive/Capitol Expressway

\*\*\*\*\*

Cycle (sec): 160 Critical Vol./Cap.(X): 0.471

Loss Time (sec): 12 Average Delay (sec/veh): 45.7

Optimal Cycle: 174 Level Of Service: D

\*\*\*\*\*

Street Name:	Vistapark Drive				Capitol Expressway																								
Approach:	North Bound		South Bound		East Bound		West Bound																						
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R									
Control:	Protected				Protected				Protected				Protected																
Rights:	Include				Include				Ovl				Ovl																
Min. Green:	28	36	36	22	29	29	15	86	86	18	87	87	Y+R:	6.3	6.3	6.3	5.8	6.2	6.2	6.0	6.3	6.2	5.9	6.2	6.2				
Lanes:	2	0	1	1	0	1	0	1	1	0	3	0	1	1	0	3	0	1	1	0	3	0	1						
Volume Module:																													
Base Vol:	242	130	204	100	46	40	41	970	71	129	2488	176	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:	242	130	204	100	46	40	41	970	71	129	2488	176	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:	242	130	204	100	46	40	41	970	71	129	2488	176				
Reducut Vol:	0	0	0	0	0	0	0	0	0	0	0	0	Reduced Vol:	242	130	204	100	46	40	41	970	71	129	2488	176				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	242	130	204	100	46	40	41	970	71	129	2488	176	Saturation Flow Module:																
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	Adjustment:	0.92	0.86	0.86	0.95	0.88	0.88	0.95	0.91	0.85	0.95	0.91	0.85				
Lanes:	2.00	1.00	1.00	1.00	1.07	0.93	1.00	3.00	1.00	1.00	3.00	1.00	Final Sat.:	3502	1639	1639	1805	1796	1562	1805	5187	1615	1805	5187	1615				
Capacity Analysis Module:																													
Vol/Sat:	0.07	0.08	0.12	0.06	0.03	0.03	0.02	0.19	0.04	0.07	0.48	0.11	Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****				
Green/Cycle:	0.16	0.21	0.21	0.13	0.17	0.17	0.09	0.49	0.66	0.10	0.51	0.64	Volume/Cap:	0.42	0.38	0.60	0.44	0.15	0.15	0.26	0.38	0.07	0.69	0.94	0.17				
Uniform Del:	65.4	59.4	62.5	70.3	61.6	61.6	74.1	27.4	10.6	75.3	40.2	12.9	IncremntDel:	0.5	0.3	1.9	1.3	0.1	0.1	0.9	0.1	0.0	10.5	7.6	0.1				
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Delay/Veh:	65.9	59.7	64.4	71.6	61.7	61.7	74.9	27.5	10.7	85.8	47.8	13.0	User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
AdjDel/Veh:	65.9	59.7	64.4	71.6	61.7	61.7	74.9	27.5	10.7	85.8	47.8	13.0	LOS by Move:	E	E	E	E	E	E	E	C	B	F	D	B				
HCM2k95thQ:	12	12	20	10	4	4	4	21	3	15	76	7	Note: Queue reported is the number of cars per lane.																

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

## Scenario Report

Scenario: Background+Project PM

Command: Default Command  
Volume: Exist+App+Project PM  
Geometry: Existing PM  
Impact Fee: Default Impact Fee  
Trip Generation: None  
Trip Distribution: None  
Paths: Default Path  
Routes: Default Route  
Configuration: Default Configuration

Level Of Service Computation Report  
2000 HCM Unsignalized Method (Base Volume Alternative)

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Intersection #1 Capitol Expressway/Project Driveway

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Average Delay (sec/veh): 0.1 Worst Case Level Of Service: B[ 11.6]

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Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Rights:	Include	Include	Include	Include
Lanes:	0 0 0 0 0	0 0 0 0 1	0 0 1 0 0	0 0 3 1 0

---

Volume Module:

Base Vol:	0 0 0 0 0	39	0 2399 0 0 1612 34
Growth Adj:	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00
Initial Bse:	0 0 0 0 0	39	0 2399 0 0 1612 34
User Adj:	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 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 1.00 1.00 1.00
PHF Volume:	0 0 0 0 0	39	0 2399 0 0 1612 34
Reduct Vol:	0 0 0 0 0	0	0 0 0 0 0 0
FinalVolume:	0 0 0 0 0	39	0 2399 0 0 1612 34

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Critical Gap Module:

Critical Gp:	xxxxxx xxxx xxxx xxxx xxxx xxxx	6.9	xxxxxx xxxx xxxx xxxx xxxx xxxx xxxx
FollowUpTim:	xxxxxx xxxx xxxx xxxx xxxx xxxx	3.3	xxxxxx xxxx xxxx xxxx xxxx xxxx

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Capacity Module:

Cnflict Vol:	xxxx xxxx xxxx xxxx xxxx	420	xxxx xxxx xxxx xxxx xxxx xxxx
Potent Cap.:	xxxx xxxx xxxx xxxx xxxx	588	xxxx xxxx xxxx xxxx xxxx xxxx
Move Cap.:	xxxx xxxx xxxx xxxx xxxx	588	xxxx xxxx xxxx xxxx xxxx xxxx
Volume/Cap:	xxxx xxxx xxxx xxxx xxxx	0.07	xxxx xxxx xxxx xxxx xxxx xxxx

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Level Of Service Module:

2Way95thQ:	xxxx xxxx xxxx xxxx xxxx	0.2	xxxx xxxx xxxx xxxx xxxx xxxx						
Control Del:	xxxxxx xxxx xxxx xxxx xxxx	11.6	xxxxxx xxxx xxxx xxxx xxxx xxxx						
LOS by Move:	*	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT					
Shared Cap.:	xxxx xxxx xxxx xxxx xxxx	xxxx xxxx xxxx xxxx	xxxx xxxx xxxx xxxx	xxxx xxxx xxxx xxxx					
SharedQueue:	xxxxxx xxxx xxxx xxxx xxxx	xxxx xxxx xxxx xxxx	xxxx xxxx xxxx xxxx	xxxx xxxx xxxx xxxx					
Shrd ConDel:	xxxxxx xxxx xxxx xxxx xxxx	xxxx xxxx xxxx xxxx	xxxx xxxx xxxx xxxx	xxxx xxxx xxxx xxxx					
Shared LOS:	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx	11.6	xxxxxx	xxxxxx					
ApproachLOS:	*	B	*	*					

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

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## Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #2 Snell Avenue/Capitol Expressway
\*\*\*\*\*

Cycle (sec): 160 Critical Vol./Cap.(X): 0.835  
Loss Time (sec): 12 Average Delay (sec/veh): 104.9  
Optimal Cycle: 173 Level Of Service: F
\*\*\*\*\*

Street Name: Snell Avenue Capitol Expressway  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R
\*\*\*\*\*

Control:	Protected	Protected	Protected	Protected
Rights:	Ovl	Ovl	Ovl	Ovl
Min. Green:	23 32 32	24 33 33	19 72 72	33 85 85
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
Lanes:	2 0 2 0 1	2 0 1 1 0	2 0 3 0 1	2 0 3 0 1

Volume Module:
\*\*\*\*\*

Base Vol:	240	151	354	924	483	108	118	1719	562	490	1258	457
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:	240	151	354	924	483	108	118	1719	562	490	1258	457
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:	240	151	354	924	483	108	118	1719	562	490	1258	457
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	240	151	354	924	483	108	118	1719	562	490	1258	457
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	240	151	354	924	483	108	118	1719	562	490	1258	457

Saturation Flow Module:
\*\*\*\*\*

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	0.85	0.92	0.92	0.92	0.92	0.91	0.85	0.92	0.91	0.85
Lanes:	2.00	2.00	1.00	2.00	1.63	0.37	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3502	3610	1615	3502	2871	642	3502	5187	1615	3502	5187	1615

Capacity Analysis Module:
\*\*\*\*\*

Vol/Sat:	0.07	0.04	0.22	0.26	0.17	0.17	0.03	0.33	0.35	0.14	0.24	0.28
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.13	0.18	0.38	0.14	0.19	0.30	0.11	0.42	0.55	0.19	0.50	0.63
Volume/Cap:	0.52	0.23	0.58	1.90	0.88	0.56	0.30	0.80	0.63	0.73	0.49	0.45
Uniform Del:	69.8	60.0	43.2	74.5	68.1	50.7	70.8	44.1	27.0	65.9	29.0	16.1
IncremntDel:	1.0	0.2	1.5	413.6	13.1	0.7	0.4	2.1	1.5	4.2	0.1	0.3
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	70.8	60.1	44.6	488.1	81.2	51.4	71.2	46.2	28.5	70.1	29.1	16.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	70.8	60.1	44.6	488.1	81.2	51.4	71.2	46.2	28.5	70.1	29.1	16.4
LOS by Move:	E	E	D	F	F	D	E	D	C	E	C	B
HCM2k95thQ:	13	7	26	81	32	24	6	48	34	24	27	22

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

## Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #3 Vistapark Drive/Capitol Expressway
\*\*\*\*\*

Cycle (sec): 157 Critical Vol./Cap.(X): 0.532  
Loss Time (sec): 12 Average Delay (sec/veh): 41.9  
Optimal Cycle: 170 Level Of Service: D
\*\*\*\*\*

Street Name: Vistapark Drive Capitol Expressway  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R
|-----|-----|-----|-----|-----|-----|-----|-----|

Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Ovl	Ovl
Min. Green:	24 30 30	28 34 34	19 72 72	28 80 80
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
Lanes:	2 0 1 1 0	1 0 1 1 0	1 0 3 1 1	1 0 3 0 1

Volume Module:
|-----|-----|-----|-----|-----|-----|-----|-----|

Base Vol:	148	83	144	193	135	57	53	1985	183	191	1274	114
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:	148	83	144	193	135	57	53	1985	183	191	1274	114
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:	148	83	144	193	135	57	53	1985	183	191	1274	114
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	148	83	144	193	135	57	53	1985	183	191	1274	114
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	148	83	144	193	135	57	53	1985	183	191	1274	114

Saturation Flow Module:
|-----|-----|-----|-----|-----|-----|-----|-----|

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.86	0.86	0.95	0.91	0.91	0.95	0.90	0.90	0.95	0.91	0.85
Lanes:	2.00	1.00	1.00	1.00	1.41	0.59	1.00	4.00	1.00	1.00	3.00	1.00
Final Sat.:	3502	1634	1634	1805	2424	1023	1805	6826	1707	1805	5187	1615

Capacity Analysis Module:
|-----|-----|-----|-----|-----|-----|-----|-----|

Vol/Sat:	0.04	0.05	0.09	0.11	0.06	0.06	0.03	0.29	0.11	0.11	0.25	0.07
Crit Moves:	****		****		****		****		****		****	
Green/Cycle:	0.14	0.18	0.18	0.16	0.20	0.20	0.11	0.42	0.56	0.16	0.48	0.64
Volume/Cap:	0.30	0.29	0.50	0.65	0.28	0.28	0.26	0.69	0.19	0.64	0.52	0.11
Uniform Del:	65.5	60.7	63.2	66.4	57.6	57.6	68.9	39.8	18.0	66.3	31.0	11.8
IncremntDel:	0.3	0.2	0.9	5.0	0.2	0.2	0.7	0.6	0.0	4.7	0.2	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	65.8	60.9	64.1	71.4	57.8	57.8	69.6	40.5	18.0	71.1	31.2	11.9
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:	65.8	60.9	64.1	71.4	57.8	57.8	69.6	40.5	18.0	71.1	31.2	11.9
LOS by Move:	E	E	E	E	E	E	E	D	B	E	C	B
HCM2k95thQ:	7	8	14	19	9	9	5	38	10	18	29	4

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