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Traffic Impact Study

Wheeler Farms Use Permit Major Modification P19-00130
Planning Commission Hearing January 20, 2021

FINAL TRAFFIC IMPACT REPORT

WHEELER FARMS WINERY
USE PERMIT MODIFICATION 2020

588 Zinfandel Lane, St. Helena, CA 94574
(APN 030-260-016-000)
Project No. P19-00130

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Prepared for: WHEELER FARMS WINERY

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I. INTRODUCTION

This report has been prepared at the request of the Wheeler Farms Winery to determine whether expanded production at the Winery as detailed in their 2020 use permit modification application will result in any significant circulation impacts to the local roadway network. The project site is located on the north side of Zinfandel Lane about 2200 feet east of SR 29 and a mile west of Silverado Trail. (See **Figure 1 Regional Map**, **Figure 2 Site Specific Air Photo** and **Figure 3 Site Plan.**) The scope of analysis includes evaluation of SR 29, Silverado Trail and Zinfandel Lane as well as the Zinfandel Lane intersections with SR 29, Silverado Trail and the Project Main Driveway for harvest 2019, 2025 and cumulative (Year 2030) horizons. The scope of service for this traffic study was developed for and approved by both the Napa County Public Works Department and the Planning, Building & Environmental Sciences Department.

II. EXECUTIVE SUMMARY OF PROJECT IMPACTS AND RECOMMENDED IMPROVEMENTS

A. IMPACTS

1. PROPOSED PROJECT HARVEST FRIDAY & SATURDAY PM PEAK HOUR TRIP GENERATION

PM PEAK HOUR TRIPS	
HARVEST FRIDAY	HARVEST SATURDAY
1	1

2. SIGNIFICANCE OF PROJECT IMPACTS

a. Intersection Level of Service
(Zinfandel Lane at SR 29 & Silverado Trail)
- ***Less than significant.***

(Zinfandel Lane at Project Main Driveway)
- ***Less than significant.***

b. Arterial Level of Service (SR 29, Silverado Trail & Zinfandel Lane)
- ***Less than significant.***

c. Need for Left Turn Lane on Zinfandel Lane at the Project Main Driveway Intersection
- ***Less than significant*** **-** A left turn lane is being provided by the project applicant.

d. Sight Line Adequacy at Zinfandel Lane/Project Main Driveway Intersection

- ***Less than significant*** **-** Sight lines meet Caltrans stopping sight distance criteria.

e. Marketing Events

- ***Less than significant*** **-** There are no changes in the marketing event program. During days with midsize events occurring 2 or more times per month the number of visitors by appointment will be reduced by the number of guests at the marketing event.

f. Pedestrian, Bicycle and Transit Impacts

- ***Less than significant*** **-** No pedestrians are anticipated as there are no pedestrian paths along Zinfandel Lane. No significant transit ridership by employees is anticipated as the closest service is along SR 29. Bicycle racks will be provided for all employees or guests biking to the site.

g. Parking & Internal Circulation

- ***Less than significant*** **-** Parking space layout and internal roadway design meet County and CAL FIRE Standards. A total of 31 parking spaces will be provided.

h. Transportation Demand Management (TDM) Plan and Vehicle Miles Traveled (VMT) Reduction

- ***Less than significant*** **-** A TDM coordinator will be appointed to develop programs to provide incentives for employees to carpool, bicycle or take transit to work. In addition, shuttle bus service will be provided at all large marketing events (with 100 or more guests). A TDM plan is attached.

B. RECOMMENDED IMPROVEMENTS

No circulation system improvements required.

III. SUMMARY OF "WITHOUT AND WITH PROJECT" OPERATING CONDITIONS

A. "WITHOUT PROJECT" OPERATING CONDITIONS

1. INTERSECTION LEVEL OF SERVICE

a. SR 29/Zinfandel Lane - stop sign controlled approaches
- **Friday & Saturday PM Peak Hours**
  Existing, Year 2025 & Cumulative (2030) - **Unacceptable**

b. Silverado Trail/Zinfandel Lane - stop sign controlled approach
- **Friday & Saturday PM Peak Hours**
  Existing, Year 2025 & Cumulative (2030) - **Unacceptable**

c. Zinfandel Lane/Project Main Driveway - Main Driveway Approach
- **Friday & Saturday PM Peak Hours**
  Existing, Year 2025 & Cumulative (2030) - Acceptable

2. ARTERIAL LEVEL OF SERVICE

a. SR 29 North and South of Zinfandel Lane
- **Friday PM Peak Hour**
  Existing, Year 2025 & Cumulative (2030) - **Unacceptable** both directions
- **Saturday PM Peak Hour**
  Existing, Year 2025 & Cumulative (2030) - **Unacceptable** both directions **except**
  Existing Northbound north of Zinfandel Lane

b. Silverado Trail North and South of Zinfandel Lane
- **Friday PM Peak Hour**
  Existing, Year 2025 & Cumulative (2030)
  Northbound - Acceptable
  Southbound - **Unacceptable**
- **Saturday PM Peak Hour**
  Existing, Year 2025 & Cumulative (2030)
  Northbound - Acceptable
  Southbound
  Existing - Acceptable
  Year 2025 - **Unacceptable** south of Zinfandel Lane
  Cumulative (2030) - **Unacceptable** north & south of Zinfandel Lane

c. Zinfandel Lane East of SR 29 and West of Silverado Trail
- **Friday & Saturday PM Peak Hours**
  Existing, Year 2025 & Cumulative (2030) - Acceptable

3. INTERSECTIONS WITH VOLUMES MEETING RURAL PEAK HOUR SIGNAL WARRANT #3 CRITERIA

a. SR 29/Zinfandel Lane & Silverado Trail/Zinfandel Lane

- **Friday & Saturday PM Peak Hours**
  Existing, Year 2025 & Cumulative (2030)

4. LEFT TURN LANE VOLUME WARRANT ON EASTBOUND ZINFANDEL LANE APPROACH TO PROJECT MAIN DRIVEWAY

Daily volumes at this intersection meet County Warrant Criteria for provision of a left turn lane.

B. PROJECT IMPACTS

1. OFF-SITE

a. INTERSECTION LEVEL OF SERVICE IMPACTS
Friday & Saturday PM Peak Hours

1) SR 29/Zinfandel Lane - *Less than significant*

- **Existing, Year 2025 & Cumulative (2030) -** Project traffic would not increase delay by more than 5 seconds on the stop sign controlled Zinfandel Lane approaches to SR 29, which would already be operating at an unacceptable LOS F during both the Friday and Saturday PM peak hours.

2) Silverado Trail/Zinfandel Lane - *Less than significant*

- **Existing, Year 2025 & Cumulative (2030) -** Project traffic would not increase delay by more than 5 seconds on the stop sign controlled Zinfandel Lane approach to Silverado Trail, which would already be operating at an unacceptable LOS F during both the Friday and Saturday PM peak hours.

3) Zinfandel Lane/Project Main Driveway - *Less than significant*

- **Existing, Year 2025 & Cumulative (2030) -** Operation would be an acceptable LOS B or C with the addition of project traffic during both the Friday and Saturday PM peak hours.

b. ARTERIAL LEVEL OF SERVICE IMPACTS
Friday & Saturday PM Peak Hours

1) State Route 29 - *Less than significant*

- **Existing & Year 2025 -** Project traffic would not increase 2-way volumes by 1% or greater along the segments of SR 29 already operating unacceptably at LOS E during either the Friday or Saturday PM peak hours.

- **Cumulative (2030) -** Project traffic would not increase the growth in 2-way traffic from 2019 to 2030 by 5% or greater along segments of SR 29 that would already be operating unacceptably at LOS E during either the Friday or Saturday PM peak hours.

2) **Silverado Trail -** ***Less than significant***
   - **Existing & Year 2025 -** Project traffic would not increase 2-way volumes by 1% or greater along the segments of Silverado Trail already operating unacceptably at LOS E during either the Friday or Saturday PM peak hours.
   - **Cumulative (2030) -** Project traffic would not increase the growth in 2-way traffic from 2019 to 2030 by 5% or greater along segments of Silverado Trail that would already be operating unacceptably at LOS E during either the Friday or Saturday PM peak hours.

3) **Zinfandel Lane -** ***Less than significant***
   - **Existing, Year 2025 & Cumulative (2030) -** Operation would remain an acceptable LOS A or B with the addition of project traffic during both the Friday and Saturday PM peak hours.

c. NEED FOR A LEFT TURN LANE ON EASTBOUND ZINFANDEL LANE APPROACH TO PROJECT MAIN DRIVEWAY

Less than significant - Existing plus project daily volumes at this intersection would meet current County Warrant Criteria for provision of a left turn lane. However, the applicant will be providing a left turn lane as part of the project.

d. SIGHT LINE ADEQUACY AT ZINFANDEL LANE/PROJECT MAIN DRIVEWAY INTERSECTION - ***Less than significant***

Sight lines meet minimum Caltrans stopping sight distance criteria.

e. MARKETING EVENTS - ***Less than significant***

There will be no change in marketing events. On days with events occurring 2 or more times per month, daily visitation by appointment will be lowered an amount equal to attendance at the marketing event.

f. PEDESTRIAN, BICYCLE AND TRANSIT IMPACTS

Less than significant - No pedestrians are anticipated as there are no pedestrian paths along Zinfandel Lane. No significant transit ridership by employees is anticipated as the closest service is along SR 29. Bicycle racks will be provided for all employees or guests biking to the site.

g. ON-SITE PARKING & INTERNAL CIRCULATION

Less than significant - A total of 31 parking spaces are provided. Visitation is scheduled throughout the day such that 9 spaces for visitors are adequate. Due to

the custom crush component of project operations, employees come and go throughout the day and the 22 employee spaces are projected to be adequate to accommodate expected demand. Internal circulation and parking layouts have been designed to meet all County and CAL FIRE criteria.

h. TDM PROGRAM AND VMT REDUCTION

Less than significant - A TDM coordinator will be appointed to develop programs to provide financial incentives for employees to carpool, bicycle to work or take transit. In addition, shuttle bus service will be provided at all large marketing events (with 100 or more guests). A TDM plan is attached.

C. RECOMMENDED IMPROVEMENTS

No circulation system improvements required.

D. CONCLUSIONS & RECOMMENDATIONS

- The project will result in no significant off-site circulation system operational impacts to SR 29, Silverado Trail or Zinfandel Lane or to the Zinfandel Lane intersections with SR 29, Silverado Trail or the Project Main Driveway.

- A left turn lane will be provided on the Zinfandel Lane eastbound approach to the Main Winery Driveway as part of project development and will be designed in conjunction with a left turn lane being provided on the westbound Zinfandel Lane approach to the Raymond-Ticen Winery driveway (just west of Wheeler Farms site). Sight lines at the project driveway connection to Zinfandel Lane are acceptable and meet Caltrans stopping sight distance criteria.

- No new marketing events are being proposed, and on days with medium size marketing events occurring 2 times or more per month daily visitation by appointment will be reduced by the same amount as the number of guests at the marketing event. Finally, a TDM coordinator will be appointed to institute measures to reduce daily and peak hour employee traffic as well as increase limousine and shuttle bus service for large marketing events. The attached TDM Plan will be adopted.

- No pedestrians and minimal or no transit users are expected at the Winery. However, bicycle racks will be provided for any bike riders accessing the Winery via the Class II bike lanes along both SR 29 and Silverado Trail.
- Internal circulation is designed to meet County and CAL FIRE criteria. In addition, 31 parking spaces will be provided for guests and employees.

IV. PROJECT LOCATION & DESCRIPTION

The Wheeler Farms Winery is located on Zinfandel Lane about 2200 feet east of SR 29 and about a mile west of Silverado Trail.

The proposed use permit modification will have the following characteristics:

- An increase in yearly production from 50,000 to 70,000 gallons.
- Tons of grapes on haul will increase from 300 to 400.
- Additional bottling on site.
- Non-harvest Friday and Saturday maximum employee totals will be increased from 14 full time and 0 part time to 15 full time and 0 part time.
- Harvest Friday and Saturday maximum employee totals will be increased from 14 full time and 8 part time to 15 full time and 8 part time.
- Maximum daily visitation will remain 32 guests.
- Tours and tasting will remain 7 days/week, 10:00 AM - 6:00 PM.
- No new marketing events are proposed.
- A total of 31 parking spaces will be provided.
- Internal circulation and parking layout will meet County and CAL FIRE design criteria.
- A left turn lane will be provided on the eastbound Zinfandel Lane approach to the Project Main Driveway.

V. EXISTING CIRCULATION SYSTEM EVALUATION PROCEDURES

A. ANALYSIS LOCATIONS

1. INTERSECTIONS

The following locations have been evaluated.

a. **SR 29/Zinfandel Lane intersection** (The Zinfandel Lane east- and westbound approaches are stop sign controlled.)
b. **Silverado Trail/Zinfandel Lane intersection** (The Zinfandel Lane eastbound approach is stop sign controlled.)
c. **Zinfandel Lane/Project Main Driveway intersection** (The driveway approach is currently not stop sign controlled.)

Figure 4 presents a schematic of approach lane geometrics and control at each analysis intersection.

2. ARTERIAL ROADWAY SEGMENTS

The following locations have been evaluated.

a. State Route 29 just North and South of the Zinfandel Lane intersection
b. Silverado Trail just North and South of the Zinfandel Lane intersection
c. Zinfandel Lane between SR 29 and Silverado Trail

B. VOLUMES

1. ANALYSIS SEASONS AND DAYS OF THE WEEK

Project traffic impacts have been evaluated during harvest conditions. Based upon more than four years of historical information from Caltrans PeMS (Performance Measurement System) count surveys along SR 29 in the Napa Valley, September has the highest daily volumes of the year (during harvest). Therefore, only September harvest conditions were selected for evaluation.

In regard to the peak traffic days of the week, the Napa County Travel Behavioral **Study 1** (*Fehr & Peers, December 8, 2014*) shows that the highest weekday volumes in Napa Valley occur on a Friday, with the highest weekend volumes occurring on a Saturday. In addition historical count data from the City of Napa show that Friday has the highest volumes of any weekday, while Caltrans historical counts for SR 29 between St. Helena and Napa also show that weekday AM and PM peak hour volumes are higher on a Friday than on either a Wednesday or Thursday. Therefore, Friday and Saturday peak traffic conditions were evaluated in this study.

2. COUNT RESULTS

Friday 2:00 to 6:00 PM as well as Saturday Noon to 6:00 PM turn movement counts were conducted by Crane Transportation Group (CTG)for two Fridays and two Saturdays in October and November 2019 at the Zinfandel Lane intersections with SR 29, Silverado Trail and the project driveway. The peak traffic hours for the system were determined to be 2:45 to 3:45 PM on Friday and 2:30 to 3:30PM on Saturday. It should be noted, however, that there were many hours on both days that had similar volumes. Based upon direction from County Public Works, results from the two Friday counts were averaged and the results shown in **Figure 5**. The two Saturday counts were also averaged with the results also shown in **Figure 5**. It should be noted that the November counts were seasonally adjusted upwards by 15% based upon County criteria as part of the averaging process. Peak hour counts from each count day are presented in **Appendix A**.

Daily (24-hour) directional volume classification counts and speed surveys were also conducted for two Fridays and two Saturdays in September and October on Zinfandel Lane at the project site and on the Project Main Driveway. See **Appendix A**.

C. ROADWAYS

Roadway descriptions are based upon the designation that SR 29, Silverado Trail and the project driveway run in general north-south directions through the project area, while Zinfandel Lane runs in an east-west direction. The project site is along the north side of Zinfandel Lane. **Figure 4** presents existing intersection geometrics and control.

State Route 29 (SR 29) provides the only major regional access to the west side of the Napa Valley and a connection to Zinfandel Lane. In the vicinity of the Zinfandel Lane intersection it has two well-paved 12-foot travel lanes and 8-foot wide paved shoulders. The posted speed limit is 45 miles per hour and the roadway is level and straight. SR 29 is not controlled on its approaches to the Zinfandel Lane four-leg intersection, but left turn lanes are provided on the north- and southbound intersection approaches. The shoulders are striped and signed as Class II bicycle lanes.

Silverado Trail in the project vicinity has two well-paved 12-foot travel lanes and wide paved shoulders that are utilized as Class II bicycle lanes. A left turn lane is provided on the northbound Silverado Trail approach to Zinfandel Lane. The posted speed limit is 55 miles per hour at Zinfandel Lane but lowers to 45 miles per hour northbound and 40 miles per hour southbound north of Zinfandel Lane.

Zinfandel Lane is a two-lane rural collector roadway extending westerly from Silverado Trail to the west of SR 29. It is stop sign controlled on its eastbound approach to Silverado Trail and on both approaches to SR 29. The posted speed limit is 45 miles per hour. The Napa Wine Train has an at-grade crossing of Zinfandel Lane just east of SR 29. Its crossing is protected by gates and flashing lights. There are no pedestrian walkways or bicycle lanes along Zinfandel Lane in the project vicinity.

D. INTERSECTION LEVEL OF SERVICE

1. ANALYSIS METHODOLOGY

Transportation engineers and planners commonly use a grading system called level of service (LOS) to measure and describe the operational status of the local roadway network. LOS is a description of the quality of a roadway facility's operation, ranging from LOS A (indicating free-flow traffic conditions with little or no delay) to LOS F (representing oversaturated conditions where traffic flows exceed design capacity, resulting in long queues and delays). Intersections, rather than roadway segments between intersections, are almost always the capacity controlling locations for any circulation system.

Unsignalized Intersections**.** For unsignalized (all-way stop-controlled and side-street stop- controlled) intersections, the Year 2017 6th Edition Highway Capacity Manual (Transportation Research Board, National Research Council) methodology for unsignalized intersections was utilized. For side-street stop-controlled intersections, operations are defined by the level of service and average control delay per vehicle (measured in seconds), with delay reported for the stop sign controlled approaches or turn movements. For all-way stop-controlled intersections, operations are defined by the average control delay for the entire intersection (measured in seconds per vehicle). The delay at an unsignalized intersection incorporates delay associated with deceleration, acceleration, stopping, and moving up in

the queue. **Table 1** summarizes the relationship between delay and LOS for unsignalized intersections while **Appendix B** presents level of service worksheets.

2. MINIMUM ACCEPTABLE OPERATION

Napa County's currently minimum acceptable operating standard for unsignalized intersections Is Level of Service D (LOS D) for side street stop sign controlled approaches at two-way stop intersections and for overall operation at all-way-stop intersections. It should be noted, however, that the recently approved General Plan Update Circulation element shows that LOS F is now acceptable for SR 29 in the project area, while LOS E is acceptable for Silverado Trail. However, to provide a conservative analysis the LOS D criteria as minimum acceptable has been used.

E. ARTERIAL LEVEL OF SERVICE

1. ANALYSIS METHODOLOGY

The 2017 Highway Capacity Manual 6th Edition arterial analysis methodology has been utilized for analysis of State Route 29, Silverado Trail and Zinfandel Lane. Analysis results are presented as a level of service and demand capacity ratio. Input includes directional volumes, road and shoulder widths, percent trucks and RV's, terrain characteristics, percent available passing distance, etc.

2. MINIMUM ACCEPTABLE OPERATION

Napa County's currently minimum acceptable operating standard for arterials is Level of Service D (LOS D). It should be noted, however, that recently approved General Plan Update Circulation element shows that LOS F is now acceptable for SR 29 and LOS E is now acceptable for Silverado Trail in the project area. However, to provide a conservative analysis the LOS D criteria as minimum acceptable has been used.

F. INTERSECTION SIGNAL WARRANTS

1. ANALYSIS METHODOLOGY

Traffic signals are used to provide an orderly flow of traffic through an intersection. Many times, they are needed to offer side street traffic an opportunity to access a major road where high volumes and/or high vehicle speeds block crossing or turn movements. They do not, however, increase the capacity of an intersection (i.e., increase the overall intersection's ability to accommodate additional vehicles) and, in fact, often slightly reduce the number of total vehicles that can pass through an intersection in a given period of time. Signals can also cause an increase in traffic accidents if installed at inappropriate locations.

There are 10 possible tests for determining whether a traffic signal should be considered for installation. These tests, called "warrants", consider criteria such as actual traffic volume, pedestrian volume, presence of school children, and accident history. The intersection volume data together with the available collision histories were compared to warrants contained in the *California Manual on Uniform*

Traffic Control Devices, 2014, Rev 5 (2014 CaMUTCD Rev 5 - March 2020). It provides guidelines, or warrants, which may indicate need for a traffic signal at an unsignalized intersection. As indicated in the *2014 CaMUTCD Rev 5 – March 2020*, satisfaction of one or more warrants does not necessarily require immediate installation of a traffic signal. It is merely an indication that the local jurisdiction should begin monitoring conditions at that location and that a signal may ultimately be required.

2. MINIMUM ACCEPTABLE OPERATION

Warrant 3, the peak hour volume warrant, is often used as an initial check of signalization needs since peak hour volume data is typically available and this warrant is usually the first one to be met. Warrant 3 is based on a logarithmic curve and takes only the hour with the highest volume of the day into account. For intersections in rural locations (with local area population less than 10,000 people or where the posted speed limit or 85th percentile speed on the uncontrolled intersection approaches is greater than 40 miles per hour) a 70 percent warrant is applied. The regular and 70 percent warrants are typically referred to as the urban and rural peak hour warrants. Rural warrant criteria have been used for evaluation of the SR 29/Zinfandel Lane and Silverado Trail/Zinfandel Lane intersections. Please see **Appendix C** for the signal warrant charts.

G. PLANNED IMPROVEMENTS

There are no planned and funded improvements at any location evaluated in this study *(Napa County Public Works Department, January 2020).*

H. ACCIDENT HISTORY

Accident records from January 2014 through October 2019 were obtained from the California Highway Patrol for Zinfandel Lane between and including the SR 29 and Silverado Trail intersections. Locations of all accidents over this time span are presented in **Figure 6**, while attached year by year accident details are presented in **Appendix D**. As shown, there have not been any reported accidents at the Zinfandel Lane intersection with the project main driveway. The location with the greatest accident history, the SR 29/Zinfandel Lane intersection, had 19 accidents over this almost 6-year span, while Silverado Trail/Zinfandel Lane had 11.

I. EXISTING PEDESTRIAN AND BICYCLE FACILITIES NEAR THE PROJECT

There are no pedestrian walkways along Zinfandel Lane between SR 29 and Silverado Trail, and none are planned by the project. Likewise, there are no Class 1 to 4 Bicycle facilities along Zinfandel Lane and none are planned by the project. Class II signed and striped bicycle lanes are, however, provided along both Silverado Trail and SR 29.

J. TRANSIT SERVICE

The Vine provides transit service along SR 29. Route 10 travels between the City of Napa and Calistoga on approximate hourly headways 7 days per week. Route 10X also travels along SR 29 6 times per day during commute periods on weekdays only. Stops are limited.

K. LEFT TURN WARRANT FOR ZINFANDEL LANE AT PROJECT MAIN DRIVEWAY

Daily volumes on Zinfandel Lane and the Project Main Driveway currently meet County warrant criteria for provision of a left turn lane on the eastbound Zinfandel Lane intersection approach.
See **Appendix E**.

VI. FUTURE HORIZON TRAFFIC VOLUME PROJECTIONS

Traffic analysis has been conducted for harvest existing (2019), year 2025 and cumulative (year 2030) horizons at County request. The 2030 cumulative horizon reflects the County General Plan Buildout year. Traffic modeling for the General Plan shows the following growths in two-way traffic between 2019 and 2030 for the following roadways.

Route	2019 to 2030 Projected Growth in 2-Way PM Peak Hour Traffic
SR 29	PM peak hour = 19.9 %
Silverado Trail	PM peak hour = 19.1 %
Zinfandel Lane	PM peak hour = 14.7 %

Projecting straight line traffic growth for analysis purposes, this translates into the following growths in two-way traffic between 2019 and 2025 for the same roadways.

Route	2019 to 2025 Projected Growth in 2-Way PM Peak Hour Traffic
SR 29	PM peak hour = 10.8 %
Silverado Trail	PM peak hour = 10.4 %
Zinfandel Lane	PM peak hour = 8.0 %

Since traffic modeling projections were only available for weekday PM peak hour conditions and not for the Saturday PM peak hour, Saturday two-way PM peak hour volumes were increased by the percentages found for the weekday PM peak hour.

Based upon input from County Planning, traffic from 2 other approved but not constructed developments was also included in near-term horizon growth. They are:

- Castelluci Winery - Proposed (approved) Winery on the northwest corner of Silverado Trail/Zinfandel Lane intersection.
- Raymond-Ticen Winery - Expanded operation of the existing Raymond-Ticen Winery. Existing access on Zinfandel Lane will be supplemented by a new major entry along SR 29.

Appendix F presents expected PM peak hour trip generation from each project. Also, most Raymond Winery guest traffic now using Zinfandel Lane will adjust to using their new SR 29 entrance.

Resultant year 2025 harvest "Without Project" Friday and Saturday PM peak hour volumes are presented in **Figure 7**, while cumulative (Year 2030) harvest "Without Project" Friday and Saturday PM peak hour volumes are presented in **Figure 8**.

VII. OFF-SITE HARVEST CIRCULATION SYSTEM OPERATION – WITHOUT PROJECT

A. YEAR 2019 HARVEST (WITHOUT PROJECT) OPERATING CONDITIONS

1. EXISTING INTERSECTION LEVEL OF SERVICE – SEE TABLE 2 & APPENDIX B FOR CAPACITY WORKSHEETS

a. SR 29/ZINFANDEL LANE

- **Friday and Saturday PM Peak Hours**
  Unacceptable Zinfandel Lane stop sign controlled east- and westbound approaches: LOS F.

b. SILVERADO TRAIL/ZINFANDEL LANE

- **Friday and Saturday PM Peak Hours**
  Unacceptable Zinfandel Lane stop sign controlled eastbound approach: LOS F.

c. ZINFANDEL LANE/PROJECT MAIN DRIVEWAY

- **Friday and Saturday PM Peak Hours**
  Acceptable driveway southbound approach: LOS B.

2. EXISTING ARTERIAL SEGMENT LEVEL OF SERVICE – SEE TABLE 3

a. SR 29 JUST NORTH & SOUTH OF ZINFANDEL LANE

- **Friday PM Peak Hour**
  Northbound - LOS E
  Southbound - LOS E
- **Saturday PM Peak Hour**
  Northbound - LOS D
  Southbound - LOS E

b. SILVERADO TRAIL JUST NORTH & SOUTH OF ZINFANDEL LANE

- **Friday PM Peak Hour**
  Northbound - LOS C
  Southbound - LOS E
- **Saturday PM Peak Hour**
  Northbound - LOS C
  Southbound - LOS D

c. ZINFANDEL LANE JUST EAST OF SR 29 AND JUST WEST OF SILVERADO TRAIL

- **Friday and Saturday PM Peak Hours**
  Eastbound - LOS B
  Westbound - LOS A

3. EXISTING SIGNAL WARRANT EVALUATION – SEE TABLE 4 & APPENDIX C

a. SR 29/ZINFANDEL LANE & SILVERADO TRAIL/ZINFANDEL LANE

- **Friday and Saturday PM Peak Hours**
  Volumes **exceed** peak hour signal Warrant #3 rural criteria.

B. YEAR 2025 HARVEST (WITHOUT PROJECT) OPERATING CONDITIONS

1. 2025 INTERSECTION LEVEL OF SERVICE – SEE TABLE 2

a. SR 29/ZINFANDEL LANE

- **Friday and Saturday PM Peak Hours**
  Unacceptable Zinfandel Lane stop sign controlled east and westbound approaches: LOS F.

b. SILVERADO TRAIL/ZINFANDEL LANE

- **Friday and Saturday PM Peak Hours**
  Unacceptable Zinfandel Lane stop sign controlled eastbound approach: LOS F.

c. ZINFANDEL LANE/PROJECT MAIN DRIVEWAY

- **Friday and Saturday PM Peak Hours**
  Acceptable Driveway southbound approach: LOS B.

2. 2025 ARTERIAL SEGMENT LEVEL OF SERVICE – SEE TABLE 3

a. SR 29/JUST NORTH & SOUTH OF ZINFANDEL LANE

- **Friday and Saturday PM Peak Hours**
  Northbound - LOS E
  Southbound - LOS E

b. SILVERADO TRAIL JUST NORTH & SOUTH OF ZINFANDEL LANE

- **Friday PM Peak Hour**
  Northbound - LOS C
  Southbound - LOS E
- **Saturday PM Peak Hour**
  Northbound - LOS C
  Southbound - LOS D North of Zinfandel Lane
  - LOS E South of Zinfandel Lane

c. ZINFANDEL LANE JUST EAST OF SR 29 AND JUST WEST OF SILVERADO TRAIL

- **Friday and Saturday PM Peak Hours**
  Eastbound - LOS B
  Westbound - LOS A

3. 2025 SIGNAL WARRANT EVALUATION – SEE TABLE 4

a. SR 29/ZINFANDEL LANE & SILVERADO TRAIL/ZINFANDEL LANE

- **Friday and Saturday PM Peak Hours**
  Volumes would **exceed** peak hour signal Warrant #3 rural criteria.

C. CUMULATIVE (YEAR 2030) HARVEST (WITHOUT PROJECT) OPERATING CONDITIONS

1. 2030 INTERSECTION LEVEL OF SERVICE – SEE TABLE 2

a. SR 29/ZINFANDEL LANE

- **Friday and Saturday PM Peak Hours**
  Unacceptable Zinfandel Lane stop sign controlled east and westbound approaches: LOS F.

b. SILVERADO TRAIL/ZINFANDEL LANE

- **Friday and Saturday PM Peak Hours**
  Unacceptable Zinfandel Lane stop sign controlled eastbound approach: LOS F.

c. ZINFANDEL LANE/PROJECT MAIN DRIVEWAY

- **Friday and Saturday PM Peak Hours**
  Acceptable driveway southbound approach: LOS B or C.

2. 2030 ARTERIAL SEGMENT LEVEL OF SERVICE – SEE TABLE 3

a. SR 29/JUST NORTH & SOUTH OF ZINFANDEL LANE

- **Friday & Saturday PM Peak Hours**
  Northbound - LOS E
  Southbound - LOS E

b. SILVERADO TRAIL JUST NORTH & SOUTH OF ZINFANDEL LANE

- **Friday PM Peak Hours**
  Northbound - LOS C or D
  Southbound - LOS E
- **Saturday PM Peak Hours**
  Northbound - LOS C or D
  Southbound - LOS E

c. ZINFANDEL LANE JUST EAST OF SR 29 AND JUST WEST OF SILVERADO TRAIL

- **Friday and Saturday PM Peak Hours**
  Eastbound - LOS B
  Westbound - LOS A

3. 2030 SIGNAL WARRANT EVALUATION – SEE TABLE 4

a. SR 29/ZINFANDEL LANE AND SILVERADO TRAIL/ZINFANDEL LANE

- **Friday and Saturday PM Peak Hours**
  Volumes would **exceed** peak hour signal Warrant #3 rural criteria.

VIII. SIGNIFICANCE CRITERIA

A. COUNTY OF NAPA

The following criteria have recently been developed for traffic impact analyses in Napa County.

EXISTING + PROJECT CONDITIONS

1. ARTERIAL SEGMENTS

A project would cause a significant impact requiring mitigation if:

a. An arterial segment operates at LOS A, B, C or D during the selected peak hours without project trips, and deteriorates to LOS E or F with the addition of project trips, or

b. An arterial segment operates at LOS E or F during the selected peak hours without project trips, and the addition of project trips increases the total segment volume by one percent or more.

For the second criteria, the following equation should be used if the arterial operates at LOS E or F without the project:

Project Contribution % = Project Trips ÷ Existing Volumes

2. SIGNALIZED INTERSECTIONS

A project would cause a significant impact requiring mitigation if:

a. A signalized intersection operates at LOS A, B, C or D during the selected peak hours without project trips, and deteriorates to LOS E or F with the addition of project trips, or

b. A signalized intersection operates at LOS E or F during the selected peak hours without project trips, and the addition of project trips increases the total entering volume by one percent or more.

For the second criteria, the following equation should be used if the signalized intersection operates at LOS E or F without the project:

Project Contribution % = Project Trips ÷ Existing Volumes

Maintaining LOS D or better at all signalized intersections would sometimes require expanding the physical footprint of an intersection. In some locations around the County, expanding physical transportation infrastructure could be in direct conflict with the County's goals of preserving the area's rural character, improving safety, and sustaining the agricultural industry, making these potential improvements infeasible. The County's Circulation Element lists intersections that are slated for improvement or expansion in unincorporated Napa County. (*According to the Circulation Element dated June 8, 2008, the following intersections can be altered or expanded as a mitigation measure: SR-12/Airport Boulevard/SR-29, SR-221/SR-12/Highway 29, and several intersections along SR-29 and SR-128 north of Napa. The significance criteria shown above should apply to facilities where appropriate based upon the most recent Circulation Element chapter of the General Plan.)*

Transportation studies should individually consider the feasibility of potential mitigation measures with respect to right-of-way acquisition, regardless of the intersection's place in the Circulation Element's identified improvement lists, and present potential alternative mitigation measures that do not require right-of-way acquisition. County staff would then review that information and make the decision about the feasibility of the identified potential mitigations.

For the intersections that cannot be improved without substantial additional right-of-way according to both the Circulation Element and the individual transportation impact study, and where other mitigations such as updating signal timing, signal phasing and operations, and/or signing and striping improvements do not improve the LOS, LOS E or LOS F will be considered acceptable and the one percent threshold would not apply. Analysis of signalized intersection LOS should sill be presented for informational purposes, and there should still be an evaluation of effects on safety and local access, per Policy CIR-18.

3. UNSIGNALIZED INTERSECTIONS (ALL WAY STOP AND SIDE STREET STOP SIGN CONTROLLED)

LOS for all way stop controlled intersections is defined as an average of the delay at all approaches. LOS for side street stop-controlled intersections is defined by the delay and LOS for the worst-case approach. The recommended interpretation of Policy CIR-16 regarding unsignalized intersection significance criteria is as follows:

a. An unsignalized intersection operates at LOS A, B, C or D during the selected peak hours without project trips, the LOS deteriorates to LOS E or F with the addition of

project traffic, and the peak hour traffic signal warrant criteria should also be evaluated and presented for informational purposes, or

b. An unsignalized intersection operates at LOS E or F during the selected peak hours without project trips, and the project increases stop sign controlled delay by 5 seconds or greater. The peak hour traffic signal warrant criteria should also be evaluated and presented for informational purposes.

Project Contribution % = Project Trips ÷ Existing Volumes

CUMULATIVE + PROJECT CONDITIONS

1. ARTERIAL SEGMENTS, SIGNALIZED INTERSECTIONS AND UNSIGNALIZED INTERSECTIONS

A project would cause a significant cumulative impact requiring mitigation if:

a. The overall amount of expected traffic growth causes conditions to deteriorate such that any of the significance criteria described above for existing conditions are met, and

b. The project's contribution to a significant cumulative impact for arterials or signalized intersections would be equal to or greater than five percent of the growth in traffic from existing to cumulative conditions.

c. The project's contribution to a cumulative significant impact at an unsignalized intersection would result with an increase in stop sign controlled delay of 5 seconds or greater.

A project's contribution to a cumulative condition would be calculated as the project's percentage contribution to the total growth in traffic from existing conditions.

Project Contribution % = Project Trips ÷ (Cumulative Volumes - Existing Volumes)

IX. PROJECT IMPACT EVALUATION

It should be noted that all project harvest Friday or Saturday PM peak hour trip generation will be due to the one new employee, as no change in visitation is being requested and any increase in grape truck deliveries would occur earlier in the day.

A. TRIP GENERATION

1. METHODOLOGY

Project trip generation was determined using one of the three possible methodologies recently approved by Napa County Public Works for transportation impact study analysis. As detailed from Public Works, perform a site-specific analysis by first conducting actual daily trip counts at the driveway of the project on two Fridays and two Saturdays (for Winery use permit modifications). Next, determine the increment of net new daily traffic due to the use permit modification proposed project using trip rates from the use permit Winery Traffic Information/Trip Generation sheets. Based upon the two Friday and two Saturday 24-hour Winery driveway counts, determine which hour on each day had the highest combined inbound + outbound traffic and determine the percent of total traffic occurring during those hours in relation to the daily counts. Apply these percentages to the net new Friday and Saturday daily traffic increments for the project to determine the amount of project traffic that would be expected to occur during the Winery's peak traffic hour. Finally, assume that the Winery's peak hourly traffic will occur at the time as the ambient peak traffic time on the adjacent roadway system.

2. PROJECT PM PEAK HOUR VOLUMES

Table 5 shows that the proposed use permit modification 2020 would be expected to generate 1 new outbound trip during a harvest Friday PM peak hour (2:45 - 3:45), with 1 new outbound trip during a harvest Saturday PM peak hour (2:30 - 3:30). Winery Traffic Information/Trip Generation sheets are presented in **Appendix G**, as are the hourly 2-way traffic volume percentages on the Winery's main driveway for two Fridays and two Saturdays. It should be noted that all project harvest Friday and Saturday PM peak hour trip generation will be due to the one new full time employee, as no change in visitation is being requested and any increase in grape truck deliveries would occur earlier in the day.

B. TRIP DISTRIBUTION

Project traffic was distributed to Zinfandel Lane, SR 29 and Silverado Trail in a pattern reflective of existing PM peak hour distribution patterns at the Project Main Driveway intersection and at the Zinfandel Lane intersections with SR 29 and Silverado Trail. The one new outbound trip would be expected to be destined to the south and travel via Silverado Trail due to the ease of making a right turn to Silverado Trail compared to a left turn to SR 29.

The harvest Friday and Saturday project traffic increment expected during the times of ambient peak traffic flows are presented in **Figure 9**. Friday and Saturday "With Project" PM peak hour harvest volumes for year 2019 are presented in **Figure 10**; "With Project" PM peak hour harvest volumes for

year 2025 conditions are presented in **Figure 11**, and "With Project" PM peak hour harvest volumes for cumulative (year 2030) conditions are presented in **Figure 12.**

C. OFF-SITE IMPACTS

1. EXISTING (2019) HARVEST + PROJECT CONDITIONS

a. SUMMARY

Project traffic would not result in any significant level of service impacts along SR 29, Silverado Trail or Zinfandel Lane, nor at the Zinfandel Lane intersections with SR 29, Silverado Trail or the Project Main Driveway during either the Friday or Saturday PM peak traffic hours. ***Less than significant.***

b. 2019 INTERSECTION LEVEL OF SERVICE IMPACTS – SEE TABLE 2

1) SR 29/Zinfandel Lane

- **Friday & Saturday PM Peak Hours**
  Operation of the stop sign controlled Zinfandel Lane intersection approaches would remain an unacceptable LOS F with the addition of project traffic. However, since the project would not be adding any traffic to this location there would be no change in delay. ***Less than significant.***

2) Silverado Trail/Zinfandel Lane

- **Friday & Saturday PM Peak Hours**
  Operation of the stop sign controlled Zinfandel Lane intersection approach would remain an unacceptable LOS F with the addition of project traffic. However, the addition of one project vehicle to the eastbound Zinfandel Lane approach would not measurably increase delay. ***Less than significant.***

3) Zinfandel Lane/Project Main Driveway

- **Friday & Saturday PM Peak Hours**
  Operation of the Project Main Driveway approach to Zinfandel Lane would be an acceptable LOS B with the addition of project traffic.
  Less than significant.

c. 2019 ARTERIAL SEGMENT LEVEL OF SERVICE IMPACTS – SEE TABLE 3

1) SR 29 North & South of Zinfandel Lane

- **Friday PM Peak Hour**
  Operation would remain LOS E north and southbound. However, the project would not increase total segment volumes by 1 percent or more (0.0%). ***Less than significant.***

- **Saturday PM Peak Hour**
  Operation would remain LOS D or E northbound and LOS E southbound. However, the project would not increase total segment volumes by 1 percent or more (0.0%). ***Less than significant.***

2) Silverado Trail North & South of Zinfandel Lane

- **Friday PM Peak Hour**
  Operation would remain LOS C northbound and LOS E southbound. However, the project would not increase total segment volumes by 1 percent or more (0.0% north of Zinfandel Lane & 0.1% south of Zinfandel Lane). ***Less than significant.***
- **Saturday PM Peak Hour**
  Operation would remain LOS C northbound and LOS D southbound. ***Less than significant.***

3) Zinfandel Lane East of SR 29 & West of Silverado Trail

- **Friday & Saturday PM Peak Hours**
  Operation would remain LOS B eastbound and LOS A westbound. ***Less than significant.***

d. 2019 SIGNAL WARRANT EVALUATION – SEE TABLE 4

Signal warrant information is provided for informational purposes only per County significance criteria.

1) SR 29/Zinfandel Lane

- **Friday & Saturday PM Peak Hours**
  Volumes would be exceeding rural peak hour signal warrant criteria with or without project traffic. ***Less than significant.***

2) Silverado Trail/Zinfandel Lane

- **Friday & Saturday PM Peak Hours**
  Volumes would be exceeding rural peak hour signal warrant criteria with or without project traffic. ***Less than significant.***

2. YEAR 2025 HARVEST + PROJECT CONDITIONS

a. SUMMARY

Project traffic would not result in any significant level of service impacts along SR 29, Silverado Trail or Zinfandel Lane, nor at the Zinfandel Lane intersections with SR 29, Silverado Trail or the Project Main Driveway during either the Friday or Saturday PM peak traffic hours. ***Less than significant.***

b. 2025 INTERSECTION LEVEL OF SERVICE IMPACTS – SEE TABLE 2

1) SR 29/Zinfandel Lane

- **Friday & Saturday PM Peak Hours**
  Operation of the stop sign controlled Zinfandel Lane intersection approaches would remain an unacceptable LOS F with the addition of project traffic. However, since the project would not be adding any traffic to this location there would be no change in delay. ***Less than significant.***

2) Silverado Trail/Zinfandel Lane

- **Friday & Saturday PM Peak Hours**
  Operation of the stop sign controlled Zinfandel Lane intersection approach would remain an unacceptable LOS F with the addition of project traffic. However, the addition of one project vehicle to the eastbound Zinfandel Lane approach would not measurably increase delay. ***Less than significant.***

3) Zinfandel Lane/Project Main Driveway

- **Friday & Saturday PM Peak Hours**
  Operation of the Project Main Driveway approach to Zinfandel Lane would be an acceptable LOS B or C with the addition of project traffic. ***Less than significant.***

c. 2025 ARTERIAL SEGMENT LEVEL OF SERVICE IMPACTS – SEE TABLE 3

1) SR 29 North & South of Zinfandel Lane

- **Friday & Saturday PM Peak Hours**
  Operation would remain LOS E north- and southbound. However, the project would not increase total segment volumes by 1 percent or more (0.0% on both Friday & Saturday). ***Less than significant.***

2) Silverado Trail North & South of Zinfandel Lane

- **Friday PM Peak Hour**
  Operation would be LOS C or D northbound and LOS E southbound. However, the project would not increase total segment volumes by 1 percent or more (0.0% north of Zinfandel Lane & 0.1% south of Zinfandel Lane). ***Less than significant.***
- **Saturday PM Peak Hour**
  Operation would remain LOS C northbound and LOS D or E southbound. However, the project would not increase total segment volumes by 1% or more (0.0% north of Zinfandel Lane & 0.1% south of Zinfandel Lane). ***Less than significant.***

3) **Zinfandel Lane East of SR 29 & West of Silverado Trail**
   - **Friday & Saturday PM Peak Hours**
     Operation would remain LOS B eastbound and LOS A westbound. ***Less than significant.***

d. 2025 SIGNAL WARRANT EVALUATION – SEE TABLE 4

Signal warrant information is provided for informational purposes only per County significance criteria.

1) **SR 29/Zinfandel Lane**
   - **Friday & Saturday PM Peak Hours**
     Volumes would be exceeding rural peak hour signal warrant criteria with or without project traffic.

2) **Silverado Trail/ Zinfandel Lane**
   - **Friday & Saturday PM Peak Hours**
     Volumes would be exceeding rural peak hour signal warrant criteria with or without project traffic.

3. CUMULATIVE (YEAR 2030) HARVEST + PROJECT CONDITIONS

a. SUMMARY

Project traffic would not result in any significant level of service impacts along SR 29, Silverado Trail or Zinfandel Lane, nor at the Zinfandel Lane intersections with SR 29, Silverado Trail or the Project Main Driveway during either the Friday or Saturday PM peak traffic hours. ***Less than significant.***

b. 2030 INTERSECTION LEVEL OF SERVICE IMPACTS – SEE TABLE 2

1) **SR 29/Zinfandel Lane**
   - **Friday & Saturday Peak Hours**
     Operation of the stop sign controlled Zinfandel Lane intersection approaches would remain an unacceptable LOS F with the addition of project traffic. However, since the project would not be adding any traffic to this location there would be no change in delay. ***Less than significant.***

2) **Silverado Trail/Zinfandel Lane**
   - **Friday & Saturday PM Peak Hours**
     Operation of the stop sign controlled Zinfandel Lane intersection approach would remain an unacceptable LOS F with the addition of project traffic. However, the addition of one project vehicle to the eastbound Zinfandel Lane approach would not measurably increase delay. ***Less than significant.***

3) **Zinfandel Lane/Project Main Driveway**

- **Friday & Saturday PM Peak Hours**
  Operation of the Project Main Driveway approach to Zinfandel Lane would be an acceptable LOS B or C with the addition of project traffic. ***Less than significant.***

c. 2030 ARTERIAL SEGMENT LEVEL OF SERVICE IMPACTS – SEE TABLE 3

1) **SR 29 North and South of Zinfandel Lane**

- **Friday PM Peak Hour**
  Operation would remain LOS E north- and southbound. However, the project would not increase the change in two-way segment volumes between 2019 and 2030 by 5 percent or more (0.0%). ***Less than significant.***
- **Saturday PM Peak Hour**
  Operation would remain LOS E north- and southbound. However, the project would not increase the change in two-way segment volumes between 2019 and 2030 by 5 percent or more (0.0%).
  Less than significant.

2) **Silverado Trail North & South of Zinfandel Lane**

- **Friday PM Peak Hour**
  Operation would remain LOS C or D northbound and LOS E southbound. However, the project would not increase the change in two-way segment volumes between 2019 and 2030 by 5 percent or more (0.0% north of Zinfandel Lane & 0.3% south of Zinfandel Lane). ***Less than significant.***
- **Saturday PM Peak Hour**
  Operation would remain LOS C or D northbound and LOS E southbound. However, the project would not increase the change in two-way segment volumes between 2019 and 2030 by 5 percent or more (0.0% north of Zinfandel Lane & 0.4% south of Zinfandel Lane). ***Less than significant.***

3) **Zinfandel Lane East of SR 29 and West of Silverado Trail**

- **Friday & Saturday PM Peak Hours**
  Operation would remain LOS B eastbound and LOS A westbound, acceptable operation. ***Less than significant.***

d. 2030 SIGNAL WARRANT EVALUATION – SEE TABLE 4

Signal warrant information is provided for informational purposes only per County significance criteria.

1) **SR 29/Zinfandel Lane**

- **Friday & Saturday PM Peak Hours**
  Volumes would be exceeding rural peak hour signal warrant criteria with or without project traffic.

2) **Silverado Trail/Zinfandel Lane**
   - **Friday & Saturday PM Peak Hours**
     Volumes would be exceeding rural peak hour signal warrant criteria with or without project traffic.

X. OTHER POTENTIAL PROJECT IMPACTS

A. SIGHT LINES AT ZINFANDEL LANE/PROJECT MAIN DRIVEWAY

Sight lines at the Zinfandel Lane/Project Main Driveway intersection are currently acceptable to the east and west along Zinfandel Lane.

Sight line to the east along Zinfandel Lane (to see westbound vehicles) 1000+ feet
Sight line to the west along Zinfandel Lane (to see eastbound vehicles) 1000+ feet

The *Caltrans Highway Design Manual (July 2018)* states that stopping sight distance is the corner sight distance criteria to be utilized at private road connections to arterial roadways. The minimum required stopping sight distances based upon various vehicle speeds are as follows.

SPEED	MINIMUM REQUIRED STOPPING SIGHT DISTANCE
45 mph	360 feet
50 mph	430 feet
55 mph	500 feet

The posted speed limit at the project entrance is 45 miles per hour, and some vehicles were observed traveling higher than the posted limit during two field surveys by Crane Transportation Group. Based upon the 55 mile per hour criteria, resultant sight lines to the east and west along Zinfandel Lane from the Project Main Driveway would be acceptable. ***Less than significant***.

B. LEFT TURN LANE AT THE ZINFANDEL LANE/ PROJECT MAIN DRIVEWAY INTERSECTION

A left turn lane is now warranted on the eastbound Zinfandel Lane approach to the Project Main Driveway and will be provided by the project applicant. The turn lane will be designed in conjunction with the westbound left turn lane now being constructed on the westbound Zinfandel Lane approach to the Raymond-Ticen Ranch Winery driveway. The County left turn lane warrant chart is provided in **Appendix E**. ***Less than significant.***

C. MARKETING EVENTS

No new marketing events are proposed. In addition, for midsize events occurring two or more times per month daily visitation by appointment will be reduced by the level of attendance at the marketing event. ***Less than significant.***

D. PEDESTRIAN, BICYCLE AND TRANSIT IMPACTS

There are no pedestrian walkways along Zinfandel Lane, SR 29 or Silverado Trail. No pedestrian traffic is expected, and no pedestrian facilities are proposed along the project's Zinfandel Lane frontage. Bicycle racks will be provided for all guests using bicycles and accessing the area via the Class II bicycle lanes along Silverado Trail and SR 29. Currently no employees or visitors use County-wide transit service along SR 29 to access the Winery, although as part of the project's proposed TDM plan, incentives will be provided to any employee taking transit. ***Less than significant.***

E. TRANSPORTATION DEMAND MANAGEMENT (TDM) PLAN & VEHICLE MILES TRAVELED (VMT) REDUCTIONS

It is an upcoming requirement of all jurisdictions in the state to reduce the Vehicle Miles Traveled (VMT) of traffic associated with new developments to lower levels than would have resulted with comparable projects in the past (per State Senate Bill 743, which took effect in July 2020). This will help reduce greenhouse gas emissions and vehicle congestion. Specific quantitative reduction guidelines have not yet been set for wineries in Napa County, but all are expected to develop ongoing programs that will provide incentives to reduce daily and commute period employee traffic as well as measures that will entice guests to use travel modes other than the automobile or to travel at times other than peak congestion periods. Towards this end, the Wheeler Farms Winery will develop a Transportation Demand Management (TDM) plan that will help accomplish these goals.

The applicant will be appointing a TDM coordinator to carry out the proposed plan. See **Appendix H**. Measures will include providing incentives to establish carpools and riding bicycles to work. Bike racks will be provided for employees and guests. Incentives will also be provided for any employees riding transit. In addition, shuttle buses will be provided for all large events with 100 or more guests.

F. ON-SITE PARKING & INTERNAL CIRCULATION

There are a total of 31 parking spaces with two designated for ADA. Nine of these spaces are located on the south side of the Winery (for visitor parking) with 22 on the northwest side of the Winery (for employee parking). Visitors to the Winery are by appointment only. On a busy day, visitors arrive in a staggered arrangement so that the 9 spaces are more than adequate to accommodate demand. Occasionally, visitors arrive in a higher-occupancy vehicle such as an SUV, minivan or smaller shuttle bus.

Most of the larger marketing events occur during off-peak hours when some employee parking spaces are available. When larger marketing events are held excess parking can also be accommodated along the Winery access road and along vineyard roads. The Winery utilizes valet parking for these events in

addition to the services of small shuttle buses or vans for some groups of visitors. Shuttle buses bring visitors from their hotels or other areas where there are legally entitled parking areas.

Internal circulation design (roadway & parking dimensions/parking spaces, turnaround areas and radii for emergency vehicle and large truck movements) has been provided to meet all County and CAL FIRE design criteria.

G. YEARLY TRIP GENERATION

Based upon County formula the Wheeler Farms Winery is currently generating 26,440 yearly trips, while with the use permit modification 2020 yearly trip generation would increase to 27,483 yearly trips for an increase of 1,043 yearly trips. See **Appendix G**.

XI. RECOMMENDED IMPROVEMENTS

No circulation system improvements required.

XII. CONCLUSIONS & RECOMMENDATIONS

- The project will result in no significant off-site circulation system operational impacts to SR 29, Silverado Trail or Zinfandel Lane or to the Zinfandel Lane intersections with SR 29, Silverado Trail or the Project Main Driveway.
- A left turn lane will be provided on the Zinfandel Lane eastbound approach to the Main Winery Driveway as part of project development and will be designed in conjunction with a left turn lane being provided on the westbound Zinfandel Lane approach to the Raymond-Ticen Winery driveway (just west of Wheeler Farms site). Sight lines at the project driveway connection to Zinfandel Lane are acceptable and meet Caltrans stopping sight distance criteria.
- No new marketing events are being proposed, and on days with medium size marketing events occurring 2 times or more per month daily visitation by appointment will be reduced by the same amount as the number of guests at the marketing event. Finally, a TDM coordinator will be appointed to institute measures to reduce daily and peak hour employee traffic as well as increase limousine and shuttle bus service for large marketing events. The attached TDM Plan will be adopted.
- No pedestrians and minimal or no transit users are expected at the Winery. However, bicycle racks will be provided for any bike riders accessing the Winery via the Class II bike lanes along both SR 29 and Silverado Trail.
- Internal circulation is designed to meet County and CAL FIRE criteria. In addition, 31 parking spaces will be provided for guests and employees.

This Report is intended for presentation and use in its entirety, together with all of its supporting exhibits, schedules, and appendices. Crane Transportation Group will have no liability for any use of the Report other than in its entirety, such as providing an excerpt to a third party or quoting a portion of the Report. If you provide a portion of the Report to a third party, you agree to hold CTG harmless against any liability to such third parties based upon their use of or reliance upon a less than complete version of the Report.

Tables

TABLE 1

UNSIGNALIZED INTERSECTION LOS CRITERIA

Level of Service	Description	Average Control Delay (Seconds Per Vehicle)
A	Little or no delays	≤ 10.0
B	Short traffic delays	10.0 to 15.0
C	Average traffic delays	15.0 to 25.0
D	Long traffic delays	25.0 to 35.0
E	Very long traffic delays	35.0 to 50.0
F	Extreme traffic delays with intersection capacity exceeded (for an all-way stop), or with approach/turn movement capacity exceeded (for a side street stop controlled intersection)	> 50.0

Source: Year 2017 6th Edition Highway Capacity Manual (Transportation Research Board).

TABLE 2

INTERSECTION LEVEL OF SERVICE

YEAR 2019 HARVEST

LOCATION	FRIDAY PM PEAK HOUR		SATURDAY PM PEAK HOUR	
	W/O PROJECT	WITH PROJECT	W/O PROJECT	WITH PROJECT
SR29-128/ Zinfandel Lane	F-282.9/ F-1804.5 [1]	F-282.9/ F-1804.5	F-143.9/ F-1301.3	F-143.9/ F-1301.3
Zinfandel Lane/ Project Access	B-10.6 [2]	B-10.7	B-10.7	B-10.8
Silverado Trail/ Zinfandel Lane	F-387.1 [3]	F-387.1	F-115.8	F-115.8

YEAR 2025 HARVEST

LOCATION	FRIDAY PM PEAK HOUR		SATURDAY PM PEAK HOUR	
	W/O PROJECT	WITH PROJECT	W/O PROJECT	WITH PROJECT
SR29-128/ Zinfandel Lane	F-958.5/ F-3454.1 [1]	F-958.5/ F-3454.1	F-322.6/ F-2093.8	F-322.6/ F-2093.8
Zinfandel Lane/ Project Access	B-10.8 [2]	B-11.0	B-14.7	C-15.1
Silverado Trail/ Zinfandel Lane	F-654.6 [3]	F-654.6	F-225.1	F-225.1

YEAR 2030 (CUMULATIVE) HARVEST

LOCATION	FRIDAY PM PEAK HOUR		SATURDAY PM PEAK HOUR	
	W/O PROJECT	WITH PROJECT	W/O PROJECT	WITH PROJECT
SR29-128/ Zinfandel Lane	F-1920.2/ F-5880.5 [1]	F-1920.2/ F-5880.5	F-724.6/ F-3856.1	F-724.6/ F-3856.1
Zinfandel Lane/ Project Access	B-11.0 [2]	B-11.2	C-15.4	C-15.8
Silverado Trail/ Zinfandel Lane	F-954.5 [3]	F-954.5	F- 339.7	F-339.7

[1]Unsignalized level of service – control delay in seconds: Zinfandel Lane. Eastbound stop sign controlled approach to SR 29-128/Westbound approach to SR29-128.

[2]Unsignalized level of service – control delay in seconds: Southbound Project Access to Zinfandel Lane.

[3]Unsignalized level of service – control delay in seconds: Eastbound Zinfandel Ln approach to Silverado Trail.

6th Edition Highway Capacity Manual (HCM) Analysis Methodology for unsignalized intersections (2017)

Source: Crane Transportation Group

ARTERIAL LEVEL OF SERVICE

YEAR 2019 HARVEST

LOCATION	FRIDAY PM PEAK HOUR					SATURDAY PM PEAK HOUR				
	W/O PROJECT		WITH PROJECT		% Increase in 2-Way Volume due to Project	W/O PROJECT		WITH PROJECT		% Increase in 2-Way Volume due to Project
	NB	SB	NB	SB		NB	SB	NB	SB	
SR29-128 north of Zinfandel Ln	E-.63[(1)]	E-.71	E-.63	E-.71	0%	D-.54	E-.66	D-.54	E-.66	0%
SR29-128 south of Zinfandel Ln	E-.66[(1)]	E-.66	E-.66	E-.66	0%	D-.58	E-.65	D-.58	E-.65	0%
Silverado Trail north of Zinfandel	C-.39[(1)]	E-.67	C-.39	E-.67	0%	C-.36	D-.47	C-.36	D-.47	0%
Silverado Trail south of Zinfandel	C-.34[(1)]	E-.75	C-.34	E-.75	.1%	C-.33	D-.50	C-.33	D-.50	.1%
	EB	WB	EB	WB		EB	WB	EB	WB	
Zinfandel Ln west of Project	B-.20[(1)]	A-.10	B-.20	A-.10	N/A	A-.18	A-.12	A-.18	A-.12	N/A
Zinfandel Ln east of Project	B-.20[(1)]	A-.10	B-.20	A-.10	N/A	A-.18	A-.12	A-.18	A-.12	N/A

YEAR 2025 HARVEST

LOCATION	FRIDAY PM PEAK HOUR					SATURDAY PM PEAK HOUR				
	W/O PROJECT		WITH PROJECT		% Increase in 2-Way Volume due to Project	W/O PROJECT		WITH PROJECT		% Increase in 2-Way Volume due to Project
	NB	SB	NB	SB		NB	SB	NB	SB	
SR29-128 north of Zinfandel Ln	E-.70[(1)]	E-.79	E-.70	E-.79	0%	E-.59	E-.72	E-.59	E-.72	0%
SR29-128 south of Zinfandel Ln	E-.73[(1)]	E-.74	E-.73	E-.74	0%	E-.63	E-.70	E-.63	E-.70	0%
Silverado Trail north of Zinfandel	C-.43[(1)]	E-.74	C-.43	E-.74	0%	C-.40	D-.52	C-.40	D-.52	0%
Silverado Trail South of Zinfandel	C-.38[(1)]	E-.83	C-.38	E-.83	.1%	C-.37	E-.55	C-.37	E-.55	.1%
	EB	WB	EB	WB		EB	WB	EB	WB	
Zinfandel Ln west of Project	B-.21[(1)]	A-.11	B-.21	A-.11	N/A	A-.19	A-.13	A-.19	A-.14	N/A
Zinfandel Ln east of Project	B-.24[(1)]	A-.11	B-.24	A-.11	N/A	A-.19	A-.13	A-.19	A-.14	N/A

TABLE 3 (Page 2 of 2)

ARTERIAL LEVEL OF SERVICE

YEAR 2030 (CUMULATIVE) HARVEST

LOCATION	FRIDAY PM PEAK HOUR					SATURDAY PM PEAK HOUR				
	W/O PROJECT		WITH PROJECT		% Increase in 2-Way Increment of Growth 2019-30	W/O PROJECT		WITH PROJECT		% Increase in 2-Way Increment of Growth 2019-30
	NB	SB	NB	SB		NB	SB	NB	SB	
SR29-128 north of Zinfandel Ln	E-.75[(1)]	E-.86	E-.75	E-.86	0%	E-.64	E-.80	E-.64	E-.80	.0%
SR29-128 south of Zinfandel Ln	E-.85[(1)]	E-.80	E-.85	E-.80	0%	E-.69	E-.78	E-.69	E-.78	0%
Silverado Trail north of Zinfandel	D-.46[(1)]	E-.80	D-.46	E-.80	0%	C-.43	D-.56	C-.43	D-.56	0%
Silverado Trail south of Zinfandel	C-.41[(1)]	E-.89	C-.41	E-.89	.3%	C-.40	D-.59	C-.40	D-.59	.4%
	EB	WB	EB	WB		EB	WB	EB	WB	
Zinfandel Ln west of Project	B-.23[(1)]	A-.11	B-.23	A-.11	N/A	B-.21	A-.14	B-.21	A-.14	N/A
Zinfandel Ln east of Project	B-.25[(1)]	A-.12	B-.25	A-.12	N/A	B-.20	A-.14	B-.20	A-.14	N/A

[(1)] Level of service – demand/capacity
N/A – LOS A-D does not require % increase information
Highway Capacity Manual, 6th Edition (2017) analysis methodology

Source: Crane Transportation Group

TABLE 4 (Page 1 of 2)

RURAL SIGNAL WARRANT EVALUATION

Zinfandel Lane/State Route 29

Do Volumes meet Caltrans Rural Warrant #3 Volume Criteria?

YEAR 2019

FRIDAY PM PEAK HOUR		SATURDAY PM PEAK HOUR	
WITHOUT PROJECT	WITH PROJECT	WITHOUT PROJECT	WITH PROJECT
Yes	Yes	Yes	Yes

YEAR 2025

FRIDAY PM PEAK HOUR		SATURDAY PM PEAK HOUR	
WITHOUT PROJECT	WITH PROJECT	WITHOUT PROJECT	WITH PROJECT
Yes	Yes	Yes	Yes

CUMULATIVE (YEAR 2030)

FRIDAY PM PEAK HOUR		SATURDAY PM PEAK HOUR	
WITHOUT PROJECT	WITH PROJECT	WITHOUT PROJECT	WITH PROJECT
Yes	Yes	Yes	Yes

TABLE 4 (Page 2 of 2)

RURAL SIGNAL WARRANT EVALUATION

Zinfandel Lane/Silverado Trail

Do Volumes meet Caltrans Rural Warrant #3 Volume Criteria?

YEAR 2019

FRIDAY PM PEAK HOUR		SATURDAY PM PEAK HOUR	
WITHOUT PROJECT	WITH PROJECT	WITHOUT PROJECT	WITH PROJECT
Yes	Yes	Yes	Yes

YEAR 2025

FRIDAY PM PEAK HOUR		SATURDAY PM PEAK HOUR	
WITHOUT PROJECT	WITH PROJECT	WITHOUT PROJECT	WITH PROJECT
Yes	Yes	Yes	Yes

CUMULATIVE (YEAR 2030)

FRIDAY PM PEAK HOUR		SATURDAY PM PEAK HOUR	
WITHOUT PROJECT	WITH PROJECT	WITHOUT PROJECT	WITH PROJECT
Yes	Yes	Yes	Yes

Source: Crane Transportation Group

TABLE 5

PROJECT TRIP GENERATION

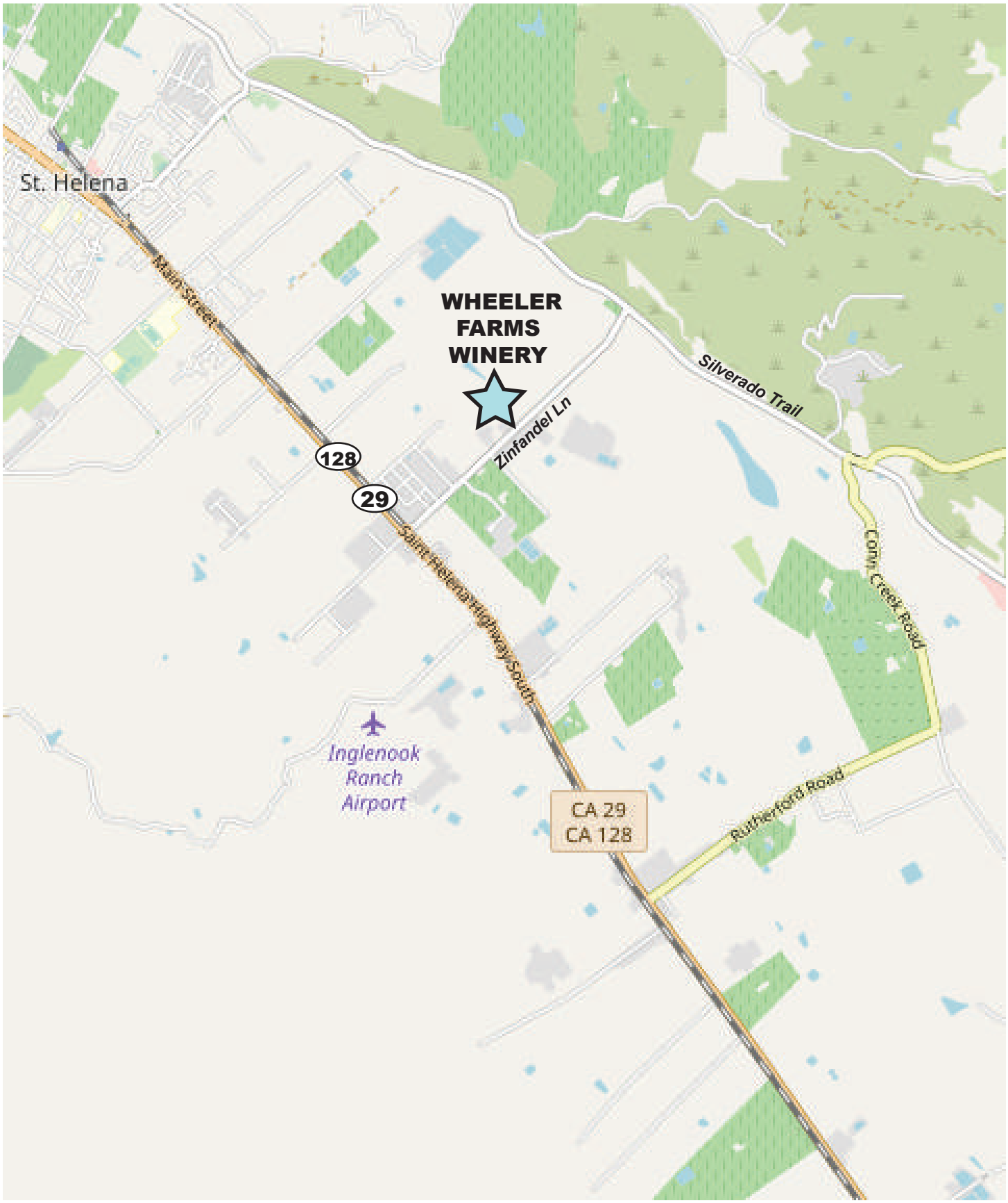
	Daily Trips			Maximum PM Hourly % of Daily 2-Way Traffic**	Resultant Project PM Peak Hour 2-Way Trip Generation
	Existing*	Existing* +Project	Increase Due to Project		
Friday	**88**	**93**	**5**	**20%**	**1**
Saturday	**86**	**91**	**5**	**19%**	**1**

* Napa County Winery Trip Generation Worksheets

** 2 Friday and 2 Saturday 24-hour Traffic Counts of the Winery driveway - October-November 2019

Source: Crane Transportation Group

Figures



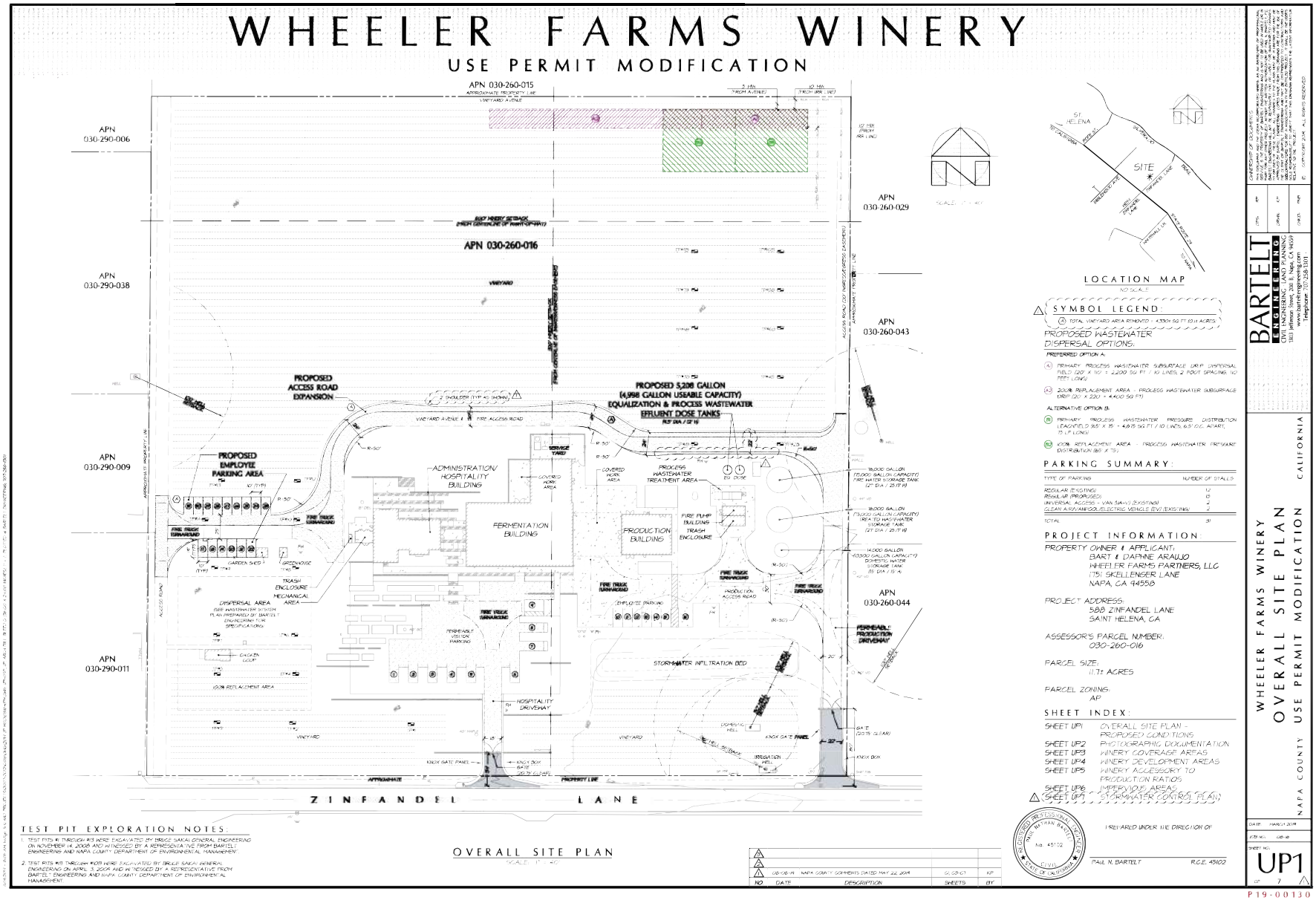
Wheeler Farms Winery Use Permit Modification 2020 Traffic Study

CRANE TRANSPORTATION GROUP

Figure 1
Area Map

CRANE TRANSPORTATION GROUP

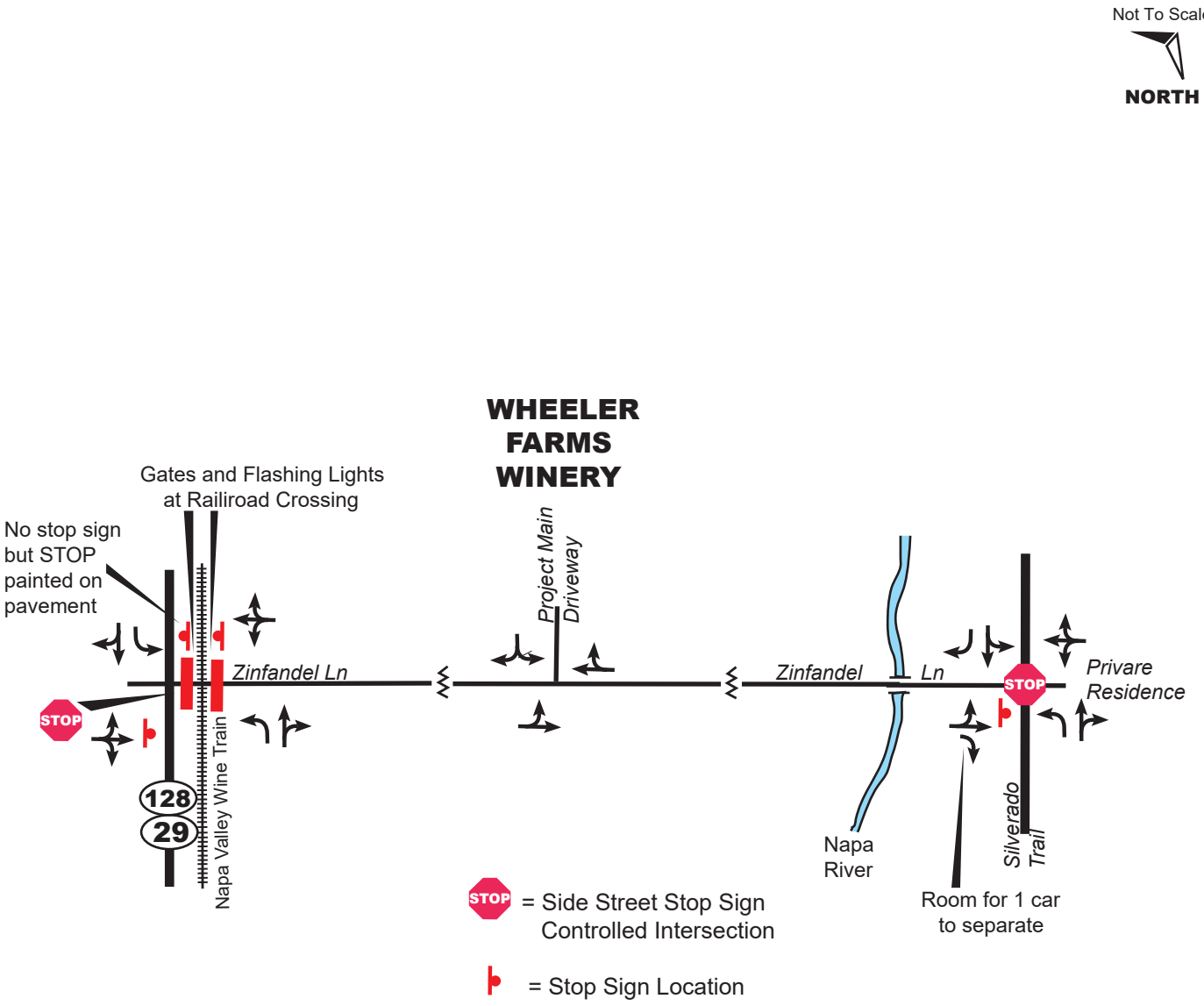
Figure 2
Site Specific Air Photo



CRANE TRANSPORTATION GROUP

Figure 3

Site Plan

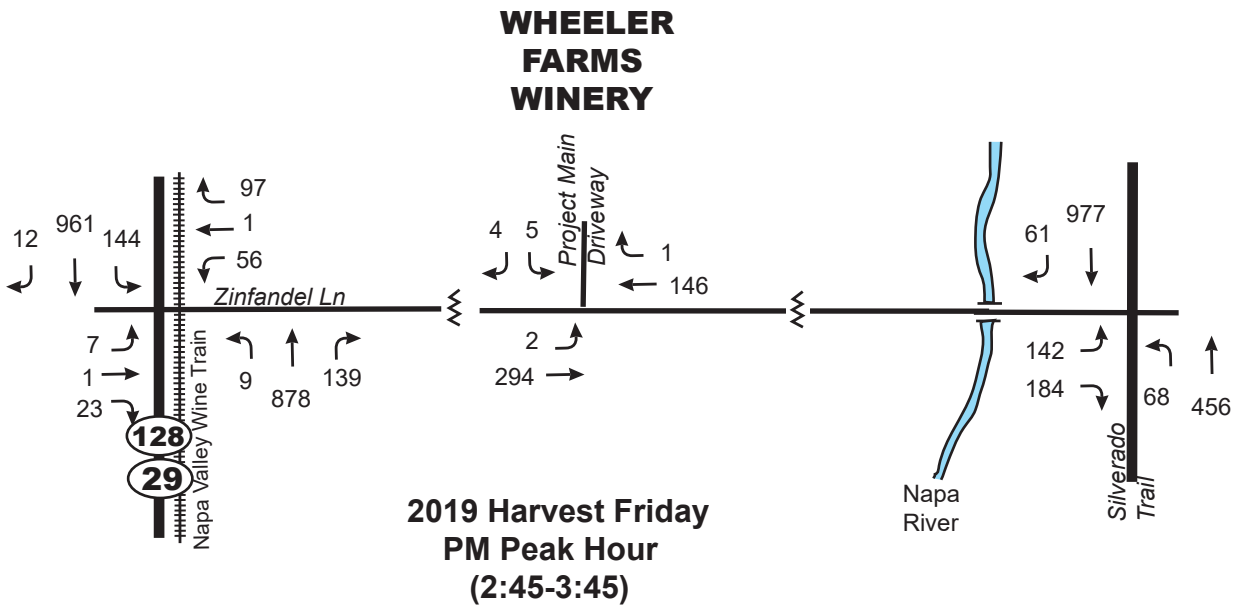


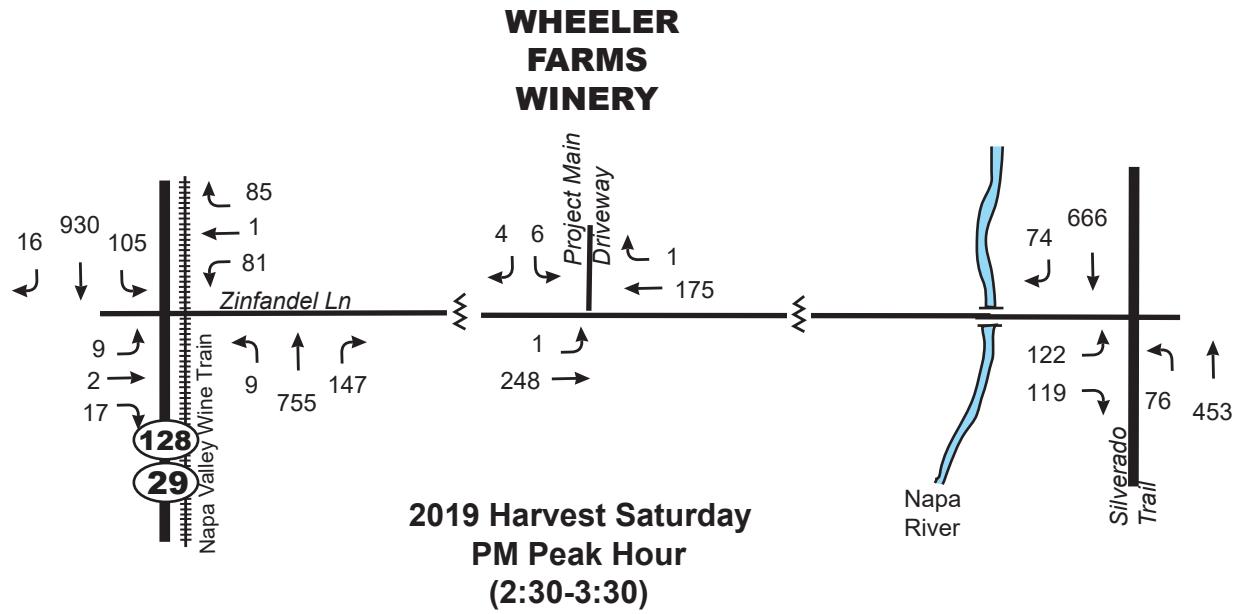
CRANE TRANSPORTATION GROUP

Figure 4
Intersection Control and Lane Geometrics

Not To Scale

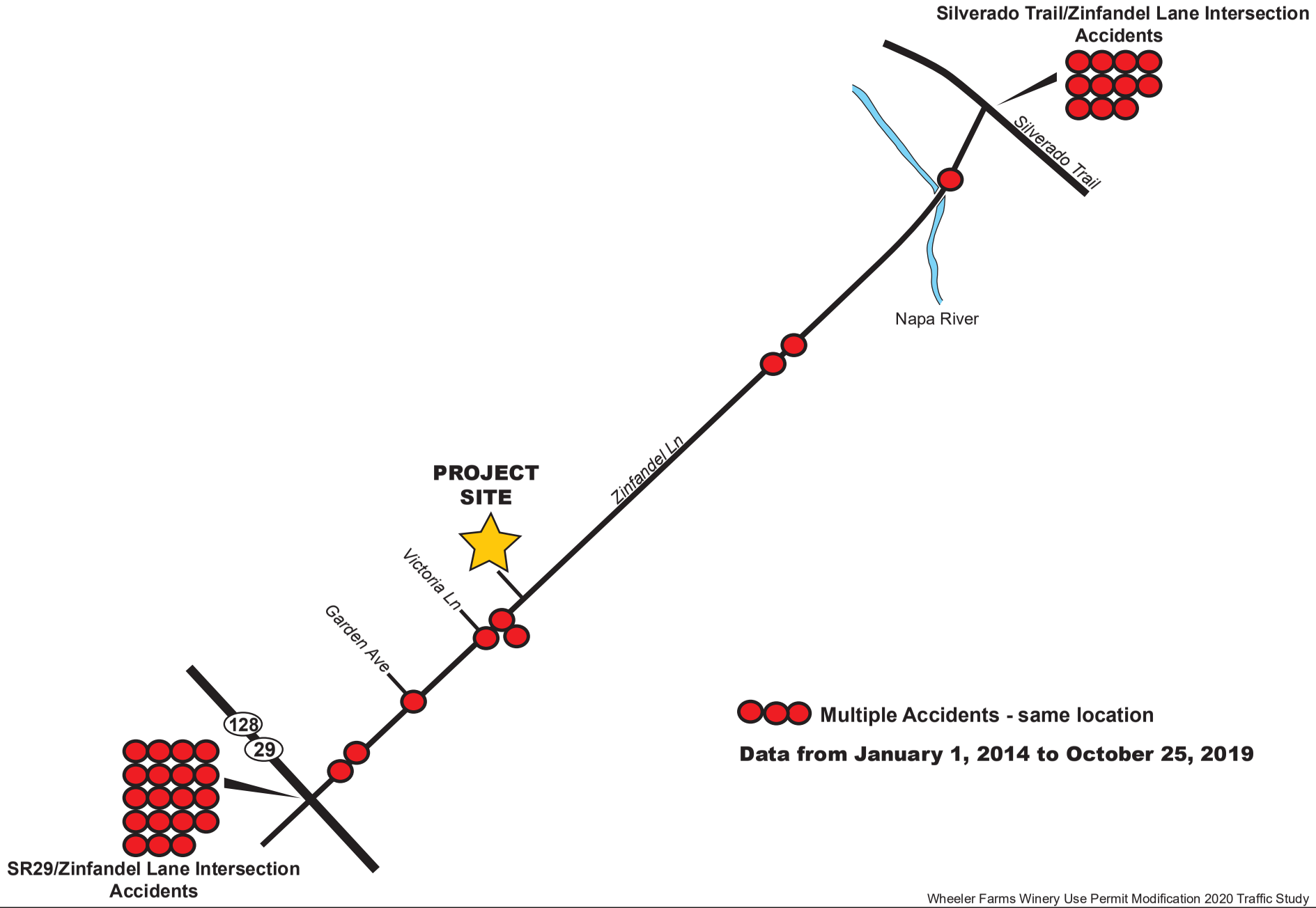
NORTH





CRANE TRANSPORTATION GROUP

Figure 5
2019 Harvest without Project
Friday & Saturday PM Peak Hour Volumes



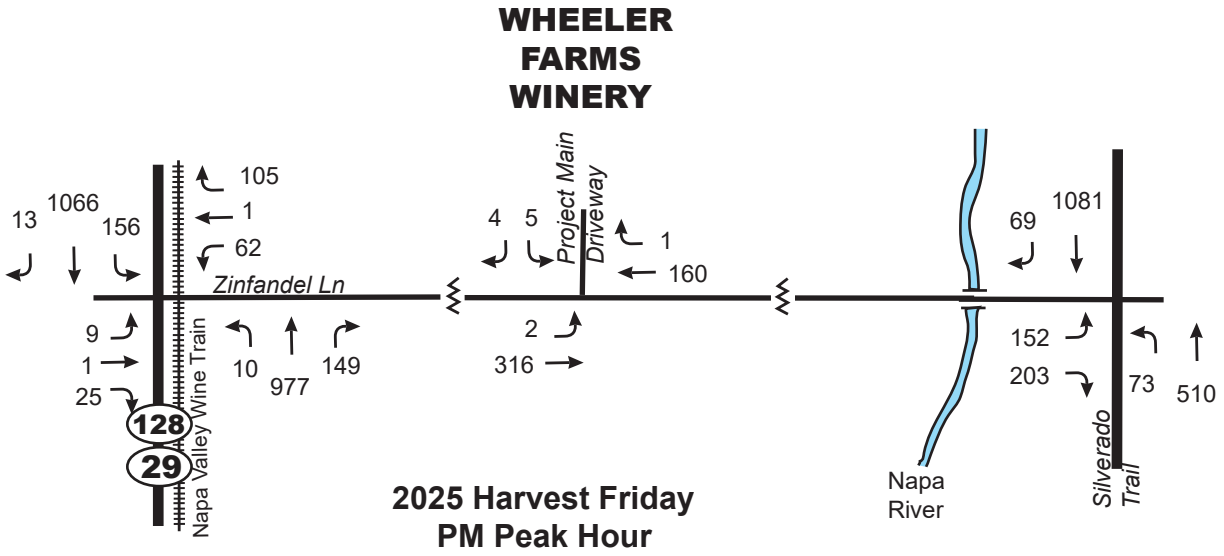
CRANE TRANSPORTATION GROUP

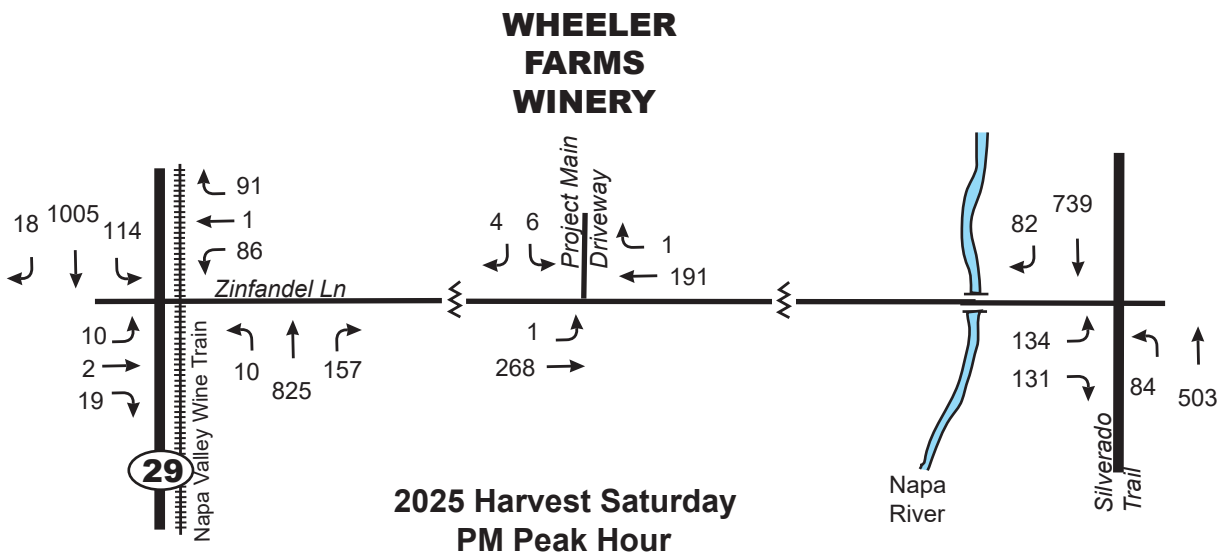
Figure 6

Accidents on Zinfandel Lane between SR29 and Silverado Trail - 2014-2019

Not To Scale

NORTH



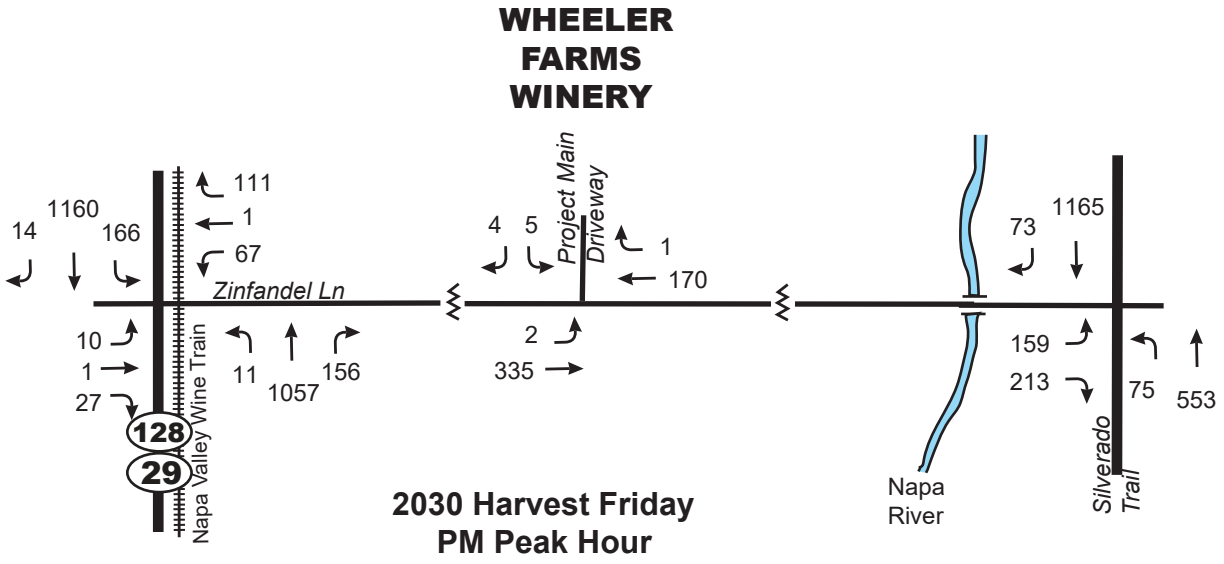


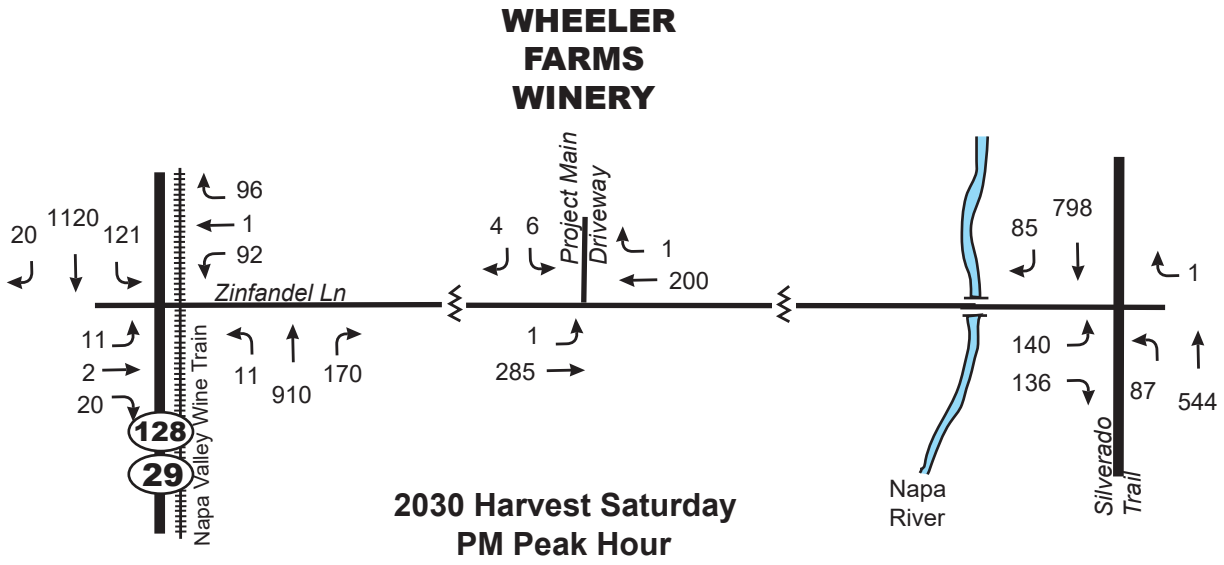
CRANE TRANSPORTATION GROUP

Figure 7
2025 Harvest without Project
Friday & Saturday PM Peak Hour Volumes

Not To Scale

NORTH





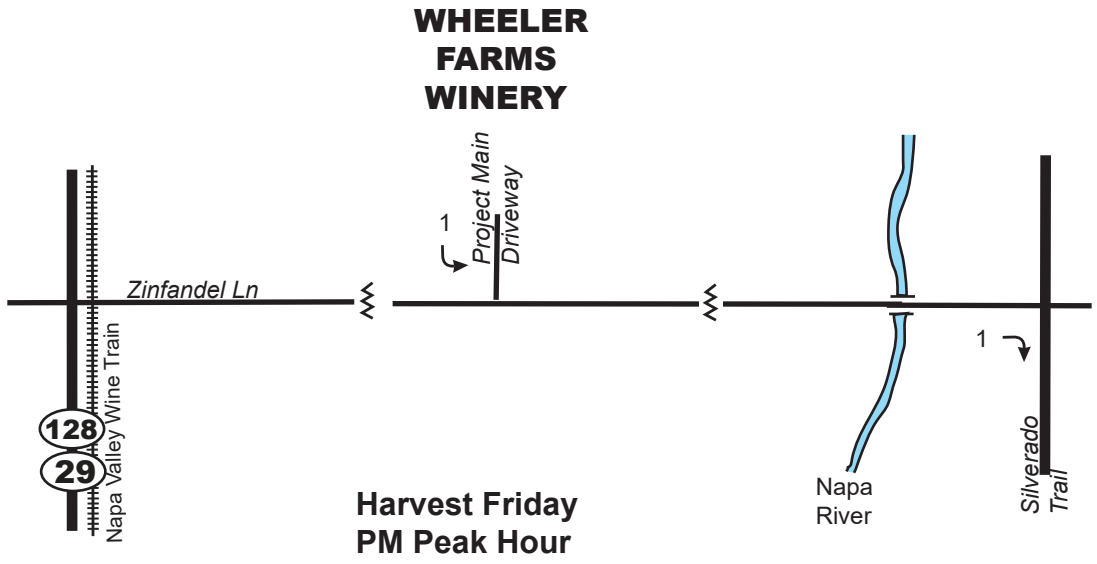
CRANE TRANSPORTATION GROUP

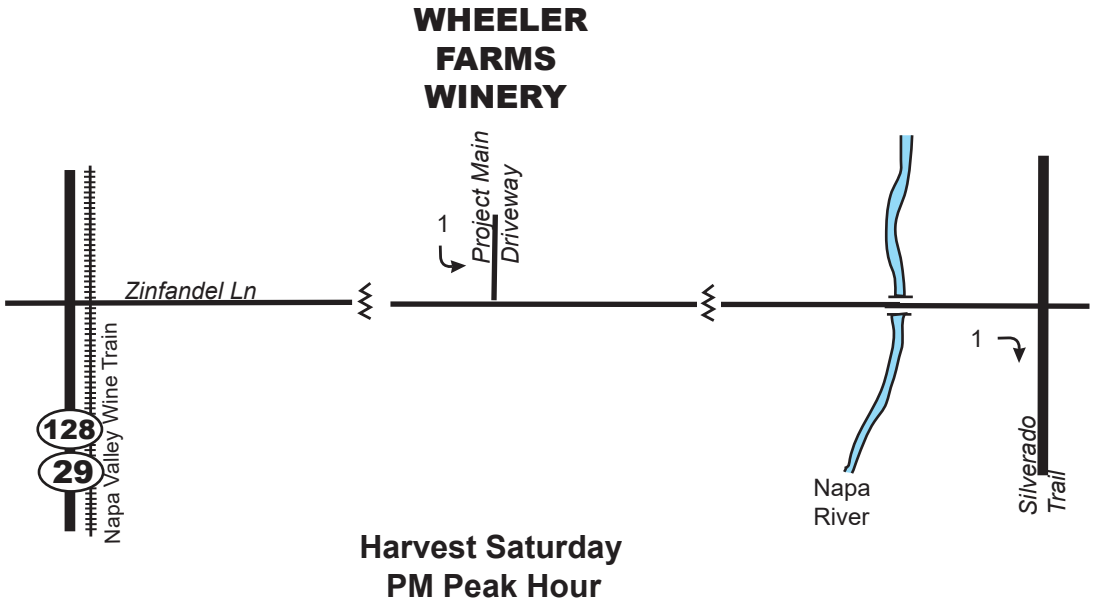
Figure 8

Cumulative (Year 2030) Harvest (without Project)
Friday & Saturday PM Peak Hour Volumes

Not To Scale

NORTH

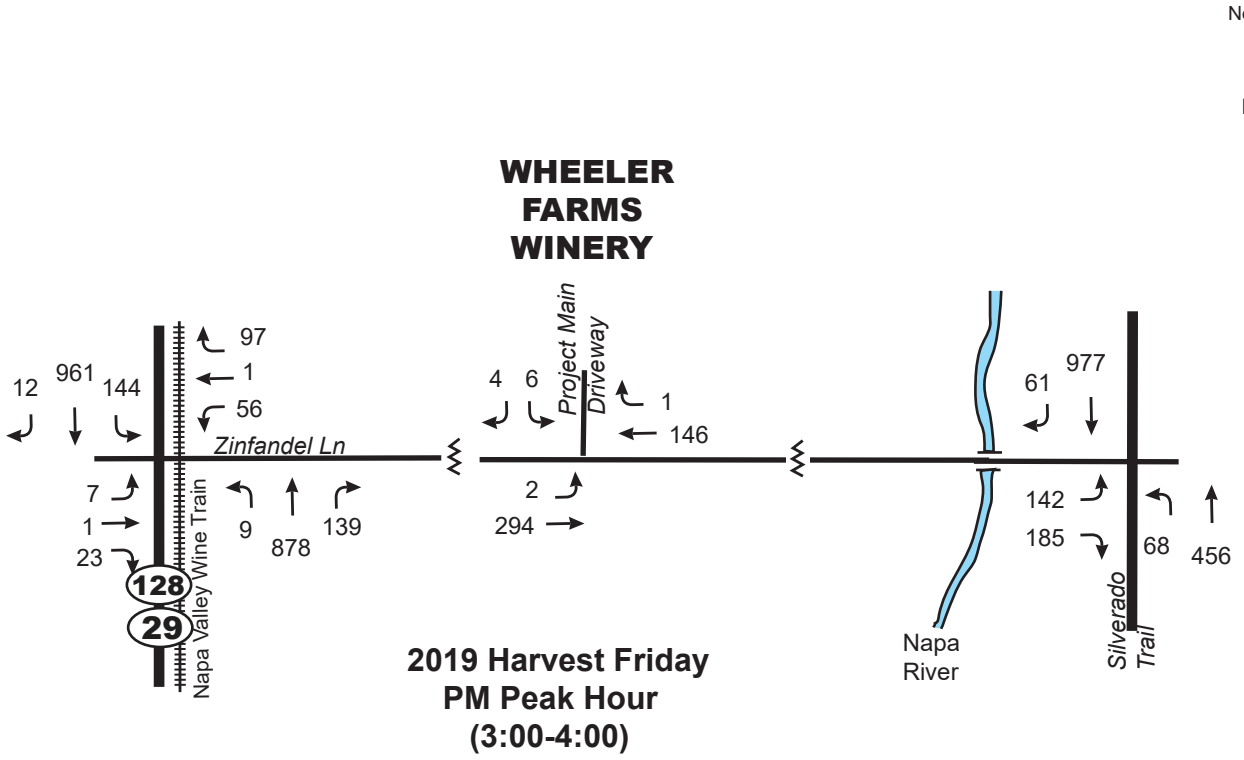


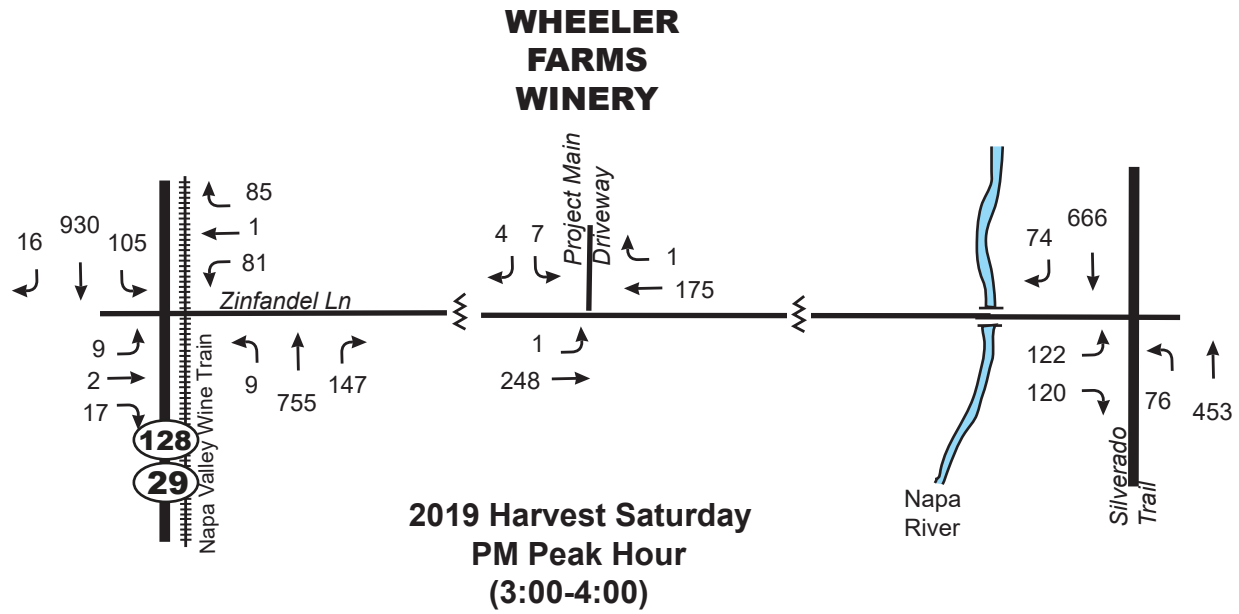


CRANE TRANSPORTATION GROUP

Figure 9

Friday & Saturday PM Peak Hour Project Increment Volumes



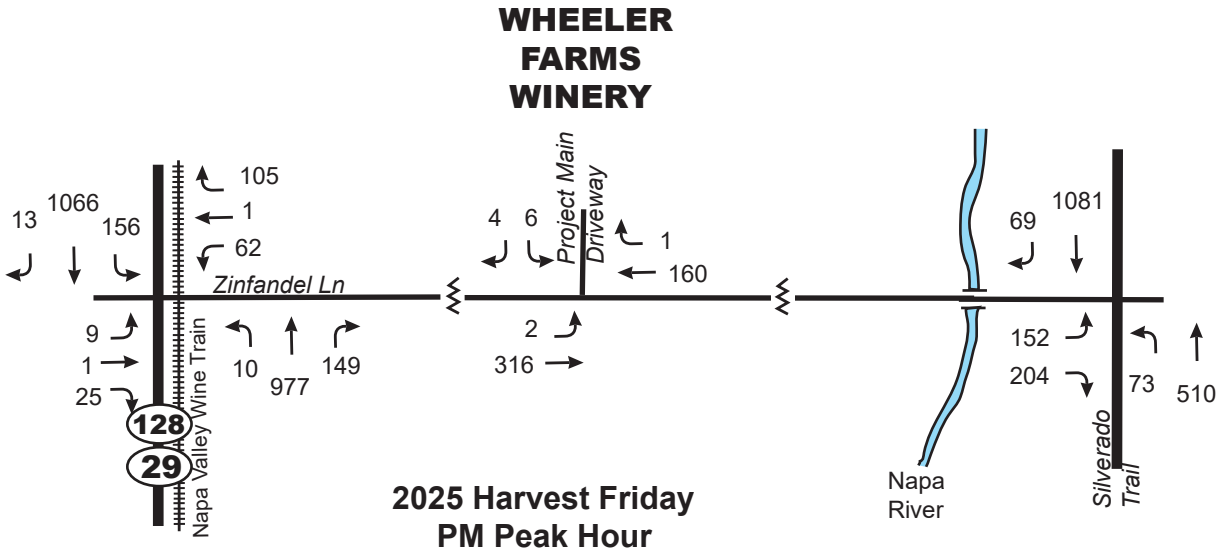


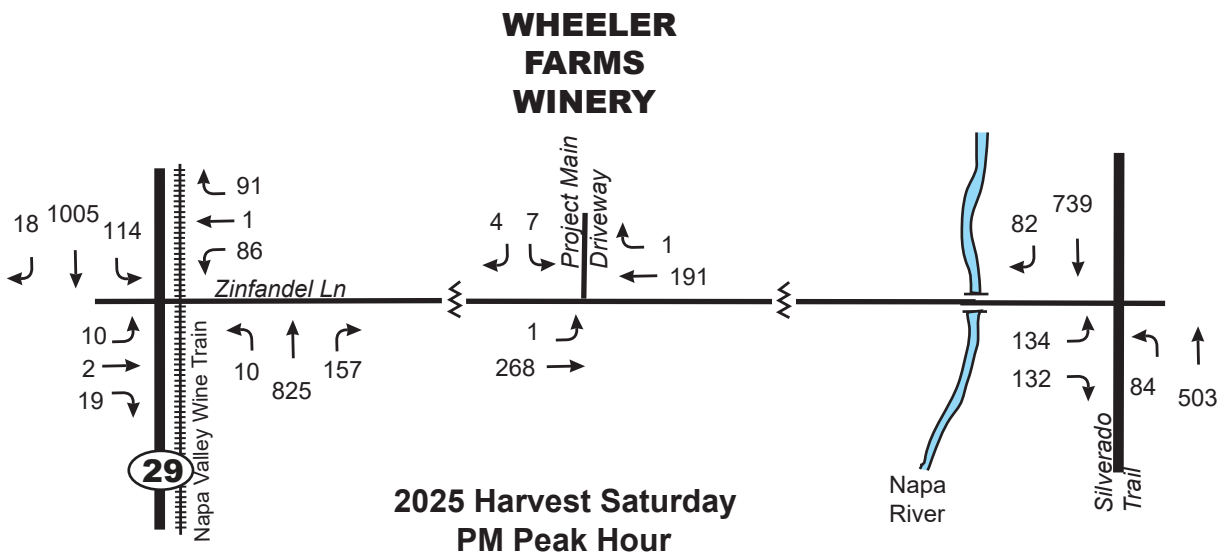
CRANE TRANSPORTATION GROUP

Figure 10
2019 Harvest with Project
Friday & Saturday PM Peak Hour Volumes

Not To Scale

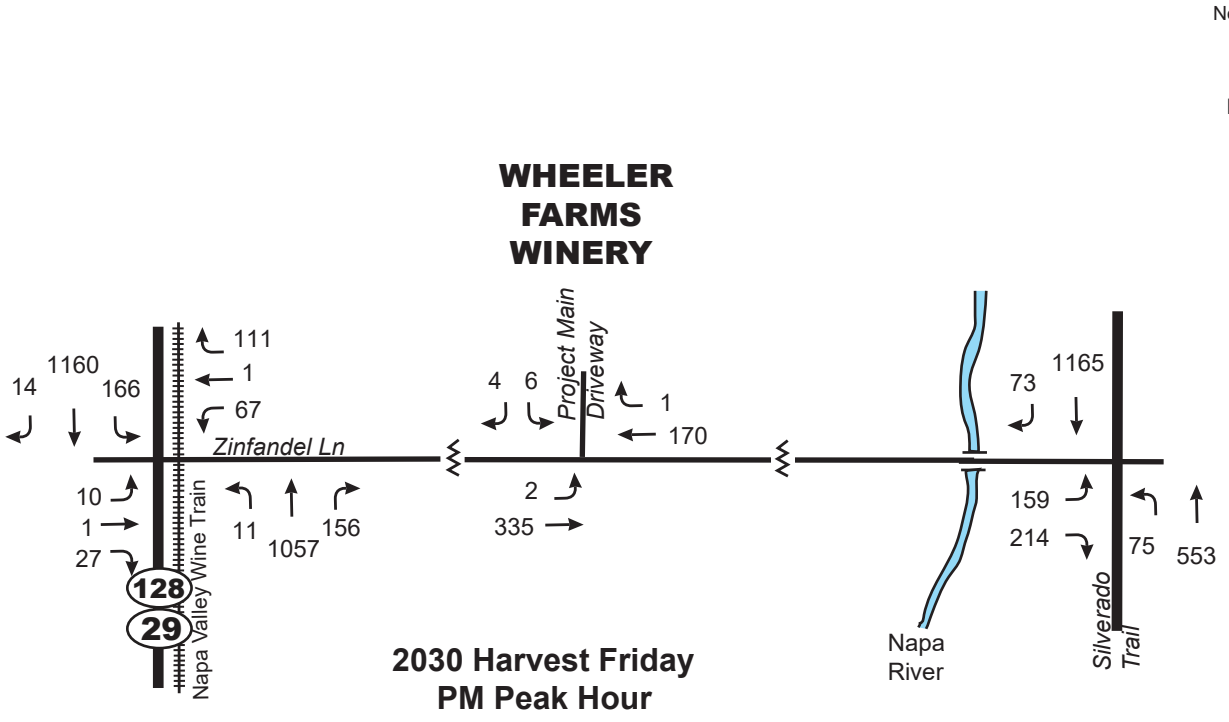
NORTH

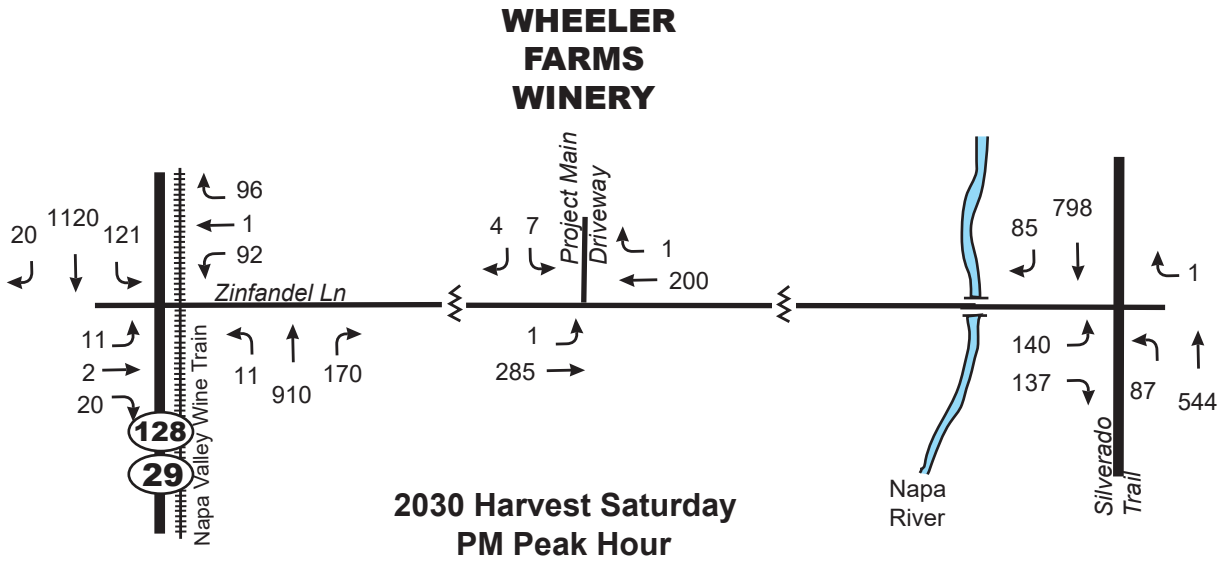




CRANE TRANSPORTATION GROUP

Figure 11
2025 Harvest with Project
Friday & Saturday PM Peak Hour Volumes





CRANE TRANSPORTATION GROUP

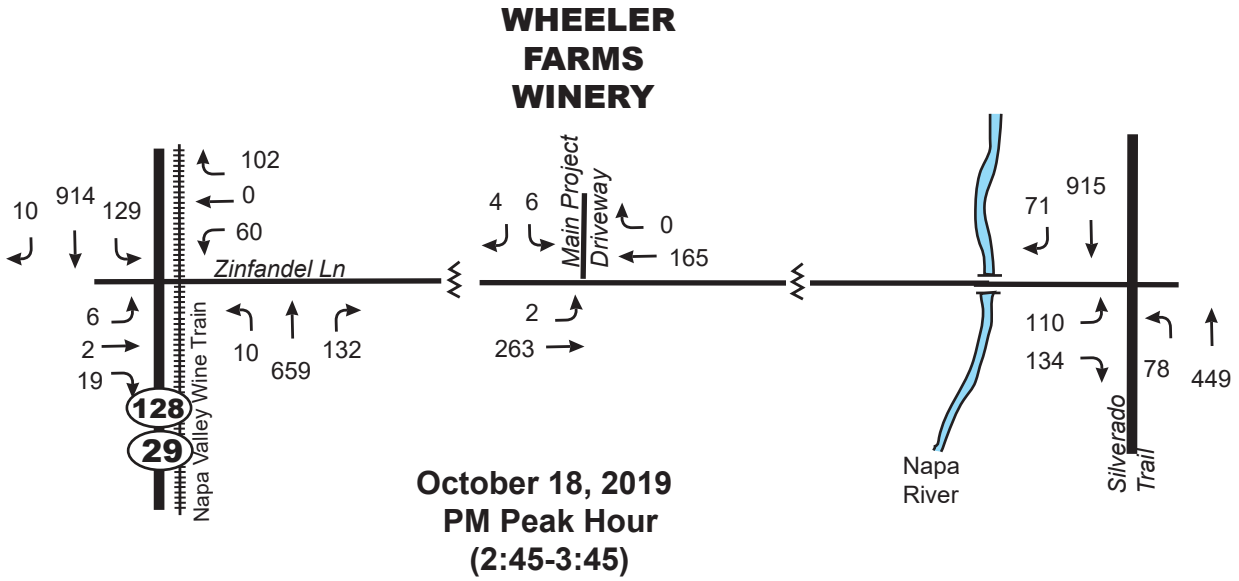
Figure 12
Cumulative (Year 2030) Harvest (with Project)
Friday & Saturday PM Peak Hour Volumes

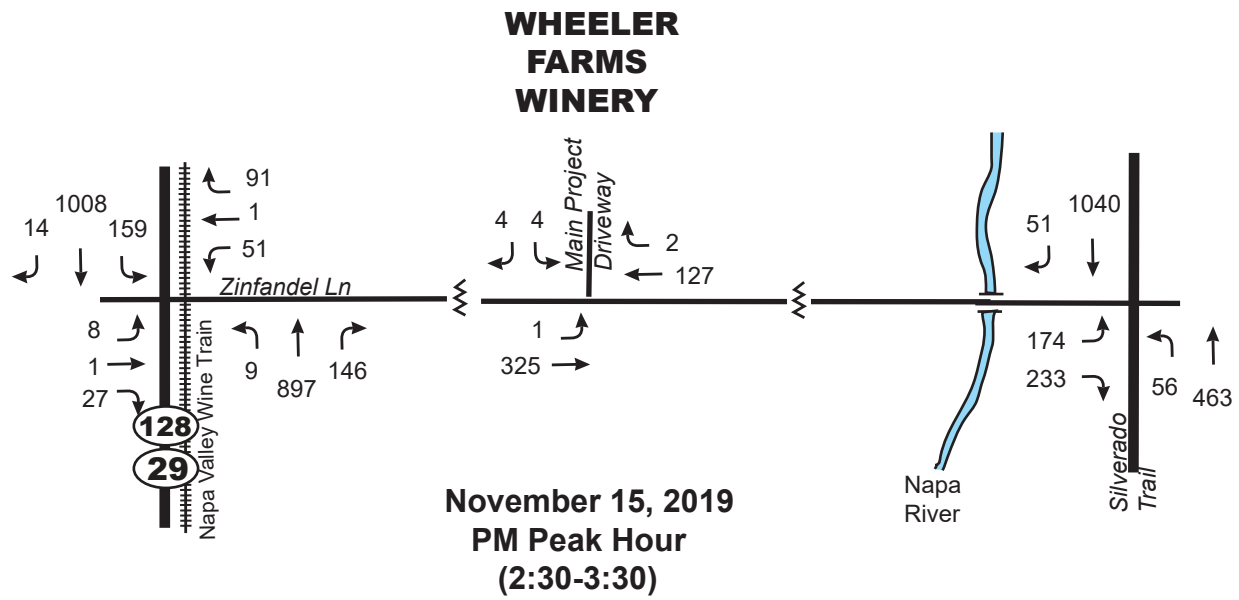
Appendices

Appendix A

Not To Scale

NORTH





November volumes presented incorporate 15% seasonal adjustment

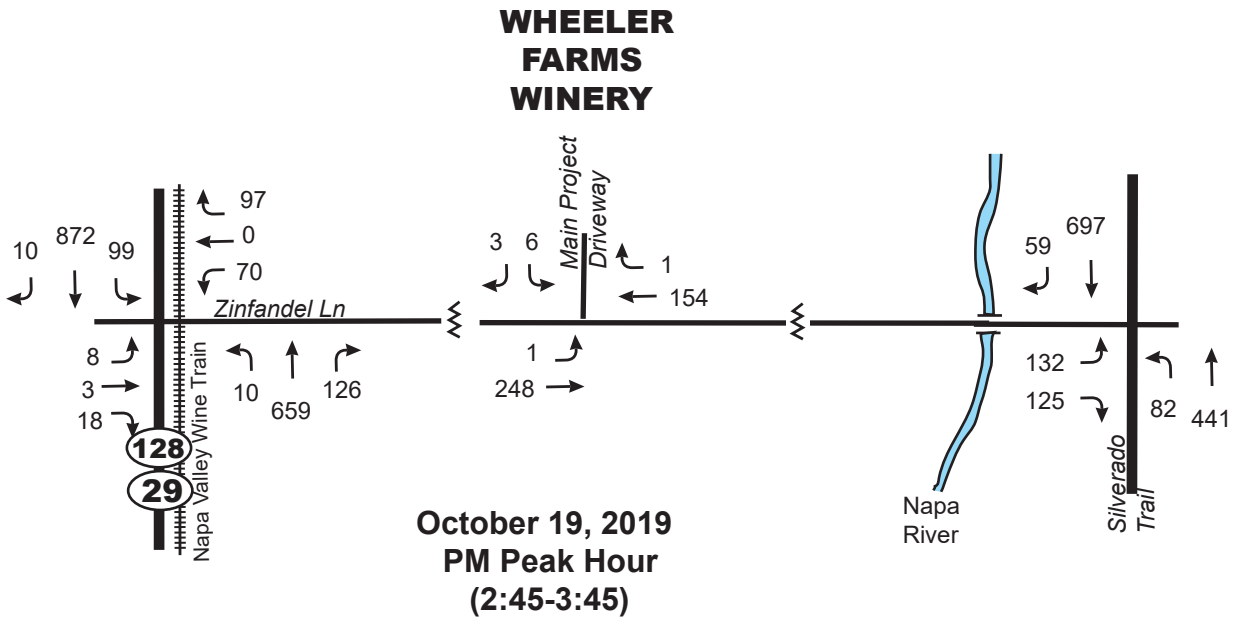
Figure A-1

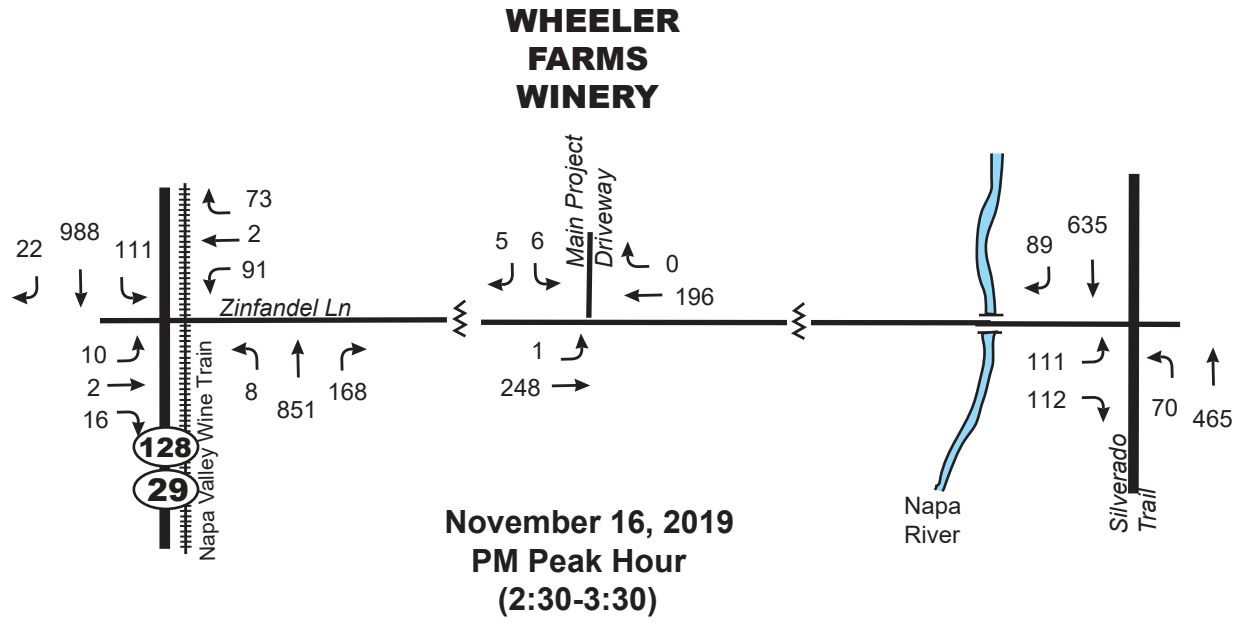
Existing Friday PM Peak Hour Volumes
Friday Oct 18 & Nov 15, 2019 (3:00-4:00)

CRANE TRANSPORTATION GROUP

Not To Scale

NORTH





November volumes presented incorporate 15% seasonal adjustment

Figure A-2

Existing Saturday PM Peak Hour Volumes
Saturday Oct 19 & Nov 16, 2019 (3:00-4:00)

CRANE TRANSPORTATION GROUP

Vehicle Classification Report Summary

Location: Silverado Trail S, N/O Zinfandel Ln

Count Direction: Northbound / Southbound

Date Range: 10/18/2019 to 10/19/2019

Site Code: 01

	FHWA Vehicle Classification													Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
Study Total														
Northbound	92	9,885	2,763	32	1,515	50	0	17	36	6	20	2	11	14,429
Percent	0.6%	68.5%	19.1%	0.2%	10.5%	0.3%	0.0%	0.1%	0.2%	0.0%	0.1%	0.0%	0.1%	100%
Southbound	100	9,890	2,494	35	1,183	66	0	14	40	7	15	3	10	13,857
Percent	0.7%	71.4%	18.0%	0.3%	8.5%	0.5%	0.0%	0.1%	0.3%	0.1%	0.1%	0.0%	0.1%	100%
Total	192	19,775	5,257	67	2,698	116	0	31	76	13	35	5	21	28,286
Percent	0.7%	69.9%	18.6%	0.2%	9.5%	0.4%	0.0%	0.1%	0.3%	0.0%	0.1%	0.0%	0.1%	100%

FHWA Vehicle Classification	
Class 1 - Motorcycles	Class 8 - Four or Fewer Axle Single-Trailer Trucks
Class 2 - Passenger Cars	Class 9 - Five-Axle Single-Trailer Trucks
Class 3 - Other Two-Axle, Four-Tire Single Unit Vehicles	Class 10 - Six or More Axle Single-Trailer Trucks
Class 4 - Buses	Class 11 - Five or fewer Axle Multi-Trailer Trucks
Class 5 - Two-Axle, Six-Tire, Single-Unit Trucks	Class 12 - Six-Axle Multi-Trailer Trucks
Class 6 - Three-Axle Single-Unit Trucks	Class 13 - Seven or More Axle Multi-Trailer Trucks
Class 7 - Four or More Axle Single-Unit Trucks	

Project Manager: (415) 310-6469
project.manager.ca@idaxdata.com

Vehicle Speed Report Summary

Location: Silverado Trail S, N/O Zinfandel Ln

Count Direction: Northbound / Southbound

Date Range: 10/18/2019 to 10/19/2019

Site Code: 01

	Speed Range (mph)																	Total
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
Study Total																		
Northbound	1	6	22	41	172	766	1,463	1,246	2,600	4,169	2,813	883	186	41	13	4	3	14,429
Percent	0.0%	0.0%	0.2%	0.3%	1.2%	5.3%	10.1%	8.6%	18.0%	28.9%	19.5%	6.1%	1.3%	0.3%	0.1%	0.0%	0.0%	100%
Southbound	1	5	56	94	253	831	1,587	2,619	3,917	2,977	1,150	281	70	5	7	2	2	13,857
Percent	0.0%	0.0%	0.4%	0.7%	1.8%	6.0%	11.5%	18.9%	28.3%	21.5%	8.3%	2.0%	0.5%	0.0%	0.1%	0.0%	0.0%	100%
Total	2	11	78	135	425	1,597	3,050	3,865	6,517	7,146	3,963	1,164	256	46	20	6	5	28,286
Percent	0.0%	0.0%	0.3%	0.5%	1.5%	5.6%	10.8%	13.7%	23.0%	25.3%	14.0%	4.1%	0.9%	0.2%	0.1%	0.0%	0.0%	100%

Total Study Percentile Speed Summary			Total Study Speed Statistics		
Northbound			**Northbound**		
50th Percentile (Median)	51.1	mph	Mean (Average) Speed	49.6	mph
85th Percentile	57.7	mph	10 mph Pace	47.8 - 57.8	mph
95th Percentile	61.3	mph	Percent in Pace	51.4	%
Southbound			**Southbound**		
50th Percentile (Median)	47.0	mph	Mean (Average) Speed	46.2	mph
85th Percentile	53.7	mph	10 mph Pace	43.6 - 53.6	mph
95th Percentile	57.8	mph	Percent in Pace	51.7	%

Project Manager: (415) 310-6469
project.manager.ca@idaxdata.com

Location: Silverado Trail S, N/O Zinfandel Ln
Date Range: 10/25/2019 - 10/31/2019
Site Code: 01

	Friday			Saturday			Sunday			Monday			Tuesday			Wednesday			Thursday			Mid-Week Average		
	10/25/2019			10/26/2019			10/27/2019			10/28/2019			10/29/2019			10/30/2019			10/31/2019					
Time	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total
12:00 AM	34	36	70	51	33	84	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
1:00 AM	20	33	53	37	47	84	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
2:00 AM	27	28	55	19	29	48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
3:00 AM	43	30	73	27	16	43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
4:00 AM	45	28	73	27	28	55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
5:00 AM	172	91	263	107	64	171	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
6:00 AM	411	221	632	285	89	374	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
7:00 AM	434	285	719	187	168	355	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
8:00 AM	**575**	330	**905**	249	198	447	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
9:00 AM	515	307	822	385	273	658	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
10:00 AM	449	339	788	370	298	668	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
11:00 AM	382	**388**	770	**478**	**376**	**854**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
12:00 PM	**546**	486	1,032	**510**	443	953	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
1:00 PM	545	520	1,065	505	523	1,028	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
2:00 PM	526	707	1,233	485	581	1,066	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
3:00 PM	452	**858**	**1,310**	414	670	**1,084**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
4:00 PM	413	827	1,240	274	**708**	982	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
5:00 PM	425	745	1,170	288	622	910	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
6:00 PM	268	381	649	208	387	595	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
7:00 PM	152	179	331	161	237	398	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
8:00 PM	118	118	236	103	127	230	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
9:00 PM	86	96	182	117	121	238	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
10:00 PM	94	101	195	124	111	235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
11:00 PM	57	82	139	104	79	183	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
Total	6,789	7,216	14,005	5,515	6,228	11,743	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
Percent	48%	52%	-	47%	53%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AM Peak	08:00	11:00	08:00	11:00	11:00	11:00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
Vol.	575	388	905	478	376	854	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
PM Peak	12:00	15:00	15:00	12:00	16:00	15:00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
Vol.	546	858	1,310	510	708	1,084	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####

1. Mid-week average includes data between Tuesday and Thursday.

Project Manager: (415) 310-6469
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Vehicle Classification Report Summary

Location: Silverado Trail S, S/O Zinfandel Ln

Count Direction: Northbound / Southbound

Date Range: 10/18/2019 to 10/19/2019

Site Code: 01

	FHWA Vehicle Classification													Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
Study Total														
Northbound	81	7,685	3,566	46	1,830	29	0	28	36	5	25	10	6	13,347
Percent	0.6%	57.6%	26.7%	0.3%	13.7%	0.2%	0.0%	0.2%	0.3%	0.0%	0.2%	0.1%	0.0%	100%
Southbound	110	10,316	2,774	19	1,284	43	0	21	40	10	22	5	11	14,655
Percent	0.8%	70.4%	18.9%	0.1%	8.8%	0.3%	0.0%	0.1%	0.3%	0.1%	0.2%	0.0%	0.1%	100%
Total	191	18,001	6,340	65	3,114	72	0	49	76	15	47	15	17	28,002
Percent	0.7%	64.3%	22.6%	0.2%	11.1%	0.3%	0.0%	0.2%	0.3%	0.1%	0.2%	0.1%	0.1%	100%

FHWA Vehicle Classification	
Class 1 - Motorcycles	Class 8 - Four or Fewer Axle Single-Trailer Trucks
Class 2 - Passenger Cars	Class 9 - Five-Axle Single-Trailer Trucks
Class 3 - Other Two-Axle, Four-Tire Single Unit Vehicles	Class 10 - Six or More Axle Single-Trailer Trucks
Class 4 - Buses	Class 11 - Five or fewer Axle Multi-Trailer Trucks
Class 5 - Two-Axle, Six-Tire, Single-Unit Trucks	Class 12 - Six-Axle Multi-Trailer Trucks
Class 6 - Three-Axle Single-Unit Trucks	Class 13 - Seven or More Axle Multi-Trailer Trucks
Class 7 - Four or More Axle Single-Unit Trucks	

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Vehicle Speed Report Summary

Location: Silverado Trail S, S/O Zinfandel Ln

Count Direction: Northbound / Southbound

Date Range: 10/18/2019 to 10/19/2019

Site Code: 01

	Speed Range (mph)																	Total
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
Study Total																		
Northbound	3	10	7	27	91	247	683	1,366	2,310	3,334	3,117	1,549	441	106	30	16	10	13,347
Percent	0.0%	0.1%	0.1%	0.2%	0.7%	1.9%	5.1%	10.2%	17.3%	25.0%	23.4%	11.6%	3.3%	0.8%	0.2%	0.1%	0.1%	100%
Southbound	3	4	36	75	119	536	1,580	2,468	4,240	3,710	1,419	370	71	15	2	6	1	14,655
Percent	0.0%	0.0%	0.2%	0.5%	0.8%	3.7%	10.8%	16.8%	28.9%	25.3%	9.7%	2.5%	0.5%	0.1%	0.0%	0.0%	0.0%	100%
Total	6	14	43	102	210	783	2,263	3,834	6,550	7,044	4,536	1,919	512	121	32	22	11	28,002
Percent	0.0%	0.0%	0.2%	0.4%	0.7%	2.8%	8.1%	13.7%	23.4%	25.2%	16.2%	6.9%	1.8%	0.4%	0.1%	0.1%	0.0%	100%

Total Study Percentile Speed Summary			Total Study Speed Statistics		
Northbound			**Northbound**		
50th Percentile (Median)	53.0	mph	Mean (Average) Speed	52.3	mph
85th Percentile	60.3	mph	10 mph Pace	49.4 - 59.4	mph
95th Percentile	64.5	mph	Percent in Pace	48.6	%
Southbound			**Southbound**		
50th Percentile (Median)	48.2	mph	Mean (Average) Speed	47.4	mph
85th Percentile	54.5	mph	10 mph Pace	44.6 - 54.6	mph
95th Percentile	58.5	mph	Percent in Pace	54.5	%

Project Manager: (415) 310-6469
project.manager.ca@idaxdata.com

Location: Silverado Trail S, S/O Zinfandel Ln
Date Range: 10/18/2019 - 10/24/2019
Site Code: 01

	Friday			Saturday			Sunday			Monday			Tuesday			Wednesday			Thursday			Mid-Week Average		
	10/18/2019			10/19/2019			10/20/2019			10/21/2019			10/22/2019			10/23/2019			10/24/2019					
Time	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total
12:00 AM	20	33	53	29	28	57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
1:00 AM	22	22	44	19	40	59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
2:00 AM	21	41	62	16	13	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
3:00 AM	40	55	95	24	20	44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
4:00 AM	48	42	90	27	18	45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
5:00 AM	160	105	265	75	79	154	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
6:00 AM	441	197	638	193	122	315	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
7:00 AM	479	288	767	171	144	315	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
8:00 AM	**645**	322	**967**	281	175	456	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
9:00 AM	574	336	910	390	266	656	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
10:00 AM	453	375	828	428	311	739	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
11:00 AM	496	**434**	930	**614**	**375**	**989**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
12:00 PM	499	423	922	663	469	1,132	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
1:00 PM	480	523	1,003	**711**	489	1,200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
2:00 PM	487	669	1,156	645	627	1,272	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
3:00 PM	**514**	**1,065**	**1,579**	522	822	**1,344**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
4:00 PM	480	1,058	1,538	445	845	1,290	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
5:00 PM	450	931	1,381	315	**849**	1,164	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
6:00 PM	289	421	710	203	500	703	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
7:00 PM	169	210	379	139	165	304	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
8:00 PM	117	84	201	116	126	242	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
9:00 PM	88	116	204	90	89	179	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
10:00 PM	63	81	144	96	99	195	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
11:00 PM	39	81	120	61	72	133	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
Total	7,074	7,912	14,986	6,273	6,743	13,016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
Percent	47%	53%	-	48%	52%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AM Peak	08:00	11:00	08:00	11:00	11:00	11:00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
Vol.	645	434	967	614	375	989	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
PM Peak	15:00	15:00	15:00	13:00	17:00	15:00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
Vol.	514	1,065	1,579	711	849	1,344	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####

1. Mid-week average includes data between Tuesday and Thursday.

Project Manager: (415) 310-6469
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Vehicle Classification Report Summary

Location: Zinfandel Ln, W/O Silverado Trail S

Count Direction: Eastbound / Westbound

Date Range: 10/18/2019 to 10/19/2019

Site Code: 03

	FHWA Vehicle Classification													Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
Study Total														
Eastbound	10	3,849	967	13	449	69	0	17	17	2	17	9	0	5,419
Percent	0.2%	71.0%	17.8%	0.2%	8.3%	1.3%	0.0%	0.3%	0.3%	0.0%	0.3%	0.2%	0.0%	100%
Westbound	11	1,716	996	57	597	8	0	5	20	0	12	2	1	3,425
Percent	0.3%	50.1%	29.1%	1.7%	17.4%	0.2%	0.0%	0.1%	0.6%	0.0%	0.4%	0.1%	0.0%	100%
Total	21	5,565	1,963	70	1,046	77	0	22	37	2	29	11	1	8,844
Percent	0.2%	62.9%	22.2%	0.8%	11.8%	0.9%	0.0%	0.2%	0.4%	0.0%	0.3%	0.1%	0.0%	100%

FHWA Vehicle Classification	
Class 1 - Motorcycles	Class 8 - Four or Fewer Axle Single-Trailer Trucks
Class 2 - Passenger Cars	Class 9 - Five-Axle Single-Trailer Trucks
Class 3 - Other Two-Axle, Four-Tire Single Unit Vehicles	Class 10 - Six or More Axle Single-Trailer Trucks
Class 4 - Buses	Class 11 - Five or fewer Axle Multi-Trailer Trucks
Class 5 - Two-Axle, Six-Tire, Single-Unit Trucks	Class 12 - Six-Axle Multi-Trailer Trucks
Class 6 - Three-Axle Single-Unit Trucks	Class 13 - Seven or More Axle Multi-Trailer Trucks
Class 7 - Four or More Axle Single-Unit Trucks	

Project Manager: (415) 310-6469
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Vehicle Speed Report Summary

Location: Zinfandel Ln, W/O Silverado Trail S

Count Direction: Eastbound / Westbound

Date Range: 10/18/2019 to 10/19/2019

Site Code: 03

	Speed Range (mph)																	Total
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
Study Total																		
Eastbound	1	4	5	31	76	274	1,116	1,853	1,381	493	137	39	5	4	0	0	0	5,419
Percent	0.0%	0.1%	0.1%	0.6%	1.4%	5.1%	20.6%	34.2%	25.5%	9.1%	2.5%	0.7%	0.1%	0.1%	0.0%	0.0%	0.0%	100%
Westbound	0	1	5	18	46	130	417	949	1,001	578	197	63	13	3	2	0	2	3,425
Percent	0.0%	0.0%	0.1%	0.5%	1.3%	3.8%	12.2%	27.7%	29.2%	16.9%	5.8%	1.8%	0.4%	0.1%	0.1%	0.0%	0.1%	100%
Total	1	5	10	49	122	404	1,533	2,802	2,382	1,071	334	102	18	7	2	0	2	8,844
Percent	0.0%	0.1%	0.1%	0.6%	1.4%	4.6%	17.3%	31.7%	26.9%	12.1%	3.8%	1.2%	0.2%	0.1%	0.0%	0.0%	0.0%	100%

Total Study Percentile Speed Summary			Total Study Speed Statistics		
Eastbound			**Eastbound**		
50th Percentile (Median)	43.3	mph	Mean (Average) Speed	43.3	mph
85th Percentile	49.2	mph	10 mph Pace	37.9 - 47.9	mph
95th Percentile	53.6	mph	Percent in Pace	62.5	%
Westbound			**Westbound**		
50th Percentile (Median)	45.6	mph	Mean (Average) Speed	45.7	mph
85th Percentile	52.2	mph	10 mph Pace	41.2 - 51.2	mph
95th Percentile	57.0	mph	Percent in Pace	57.5	%

Project Manager: (415) 310-6469
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Location: Zinfandel Ln, W/O Silverado Trail S
Date Range: 10/18/2019 - 10/24/2019
Site Code: 03

	Friday			Saturday			Sunday			Monday			Tuesday			Wednesday			Thursday					
	10/18/2019			10/19/2019			10/20/2019			10/21/2019			10/22/2019			10/23/2019			10/24/2019			Mid-Week Average		
Time	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total
12:00 AM	10	16	26	14	16	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
1:00 AM	15	8	23	7	11	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
2:00 AM	6	19	25	4	7	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
3:00 AM	26	15	41	24	23	47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
4:00 AM	16	19	35	18	16	34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
5:00 AM	70	30	100	32	15	47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
6:00 AM	96	73	169	55	35	90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
7:00 AM	104	122	226	60	40	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
8:00 AM	152	**143**	295	98	85	183	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
9:00 AM	176	120	296	120	103	223	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
10:00 AM	**204**	135	339	170	102	272	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
11:00 AM	203	138	**341**	**182**	**136**	**318**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
12:00 PM	218	147	365	195	152	347	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
1:00 PM	247	132	379	255	**185**	**440**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
2:00 PM	249	129	378	**281**	139	420	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
3:00 PM	262	**165**	427	246	157	403	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
4:00 PM	**347**	109	**456**	210	116	326	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
5:00 PM	240	88	328	205	80	285	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
6:00 PM	107	47	154	129	57	186	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
7:00 PM	50	36	86	49	30	79	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
8:00 PM	37	30	67	39	38	77	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
9:00 PM	39	18	57	29	28	57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
10:00 PM	40	25	65	25	35	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
11:00 PM	31	29	60	27	26	53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
Total	2,945	1,793	4,738	2,474	1,632	4,106	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
Percent	62%	38%	-	60%	40%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AM Peak	10:00	08:00	11:00	11:00	11:00	11:00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
Vol.	204	143	341	182	136	318	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
PM Peak	16:00	15:00	16:00	14:00	13:00	13:00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
Vol.	347	165	456	281	185	440	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####

1. Mid-week average includes data between Tuesday and Thursday.

Project Manager: (415) 310-6469
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Vehicle Classification Report Summary

Location: Silverado Trail S, N/O Zinfandel Ln

Count Direction: Northbound / Southbound

Date Range: 10/25/2019 to 10/26/2019

Site Code: 01

	FHWA Vehicle Classification													Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
Study Total														
Northbound	52	8,075	2,484	18	1,546	38	0	20	37	6	17	4	7	12,304
Percent	0.4%	65.6%	20.2%	0.1%	12.6%	0.3%	0.0%	0.2%	0.3%	0.0%	0.1%	0.0%	0.1%	100%
Southbound	109	9,330	2,535	23	1,300	52	0	22	39	7	13	3	11	13,444
Percent	0.8%	69.4%	18.9%	0.2%	9.7%	0.4%	0.0%	0.2%	0.3%	0.1%	0.1%	0.0%	0.1%	100%
Total	161	17,405	5,019	41	2,846	90	0	42	76	13	30	7	18	25,748
Percent	0.6%	67.6%	19.5%	0.2%	11.1%	0.3%	0.0%	0.2%	0.3%	0.1%	0.1%	0.0%	0.1%	100%

FHWA Vehicle Classification	
Class 1 - Motorcycles	Class 8 - Four or Fewer Axle Single-Trailer Trucks
Class 2 - Passenger Cars	Class 9 - Five-Axle Single-Trailer Trucks
Class 3 - Other Two-Axle, Four-Tire Single Unit Vehicles	Class 10 - Six or More Axle Single-Trailer Trucks
Class 4 - Buses	Class 11 - Five or fewer Axle Multi-Trailer Trucks
Class 5 - Two-Axle, Six-Tire, Single-Unit Trucks	Class 12 - Six-Axle Multi-Trailer Trucks
Class 6 - Three-Axle Single-Unit Trucks	Class 13 - Seven or More Axle Multi-Trailer Trucks
Class 7 - Four or More Axle Single-Unit Trucks	

Project Manager: (415) 310-6469
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Vehicle Speed Report Summary

Location: Silverado Trail S, N/O Zinfandel Ln

Count Direction: Northbound / Southbound

Date Range: 10/25/2019 to 10/26/2019

Site Code: 01

	Speed Range (mph)																	Total
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
Study Total																		
Northbound	0	1	5	39	140	698	1,110	857	1,793	3,266	2,976	1,114	236	57	6	3	3	12,304
Percent	0.0%	0.0%	0.0%	0.3%	1.1%	5.7%	9.0%	7.0%	14.6%	26.5%	24.2%	9.1%	1.9%	0.5%	0.0%	0.0%	0.0%	100%
Southbound	154	175	147	168	216	725	1,472	2,174	3,596	3,009	1,256	277	56	12	4	2	1	13,444
Percent	1.1%	1.3%	1.1%	1.2%	1.6%	5.4%	10.9%	16.2%	26.7%	22.4%	9.3%	2.1%	0.4%	0.1%	0.0%	0.0%	0.0%	100%
Total	154	176	152	207	356	1,423	2,582	3,031	5,389	6,275	4,232	1,391	292	69	10	5	4	25,748
Percent	0.6%	0.7%	0.6%	0.8%	1.4%	5.5%	10.0%	11.8%	20.9%	24.4%	16.4%	5.4%	1.1%	0.3%	0.0%	0.0%	0.0%	100%

Total Study Percentile Speed Summary			Total Study Speed Statistics		
Northbound			**Northbound**		
50th Percentile (Median)	52.6	mph	Mean (Average) Speed	50.7	mph
85th Percentile	59.1	mph	10 mph Pace	49.3 - 59.3	mph
95th Percentile	62.9	mph	Percent in Pace	51.0	%
Southbound			**Southbound**		
50th Percentile (Median)	47.3	mph	Mean (Average) Speed	45.4	mph
85th Percentile	54.2	mph	10 mph Pace	43.8 - 53.8	mph
95th Percentile	58.2	mph	Percent in Pace	49.1	%

Project Manager: (415) 310-6469
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Location: Silverado Trail S, N/O Zinfandel Ln
Date Range: 10/25/2019 - 10/31/2019
Site Code: 01

	Friday			Saturday			Sunday			Monday			Tuesday			Wednesday			Thursday			Mid-Week Average		
	10/25/2019			10/26/2019			10/27/2019			10/28/2019			10/29/2019			10/30/2019			10/31/2019					
Time	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total
12:00 AM	34	36	70	51	33	84	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
1:00 AM	20	33	53	37	47	84	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
2:00 AM	27	28	55	19	29	48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
3:00 AM	43	30	73	27	16	43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
4:00 AM	45	28	73	27	28	55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
5:00 AM	172	91	263	107	64	171	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
6:00 AM	411	221	632	285	89	374	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
7:00 AM	434	285	719	187	168	355	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
8:00 AM	**575**	330	**905**	249	198	447	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
9:00 AM	515	307	822	385	273	658	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
10:00 AM	449	339	788	370	298	668	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
11:00 AM	382	**388**	770	**478**	**376**	**854**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
12:00 PM	**546**	486	1,032	**510**	443	953	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
1:00 PM	545	520	1,065	505	523	1,028	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
2:00 PM	526	707	1,233	485	581	1,066	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
3:00 PM	452	**858**	**1,310**	414	670	**1,084**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
4:00 PM	413	827	1,240	274	**708**	982	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
5:00 PM	425	745	1,170	288	622	910	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
6:00 PM	268	381	649	208	387	595	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
7:00 PM	152	179	331	161	237	398	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
8:00 PM	118	118	236	103	127	230	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
9:00 PM	86	96	182	117	121	238	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
10:00 PM	94	101	195	124	111	235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
11:00 PM	57	82	139	104	79	183	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
Total	6,789	7,216	14,005	5,515	6,228	11,743	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
Percent	48%	52%	-	47%	53%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AM Peak	08:00	11:00	08:00	11:00	11:00	11:00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
Vol.	575	388	905	478	376	854	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
PM Peak	12:00	15:00	15:00	12:00	16:00	15:00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
Vol.	546	858	1,310	510	708	1,084	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####

1. Mid-week average includes data between Tuesday and Thursday.

Project Manager: (415) 310-6469
project.manager.ca@idaxdata.com

Vehicle Classification Report Summary

Location: Silverado Trail S, S/O Zinfandel Ln

Count Direction: Northbound / Southbound

Date Range: 10/25/2019 to 10/26/2019

Site Code: 02

	FHWA Vehicle Classification													Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
Study Total														
Northbound	45	7,995	2,284	16	1,240	27	0	19	34	7	25	8	9	11,709
Percent	0.4%	68.3%	19.5%	0.1%	10.6%	0.2%	0.0%	0.2%	0.3%	0.1%	0.2%	0.1%	0.1%	100%
Southbound	104	9,144	3,001	12	1,760	60	0	27	53	3	22	4	8	14,198
Percent	0.7%	64.4%	21.1%	0.1%	12.4%	0.4%	0.0%	0.2%	0.4%	0.0%	0.2%	0.0%	0.1%	100%
Total	149	17,139	5,285	28	3,000	87	0	46	87	10	47	12	17	25,907
Percent	0.6%	66.2%	20.4%	0.1%	11.6%	0.3%	0.0%	0.2%	0.3%	0.0%	0.2%	0.0%	0.1%	100%

FHWA Vehicle Classification	
Class 1 - Motorcycles	Class 8 - Four or Fewer Axle Single-Trailer Trucks
Class 2 - Passenger Cars	Class 9 - Five-Axle Single-Trailer Trucks
Class 3 - Other Two-Axle, Four-Tire Single Unit Vehicles	Class 10 - Six or More Axle Single-Trailer Trucks
Class 4 - Buses	Class 11 - Five or fewer Axle Multi-Trailer Trucks
Class 5 - Two-Axle, Six-Tire, Single-Unit Trucks	Class 12 - Six-Axle Multi-Trailer Trucks
Class 6 - Three-Axle Single-Unit Trucks	Class 13 - Seven or More Axle Multi-Trailer Trucks
Class 7 - Four or More Axle Single-Unit Trucks	

Project Manager: (415) 310-6469
project.manager.ca@idaxdata.com

Location: Silverado Trail S, S/O Zinfandel Ln
Date Range: 10/25/2019 to 10/26/2019
Site Code: 02

Friday, October 25, 2019
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	17	4	0	3	0	0	0	0	0	0	0	0	**24**
1:00 AM	0	11	5	0	4	0	0	0	1	0	0	0	0	**21**
2:00 AM	0	16	2	0	3	0	0	0	0	0	0	0	0	**21**
3:00 AM	0	21	10	0	6	0	0	0	0	0	0	0	0	**37**
4:00 AM	0	33	9	0	4	0	0	1	0	0	0	0	0	**47**
5:00 AM	2	102	42	0	19	1	0	0	1	0	0	0	0	**167**
6:00 AM	0	252	109	1	58	0	0	1	1	0	0	1	1	**424**
7:00 AM	0	301	93	0	76	0	0	2	4	1	1	0	1	**479**
8:00 AM	1	412	118	1	73	2	0	3	2	0	3	0	0	**615**
9:00 AM	0	320	110	2	80	4	0	0	3	1	0	0	0	**520**
10:00 AM	5	258	92	2	49	1	0	0	2	0	2	0	0	**411**
11:00 AM	2	214	86	0	41	2	0	1	2	0	2	1	1	**352**
12:00 PM	0	331	88	0	58	2	0	0	2	0	3	0	0	**484**
1:00 PM	1	323	98	2	52	2	0	0	2	0	0	0	1	**481**
2:00 PM	0	289	89	0	53	1	0	0	2	1	2	1	0	**438**
3:00 PM	2	276	89	0	50	0	0	1	0	0	1	0	0	**419**
4:00 PM	2	261	73	0	38	0	0	0	0	0	0	0	2	**376**
5:00 PM	2	305	60	0	30	0	0	1	0	0	0	0	0	**398**
6:00 PM	0	180	40	0	15	1	0	0	1	1	0	0	0	**238**
7:00 PM	1	102	29	0	13	1	0	0	0	0	0	0	0	**146**
8:00 PM	0	79	16	0	8	0	0	0	0	0	0	0	0	**103**
9:00 PM	0	68	8	1	10	0	0	0	0	0	0	0	0	**87**
10:00 PM	0	69	18	0	2	0	0	0	0	0	0	0	0	**89**
11:00 PM	0	42	15	0	3	0	0	0	0	0	0	0	0	**60**
Total	**18**	**4,282**	**1,303**	**9**	**748**	**17**	**0**	**10**	**23**	**4**	**14**	**3**	**6**	**6,437**
Percent	**0.3%**	**66.5%**	**20.2%**	**0.1%**	**11.6%**	**0.3%**	**0.0%**	**0.2%**	**0.4%**	**0.1%**	**0.2%**	**0.0%**	**0.1%**	

Location: Silverado Trail S, S/O Zinfandel Ln
Date Range: 10/25/2019 to 10/26/2019
Site Code: 02

Friday, October 25, 2019
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	24	3	1	3	0	0	0	0	0	0	0	0	**31**
1:00 AM	0	19	14	0	8	0	0	0	0	0	0	0	0	**41**
2:00 AM	0	11	4	0	7	0	0	0	0	0	0	0	0	**22**
3:00 AM	0	21	3	0	5	0	0	0	0	0	0	0	0	**29**
4:00 AM	0	16	2	0	6	0	0	0	1	0	0	0	0	**25**
5:00 AM	0	51	25	0	22	0	0	1	0	0	0	0	0	**99**
6:00 AM	1	120	45	0	51	0	0	2	0	0	0	1	0	**220**
7:00 AM	1	173	65	0	40	1	0	0	3	0	1	0	1	**285**
8:00 AM	0	188	81	0	58	0	0	1	3	1	1	0	0	**333**
9:00 AM	2	176	73	0	53	1	0	3	3	0	3	0	1	**315**
10:00 AM	5	197	75	1	63	1	0	0	2	0	1	0	0	**345**
11:00 AM	0	216	96	0	60	1	0	2	5	0	3	0	0	**383**
12:00 PM	5	281	102	2	81	2	0	0	4	0	1	1	1	**480**
1:00 PM	7	308	129	0	77	6	0	2	2	0	3	0	0	**534**
2:00 PM	7	458	150	1	101	4	0	1	4	0	1	0	0	**727**
3:00 PM	4	646	168	2	113	9	0	0	3	0	1	0	2	**948**
4:00 PM	1	636	214	0	115	1	0	1	1	0	1	1	0	**971**
5:00 PM	2	619	167	0	85	3	0	1	4	0	0	0	0	**881**
6:00 PM	1	305	71	1	42	2	0	1	0	0	0	0	0	**423**
7:00 PM	0	122	39	0	13	2	0	0	0	0	0	0	0	**176**
8:00 PM	0	87	27	0	15	0	0	0	0	0	0	0	0	**129**
9:00 PM	0	72	15	0	16	0	0	0	0	0	1	0	0	**104**
10:00 PM	0	74	22	0	10	1	0	0	0	0	0	0	0	**107**
11:00 PM	0	51	19	0	6	1	0	0	0	0	0	0	0	**77**
Total	**36**	**4,871**	**1,609**	**8**	**1,050**	**35**	**0**	**15**	**35**	**1**	**17**	**3**	**5**	**7,685**
Percent	**0.5%**	**63.4%**	**20.9%**	**0.1%**	**13.7%**	**0.5%**	**0.0%**	**0.2%**	**0.5%**	**0.0%**	**0.2%**	**0.0%**	**0.1%**	

Location: Silverado Trail S, S/O Zinfandel Ln
Date Range: 10/25/2019 to 10/26/2019
Site Code: 02

Saturday, October 26, 2019
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	24	10	0	4	0	0	0	0	0	0	0	0	**38**
1:00 AM	0	18	6	0	2	0	0	0	0	0	0	0	0	**26**
2:00 AM	0	14	3	0	2	0	0	0	0	0	0	1	1	**21**
3:00 AM	0	18	5	0	4	0	0	0	0	0	0	1	0	**28**
4:00 AM	0	17	9	0	2	0	0	1	0	0	0	0	0	**29**
5:00 AM	0	77	27	0	16	1	0	0	0	1	2	0	0	**124**
6:00 AM	0	175	84	0	30	0	0	2	0	0	1	1	1	**294**
7:00 AM	0	105	38	2	37	2	0	2	0	0	0	0	0	**186**
8:00 AM	1	178	41	0	35	1	0	1	0	0	2	0	0	**259**
9:00 AM	1	239	65	1	46	1	0	1	4	0	1	0	0	**359**
10:00 AM	8	225	77	1	37	2	0	0	1	0	2	1	0	**354**
11:00 AM	1	307	89	1	39	0	0	1	1	0	2	0	0	**441**
12:00 PM	6	322	73	0	57	2	0	0	1	0	0	0	0	**461**
1:00 PM	1	341	90	1	31	0	0	0	0	1	1	0	0	**466**
2:00 PM	3	361	71	1	27	0	0	1	1	0	0	0	0	**465**
3:00 PM	3	300	60	0	21	1	0	0	1	0	0	0	1	**387**
4:00 PM	0	209	53	0	26	0	0	0	0	0	0	1	0	**289**
5:00 PM	1	218	55	0	23	0	0	0	1	0	0	0	0	**298**
6:00 PM	2	142	32	0	13	0	0	0	0	0	0	0	0	**189**
7:00 PM	0	112	25	0	9	0	0	0	0	1	0	0	0	**147**
8:00 PM	0	70	18	0	8	0	0	0	0	0	0	0	0	**96**
9:00 PM	0	73	26	0	7	0	0	0	1	0	0	0	0	**107**
10:00 PM	0	97	11	0	9	0	0	0	0	0	0	0	0	**117**
11:00 PM	0	71	13	0	7	0	0	0	0	0	0	0	0	**91**
Total	**27**	**3,713**	**981**	**7**	**492**	**10**	**0**	**9**	**11**	**3**	**11**	**5**	**3**	**5,272**
Percent	**0.5%**	**70.4%**	**18.6%**	**0.1%**	**9.3%**	**0.2%**	**0.0%**	**0.2%**	**0.2%**	**0.1%**	**0.2%**	**0.1%**	**0.1%**	

Location: Silverado Trail S, S/O Zinfandel Ln
Date Range: 10/25/2019 to 10/26/2019
Site Code: 02

Saturday, October 26, 2019
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	26	6	0	5	0	0	0	0	0	0	0	0	**37**
1:00 AM	0	34	6	0	3	0	0	0	0	0	0	0	0	**43**
2:00 AM	0	19	6	0	4	0	0	1	0	0	0	0	0	**30**
3:00 AM	0	13	2	0	1	1	0	0	0	0	0	0	0	**17**
4:00 AM	1	11	8	0	7	0	0	0	1	0	0	0	0	**28**
5:00 AM	0	32	13	0	14	0	0	1	1	0	0	0	0	**61**
6:00 AM	2	53	24	0	13	0	0	0	0	0	0	0	0	**92**
7:00 AM	0	87	33	0	20	1	0	1	2	0	2	0	0	**146**
8:00 AM	0	118	42	0	34	0	0	1	1	0	0	0	1	**197**
9:00 AM	2	168	58	0	40	3	0	0	1	0	0	1	0	**273**
10:00 AM	10	173	76	0	47	3	0	0	3	0	0	0	0	**312**
11:00 AM	9	233	89	1	48	2	0	1	1	0	0	0	0	**384**
12:00 PM	17	281	119	1	53	0	0	0	0	1	1	0	0	**473**
1:00 PM	7	349	123	0	54	2	0	2	3	0	0	0	1	**541**
2:00 PM	8	400	131	0	56	1	0	1	1	0	0	0	1	**599**
3:00 PM	2	480	142	2	59	4	0	2	0	0	1	0	0	**692**
4:00 PM	2	554	145	0	67	1	0	2	1	1	0	0	0	**773**
5:00 PM	2	493	160	0	78	2	0	0	1	0	0	0	0	**736**
6:00 PM	2	305	81	0	34	1	0	0	0	0	1	0	0	**424**
7:00 PM	3	159	39	0	29	0	0	0	0	0	0	0	0	**230**
8:00 PM	0	78	29	0	17	0	0	0	0	0	0	0	0	**124**
9:00 PM	1	78	25	0	10	1	0	0	1	0	0	0	0	**116**
10:00 PM	0	71	23	0	9	2	0	0	1	0	0	0	0	**106**
11:00 PM	0	58	12	0	8	1	0	0	0	0	0	0	0	**79**
Total	**68**	**4,273**	**1,392**	**4**	**710**	**25**	**0**	**12**	**18**	**2**	**5**	**1**	**3**	**6,513**
Percent	**1.0%**	**65.6%**	**21.4%**	**0.1%**	**10.9%**	**0.4%**	**0.0%**	**0.2%**	**0.3%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	

Location: Silverado Trail S, S/O Zinfandel Ln
Date Range: 10/25/2019 to 10/26/2019
Site Code: 02

Total Study Average
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	21	7	0	4	0	0	0	0	0	0	0	0	**32**
1:00 AM	0	15	6	0	3	0	0	0	1	0	0	0	0	**25**
2:00 AM	0	15	3	0	3	0	0	0	0	0	0	1	1	**23**
3:00 AM	0	20	8	0	5	0	0	0	0	0	0	1	0	**34**
4:00 AM	0	25	9	0	3	0	0	1	0	0	0	0	0	**38**
5:00 AM	1	90	35	0	18	1	0	0	1	1	1	0	0	**148**
6:00 AM	0	214	97	1	44	0	0	2	1	0	1	1	1	**362**
7:00 AM	0	203	66	1	57	1	0	2	2	1	1	0	1	**335**
8:00 AM	1	295	80	1	54	2	0	2	1	0	3	0	0	**439**
9:00 AM	1	280	88	2	63	3	0	1	4	1	1	0	0	**444**
10:00 AM	7	242	85	2	43	2	0	0	2	0	2	1	0	**386**
11:00 AM	2	261	88	1	40	1	0	1	2	0	2	1	1	**400**
12:00 PM	3	327	81	0	58	2	0	0	2	0	2	0	0	**475**
1:00 PM	1	332	94	2	42	1	0	0	1	1	1	0	1	**476**
2:00 PM	2	325	80	1	40	1	0	1	2	1	1	1	0	**455**
3:00 PM	3	288	75	0	36	1	0	1	1	0	1	0	1	**407**
4:00 PM	1	235	63	0	32	0	0	0	0	0	0	1	1	**333**
5:00 PM	2	262	58	0	27	0	0	1	1	0	0	0	0	**351**
6:00 PM	1	161	36	0	14	1	0	0	1	1	0	0	0	**215**
7:00 PM	1	107	27	0	11	1	0	0	0	1	0	0	0	**148**
8:00 PM	0	75	17	0	8	0	0	0	0	0	0	0	0	**100**
9:00 PM	0	71	17	1	9	0	0	0	1	0	0	0	0	**99**
10:00 PM	0	83	15	0	6	0	0	0	0	0	0	0	0	**104**
11:00 PM	0	57	14	0	5	0	0	0	0	0	0	0	0	**76**
Total	**26**	**4,004**	**1,149**	**12**	**625**	**17**	**0**	**12**	**23**	**7**	**16**	**7**	**7**	**5,905**
Percent	**0.4%**	**67.8%**	**19.5%**	**0.2%**	**10.6%**	**0.3%**	**0.0%**	**0.2%**	**0.4%**	**0.1%**	**0.3%**	**0.1%**	**0.1%**	

Note: Average only condsidered on days with 24-hours of data.

Location: Silverado Trail S, S/O Zinfandel Ln
Date Range: 10/25/2019 to 10/26/2019
Site Code: 02

Total Study Average
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	25	5	1	4	0	0	0	0	0	0	0	0	**35**
1:00 AM	0	27	10	0	6	0	0	0	0	0	0	0	0	**43**
2:00 AM	0	15	5	0	6	0	0	1	0	0	0	0	0	**27**
3:00 AM	0	17	3	0	3	1	0	0	0	0	0	0	0	**24**
4:00 AM	1	14	5	0	7	0	0	0	1	0	0	0	0	**28**
5:00 AM	0	42	19	0	18	0	0	1	1	0	0	0	0	**81**
6:00 AM	2	87	35	0	32	0	0	1	0	0	0	1	0	**158**
7:00 AM	1	130	49	0	30	1	0	1	3	0	2	0	1	**218**
8:00 AM	0	153	62	0	46	0	0	1	2	1	1	0	1	**267**
9:00 AM	2	172	66	0	47	2	0	2	2	0	2	1	1	**297**
10:00 AM	8	185	76	1	55	2	0	0	3	0	1	0	0	**331**
11:00 AM	5	225	93	1	54	2	0	2	3	0	2	0	0	**387**
12:00 PM	11	281	111	2	67	1	0	0	2	1	1	1	1	**479**
1:00 PM	7	329	126	0	66	4	0	2	3	0	2	0	1	**540**
2:00 PM	8	429	141	1	79	3	0	1	3	0	1	0	1	**667**
3:00 PM	3	563	155	2	86	7	0	1	2	0	1	0	1	**821**
4:00 PM	2	595	180	0	91	1	0	2	1	1	1	1	0	**875**
5:00 PM	2	556	164	0	82	3	0	1	3	0	0	0	0	**811**
6:00 PM	2	305	76	1	38	2	0	1	0	0	1	0	0	**426**
7:00 PM	2	141	39	0	21	1	0	0	0	0	0	0	0	**204**
8:00 PM	0	83	28	0	16	0	0	0	0	0	0	0	0	**127**
9:00 PM	1	75	20	0	13	1	0	0	1	0	1	0	0	**112**
10:00 PM	0	73	23	0	10	2	0	0	1	0	0	0	0	**109**
11:00 PM	0	55	16	0	7	1	0	0	0	0	0	0	0	**79**
Total	**57**	**4,577**	**1,507**	**9**	**884**	**34**	**0**	**17**	**31**	**3**	**16**	**4**	**7**	**7,146**
Percent	**0.8%**	**64.0%**	**21.1%**	**0.1%**	**12.4%**	**0.5%**	**0.0%**	**0.2%**	**0.4%**	**0.0%**	**0.2%**	**0.1%**	**0.1%**	

Note: Average only condsidered on days with 24-hours of data.

Vehicle Speed Report Summary

Location: Silverado Trail S, S/O Zinfandel Ln

Count Direction: Northbound / Southbound

Date Range: 10/25/2019 to 10/26/2019

Site Code: 02

	Speed Range (mph)																	Total
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
Study Total																		
Northbound	0	1	1	11	44	243	818	1,580	2,327	3,530	2,277	696	148	22	6	3	2	11,709
Percent	0.0%	0.0%	0.0%	0.1%	0.4%	2.1%	7.0%	13.5%	19.9%	30.1%	19.4%	5.9%	1.3%	0.2%	0.1%	0.0%	0.0%	100%
Southbound	238	169	112	91	121	430	1,202	1,738	3,216	3,799	2,167	716	137	40	16	3	3	14,198
Percent	1.7%	1.2%	0.8%	0.6%	0.9%	3.0%	8.5%	12.2%	22.7%	26.8%	15.3%	5.0%	1.0%	0.3%	0.1%	0.0%	0.0%	100%
Total	238	170	113	102	165	673	2,020	3,318	5,543	7,329	4,444	1,412	285	62	22	6	5	25,907
Percent	0.9%	0.7%	0.4%	0.4%	0.6%	2.6%	7.8%	12.8%	21.4%	28.3%	17.2%	5.5%	1.1%	0.2%	0.1%	0.0%	0.0%	100%

Total Study Percentile Speed Summary			Total Study Speed Statistics		
Northbound			**Northbound**		
50th Percentile (Median)	51.2	mph	Mean (Average) Speed	50.4	mph
85th Percentile	57.5	mph	10 mph Pace	47.6 - 57.6	mph
95th Percentile	61.4	mph	Percent in Pace	52.7	%
Southbound			**Southbound**		
50th Percentile (Median)	49.8	mph	Mean (Average) Speed	47.8	mph
85th Percentile	56.6	mph	10 mph Pace	46.4 - 56.4	mph
95th Percentile	61.0	mph	Percent in Pace	50.4	%

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Location: Silverado Trail S, S/O Zinfandel Ln
Date Range: 10/25/2019 - 10/31/2019
Site Code: 02

	Friday			Saturday			Sunday			Monday			Tuesday			Wednesday			Thursday			Mid-Week Average		
	10/25/2019			10/26/2019			10/27/2019			10/28/2019			10/29/2019			10/30/2019			10/31/2019					
Time	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total
12:00 AM	24	31	55	38	37	75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
1:00 AM	21	41	62	26	43	69	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
2:00 AM	21	22	43	21	30	51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
3:00 AM	37	29	66	28	17	45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
4:00 AM	47	25	72	29	28	57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
5:00 AM	167	99	266	124	61	185	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
6:00 AM	424	220	644	294	92	386	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
7:00 AM	479	285	764	186	146	332	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
8:00 AM	**615**	333	**948**	259	197	456	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
9:00 AM	520	315	835	359	273	632	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
10:00 AM	411	345	756	354	312	666	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
11:00 AM	352	**383**	735	**441**	**384**	**825**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
12:00 PM	**484**	480	964	461	473	934	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
1:00 PM	481	534	1,015	**466**	541	1,007	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
2:00 PM	438	727	1,165	465	599	1,064	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
3:00 PM	419	948	**1,367**	387	692	**1,079**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
4:00 PM	376	**971**	1,347	289	**773**	1,062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
5:00 PM	398	881	1,279	298	736	1,034	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
6:00 PM	238	423	661	189	424	613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
7:00 PM	146	176	322	147	230	377	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
8:00 PM	103	129	232	96	124	220	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
9:00 PM	87	104	191	107	116	223	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
10:00 PM	89	107	196	117	106	223	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
11:00 PM	60	77	137	91	79	170	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
Total	6,437	7,685	14,122	5,272	6,513	11,785	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
Percent	46%	54%	-	45%	55%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AM Peak	08:00	11:00	08:00	11:00	11:00	11:00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
Vol.	615	383	948	441	384	825	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
PM Peak	12:00	16:00	15:00	13:00	16:00	15:00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
Vol.	484	971	1,367	466	773	1,079	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####

1. Mid-week average includes data between Tuesday and Thursday.

Project Manager: (415) 310-6469
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Vehicle Classification Report Summary

Location: Silverado Trail S, S/O Zinfandel Ln

Count Direction: Northbound / Southbound

Date Range: 10/25/2019 to 10/26/2019

Site Code: 02

	FHWA Vehicle Classification													Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
Study Total														
Northbound	45	7,995	2,284	16	1,240	27	0	19	34	7	25	8	9	11,709
Percent	0.4%	68.3%	19.5%	0.1%	10.6%	0.2%	0.0%	0.2%	0.3%	0.1%	0.2%	0.1%	0.1%	100%
Southbound	104	9,144	3,001	12	1,760	60	0	27	53	3	22	4	8	14,198
Percent	0.7%	64.4%	21.1%	0.1%	12.4%	0.4%	0.0%	0.2%	0.4%	0.0%	0.2%	0.0%	0.1%	100%
Total	149	17,139	5,285	28	3,000	87	0	46	87	10	47	12	17	25,907
Percent	0.6%	66.2%	20.4%	0.1%	11.6%	0.3%	0.0%	0.2%	0.3%	0.0%	0.2%	0.0%	0.1%	100%

FHWA Vehicle Classification	
Class 1 - Motorcycles	Class 8 - Four or Fewer Axle Single-Trailer Trucks
Class 2 - Passenger Cars	Class 9 - Five-Axle Single-Trailer Trucks
Class 3 - Other Two-Axle, Four-Tire Single Unit Vehicles	Class 10 - Six or More Axle Single-Trailer Trucks
Class 4 - Buses	Class 11 - Five or fewer Axle Multi-Trailer Trucks
Class 5 - Two-Axle, Six-Tire, Single-Unit Trucks	Class 12 - Six-Axle Multi-Trailer Trucks
Class 6 - Three-Axle Single-Unit Trucks	Class 13 - Seven or More Axle Multi-Trailer Trucks
Class 7 - Four or More Axle Single-Unit Trucks	

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Vehicle Speed Report Summary

Location: Zinfandel Ln, W/O Silverado Trail S

Count Direction: Eastbound / Westbound

Date Range: 10/25/2019 to 10/26/2019

Site Code: 03

	Speed Range (mph)																	Total
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
Study Total																		
Eastbound	1	4	12	31	50	135	387	1,003	1,431	1,139	550	191	60	19	5	2	2	5,022
Percent	0.0%	0.1%	0.2%	0.6%	1.0%	2.7%	7.7%	20.0%	28.5%	22.7%	11.0%	3.8%	1.2%	0.4%	0.1%	0.0%	0.0%	100%
Westbound	0	2	7	35	105	309	921	1,265	637	189	40	8	4	0	0	0	0	3,522
Percent	0.0%	0.1%	0.2%	1.0%	3.0%	8.8%	26.1%	35.9%	18.1%	5.4%	1.1%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	100%
Total	1	6	19	66	155	444	1,308	2,268	2,068	1,328	590	199	64	19	5	2	2	8,544
Percent	0.0%	0.1%	0.2%	0.8%	1.8%	5.2%	15.3%	26.5%	24.2%	15.5%	6.9%	2.3%	0.7%	0.2%	0.1%	0.0%	0.0%	100%

Total Study Percentile Speed Summary			Total Study Speed Statistics		
Eastbound			**Eastbound**		
50th Percentile (Median)	48.1	mph	Mean (Average) Speed	48.1	mph
85th Percentile	55.5	mph	10 mph Pace	43.1 - 53.1	mph
95th Percentile	60.5	mph	Percent in Pace	53.7	%
Westbound			**Westbound**		
50th Percentile (Median)	41.4	mph	Mean (Average) Speed	41.3	mph
85th Percentile	47.2	mph	10 mph Pace	36.1 - 46.1	mph
95th Percentile	51.1	mph	Percent in Pace	63.8	%

Project Manager: (415) 310-6469
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Location: Zinfandel Ln, W/O Silverado Trail S
Date Range: 10/25/2019 - 10/31/2019
Site Code: 03

	Friday			Saturday			Sunday			Monday			Tuesday			Wednesday			Thursday			Mid-Week Average		
	10/25/2019			10/26/2019			10/27/2019			10/28/2019			10/29/2019			10/30/2019			10/31/2019					
Time	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total
12:00 AM	15	14	29	16	11	27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
1:00 AM	15	13	28	15	11	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
2:00 AM	13	16	29	8	15	23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
3:00 AM	28	7	35	30	5	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
4:00 AM	23	17	40	18	11	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
5:00 AM	50	41	91	18	27	45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
6:00 AM	100	70	170	53	50	103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
7:00 AM	140	115	255	54	50	104	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
8:00 AM	137	137	274	84	82	166	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
9:00 AM	146	**143**	289	118	103	221	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
10:00 AM	**183**	130	**313**	**146**	94	240	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
11:00 AM	171	128	299	137	**112**	**249**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
12:00 PM	220	165	385	183	148	331	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
1:00 PM	262	133	395	186	155	341	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
2:00 PM	**302**	196	498	**212**	**166**	**378**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
3:00 PM	300	**201**	**501**	189	142	331	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
4:00 PM	259	79	338	150	109	259	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
5:00 PM	250	84	334	185	91	276	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
6:00 PM	111	61	172	116	66	182	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
7:00 PM	48	43	91	54	61	115	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
8:00 PM	41	27	68	36	27	63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
9:00 PM	42	27	69	30	33	63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
10:00 PM	29	23	52	36	37	73	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
11:00 PM	28	17	45	35	29	64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
Total	2,913	1,887	4,800	2,109	1,635	3,744	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
Percent	61%	39%	-	56%	44%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AM Peak	10:00	09:00	10:00	10:00	11:00	11:00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
Vol.	183	143	313	146	112	249	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
PM Peak	14:00	15:00	15:00	14:00	14:00	14:00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####
Vol.	302	201	501	212	166	378	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#####	#####	#####

1. Mid-week average includes data between Tuesday and Thursday.

Project Manager: (415) 310-6469
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Intersection: SR-29 / Zinfandel Ln
Date: Fri, Nov 15, 2019
Count Period: 2:00 PM to 2:00 AM

Twelve-Hour Count Summaries

Interval Start	Zinfandel Ln Eastbound				Zinfandel Ln Westbound				SR-29 Northbound				SR-29 Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
2:00 PM	0	8	1	4	0	15	0	25	0	3	153	26	0	22	220	5	482	0
2:15 PM	0	2	0	4	0	17	0	13	0	1	178	30	0	21	197	3	466	0
2:30 PM	0	0	2	2	0	19	0	17	0	2	185	34	0	28	204	1	494	0
2:45 PM	0	2	0	4	0	16	1	23	0	0	187	20	0	36	205	5	499	1,941
3:00 PM	0	1	1	5	0	12	0	22	0	3	166	41	0	29	232	1	513	1,972
3:15 PM	0	0	0	12	0	9	0	13	0	0	194	31	0	32	201	2	494	2,000
3:30 PM	0	3	2	6	0	12	0	27	0	2	198	35	0	48	228	3	564	2,070
3:45 PM	0	1	0	2	0	13	0	23	0	0	159	40	0	39	221	0	498	2,069
4:00 PM	0	2	0	3	0	10	1	26	0	0	136	30	0	42	239	3	492	2,048
4:15 PM	0	4	0	1	0	12	0	26	0	1	133	21	0	28	210	1	437	1,991
4:30 PM	0	3	0	2	0	15	0	15	0	3	165	20	0	33	217	1	474	1,901
4:45 PM	0	1	1	2	0	14	0	14	0	0	151	39	0	36	203	2	463	1,866
5:00 PM	0	1	2	2	1	7	1	16	0	1	135	24	0	71	177	0	438	1,812
5:15 PM	0	0	0	0	1	6	1	13	0	0	163	45	0	46	173	3	451	1,826
5:30 PM	0	0	0	0	0	2	0	14	0	3	146	23	0	52	160	0	400	1,752
5:45 PM	0	0	0	1	0	4	0	18	0	1	134	25	0	21	183	3	390	1,679
Count Total	0	28	9	50	2	183	4	305	0	20	2,583	484	0	584	3,270	33	7,555	0
AM 2-Hour Peak (0:00 - 2:00)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
PM 2-Hour Peak (2:15 - 4:15)	**0**	**11**	**5**	**38**	**0**	**108**	**2**	**164**	**0**	**8**	**1,403**	**261**	**0**	**275**	**1,727**	**18**	**4,020**	**0**
AM Peak-Hour (0:00 - 1:00)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
PM Peak-Hour (2:45 - 3:45)	**0**	**6**	**3**	**27**	**0**	**49**	**1**	**85**	**0**	**5**	**745**	**127**	**0**	**145**	**866**	**11**	**2,070**	**0**

Intersection: Silverado Trail S / Zinfandel Ln
Date: Fri, Nov 15, 2019
Count Period: 2:00 PM to 2:00 AM

Twelve-Hour Count Summaries

Interval Start	Zinfandel Ln				Driveway				Silverado Trail S				Silverado Trail S				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		
2:00 PM	0	22	0	18	0	0	0	0	0	22	87	0	0	0	130	11	290	0
2:15 PM	0	17	0	19	0	0	0	0	0	16	99	0	0	0	148	21	320	0
2:30 PM	0	37	0	38	0	0	0	0	0	11	107	0	0	0	121	10	324	0
2:45 PM	0	30	0	34	0	0	0	1	0	16	117	0	0	0	114	16	328	1,262
3:00 PM	0	36	0	38	0	0	0	0	0	15	115	0	0	0	193	11	408	1,380
3:15 PM	0	24	0	44	0	0	0	0	0	14	100	0	0	0	222	15	419	1,479
3:30 PM	0	29	0	49	0	0	0	0	0	11	134	0	0	0	269	9	501	1,656
3:45 PM	0	62	0	71	0	0	0	0	0	8	141	0	0	0	220	10	512	1,840
4:00 PM	0	34	0	47	0	0	0	1	0	12	106	0	0	0	218	12	430	1,862
4:15 PM	0	25	0	56	0	0	0	0	0	11	129	0	0	0	189	20	430	1,873
4:30 PM	0	17	0	49	0	0	1	0	0	4	101	0	0	0	192	8	372	1,744
4:45 PM	0	34	0	45	0	0	0	0	1	12	84	0	0	0	195	12	383	1,615
5:00 PM	0	22	0	72	0	0	0	0	0	7	91	0	0	1	207	10	410	1,595
5:15 PM	0	19	0	60	0	0	0	2	0	11	98	0	0	0	214	10	414	1,579
5:30 PM	0	26	0	89	0	0	0	0	0	12	78	0	0	0	167	1	373	1,580
5:45 PM	0	11	0	41	0	0	0	0	0	15	85	0	0	0	157	5	314	1,511
Count Total	0	445	0	770	0	0	1	4	1	197	1,672	0	0	1	2,956	181	6,228	0
AM 2-Hour Peak (0:00 - 2:00)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
PM 2-Hour Peak (3:15 - 5:15)	**0**	**247**	**0**	**433**	**0**	**0**	**1**	**1**	**1**	**79**	**886**	**0**	**0**	**1**	**1,712**	**96**	**3,457**	**0**
AM Peak-Hour (0:00 - 1:00)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
PM Peak-Hour (3:30 - 4:30)	**0**	**150**	**0**	**223**	**0**	**0**	**0**	**1**	**0**	**42**	**510**	**0**	**0**	**0**	**896**	**51**	**1,873**	**0**

Intersection: SR-29 / Zinfandel Ln
Date: Sat, Nov 16, 2019
Count Period: 12:00 PM to 12:00 AM

Twelve-Hour Count Summaries

Interval Start	Zinfandel Ln Eastbound				Zinfandel Ln Westbound				SR-29 Northbound				SR-29 Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
12:00 PM	0	0	0	1	0	6	1	19	0	3	204	33	0	12	159	2	440	0
12:15 PM	0	2	0	4	0	12	1	15	0	0	204	33	0	16	141	4	432	0
12:30 PM	0	0	1	5	0	15	1	25	0	2	190	27	0	17	184	5	472	0
12:45 PM	0	2	0	2	0	10	0	18	0	4	183	22	0	12	140	6	399	1,743
1:00 PM	0	1	0	6	0	12	1	13	0	3	206	31	0	14	173	1	461	1,764
1:15 PM	0	2	1	7	0	19	0	20	0	3	160	21	0	28	153	4	418	1,750
1:30 PM	0	4	0	3	0	9	0	20	0	3	209	32	0	18	190	2	490	1,768
1:45 PM	0	1	0	1	0	12	0	18	0	1	205	29	0	26	160	3	456	1,825
2:00 PM	0	2	1	1	0	15	0	19	0	3	157	34	0	19	195	1	447	1,811
2:15 PM	0	0	1	0	0	22	0	15	0	2	142	36	0	15	187	6	426	1,819
2:30 PM	0	2	1	6	0	19	0	8	0	3	177	34	0	25	204	1	480	1,809
2:45 PM	0	1	0	2	0	15	0	20	0	4	163	36	0	27	242	4	514	1,867
3:00 PM	0	1	1	0	0	34	1	18	0	0	169	31	0	24	218	2	499	1,919
3:15 PM	0	2	0	1	0	14	0	21	0	1	151	20	0	21	228	2	461	1,954
3:30 PM	0	0	0	7	0	14	1	23	0	3	205	17	0	22	247	1	540	2,014
3:45 PM	0	0	1	2	0	19	0	20	0	1	186	28	0	19	213	3	492	1,992
4:00 PM	0	0	1	2	0	19	0	21	0	0	140	19	0	12	212	4	430	1,923
4:15 PM	0	1	0	1	0	16	0	8	0	0	163	10	0	19	211	1	430	1,892
4:30 PM	0	1	0	2	0	13	1	15	0	0	153	15	0	29	229	4	462	1,814
4:45 PM	0	3	1	2	0	5	0	18	0	0	124	17	0	27	191	3	391	1,713
5:00 PM	0	2	0	5	0	2	0	9	0	0	144	16	0	46	183	2	409	1,692
5:15 PM	0	0	0	1	0	8	0	11	0	1	142	17	0	48	184	0	412	1,674
5:30 PM	0	2	0	0	0	2	0	12	0	1	139	16	0	17	183	2	374	1,586
5:45 PM	0	0	1	3	0	12	0	11	0	3	139	12	2	15	157	3	358	1,553
Count Total	0	29	10	64	0	324	7	397	0	41	4,055	586	2	528	4,584	66	10,693	0
AM 2-Hour Peak (0:00 - 2:00)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
PM 2-Hour Peak (2:00 - 4:00)	**0**	**8**	**5**	**19**	**0**	**152**	**2**	**144**	**0**	**17**	**1,350**	**236**	**0**	**172**	**1,734**	**20**	**3,859**	**0**
AM Peak-Hour (0:00 - 1:00)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
PM Peak-Hour (2:45 - 3:45)	**0**	**4**	**1**	**10**	**0**	**77**	**2**	**82**	**0**	**8**	**688**	**104**	**0**	**94**	**935**	**9**	**2,014**	**0**

Intersection: Silverado Trail S / Zinfandel Ln
Date: Sat, Nov 16, 2019
Count Period: 12:00 PM to 12:00 AM

Twelve-Hour Count Summaries

Interval Start	Zinfandel Ln				Driveway				Silverado Trail S				Silverado Trail S				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		
12:00 PM	0	30	12	0	0	0	0	0	1	16	141	0	0	0	72	7	279	0
12:15 PM	0	29	14	0	0	0	0	0	0	8	120	0	0	0	54	14	239	0
12:30 PM	0	30	20	0	0	0	0	0	0	24	126	0	0	0	79	9	288	0
12:45 PM	0	22	9	1	0	0	0	0	0	14	132	0	0	0	79	13	270	1,076
1:00 PM	0	29	13	0	0	0	0	0	0	13	86	0	0	0	83	16	240	1,037
1:15 PM	0	22	19	0	0	0	0	0	0	21	111	0	0	0	92	11	276	1,074
1:30 PM	0	29	17	0	0	0	0	0	0	15	92	0	0	0	98	11	262	1,048
1:45 PM	0	28	24	0	0	0	0	0	1	14	108	0	0	0	117	16	308	1,086
2:00 PM	0	30	15	0	0	0	0	0	0	14	110	0	0	0	100	13	282	1,128
2:15 PM	0	40	9	0	0	0	0	0	0	9	87	0	0	0	105	19	269	1,121
2:30 PM	0	35	23	0	0	0	0	0	0	6	103	0	0	0	108	24	299	1,158
2:45 PM	0	33	23	0	0	0	0	0	0	20	99	0	0	0	120	14	309	1,159
3:00 PM	0	30	28	0	0	0	0	0	0	14	97	0	0	0	129	29	327	1,204
3:15 PM	0	25	23	0	0	0	0	1	0	15	126	0	0	0	138	13	341	1,276
3:30 PM	0	13	18	0	0	0	0	0	0	15	72	0	0	0	125	18	261	1,238
3:45 PM	0	26	25	0	0	0	0	0	0	15	110	0	0	0	150	17	343	1,272
4:00 PM	0	22	17	0	0	0	0	0	0	8	91	0	0	0	154	20	312	1,257
4:15 PM	0	8	16	0	0	0	0	0	0	8	65	0	0	0	179	14	290	1,206
4:30 PM	0	12	31	0	0	0	0	0	0	6	61	0	0	0	172	13	295	1,240
4:45 PM	0	7	37	0	0	0	0	0	0	10	56	0	0	1	179	8	298	1,195
5:00 PM	0	10	44	1	0	0	0	0	0	11	73	0	0	0	138	2	279	1,162
5:15 PM	0	15	51	0	0	0	0	0	0	6	74	0	0	0	149	5	300	1,172
5:30 PM	0	7	28	0	0	0	0	0	0	10	51	0	0	0	130	6	232	1,109
5:45 PM	0	11	20	0	0	0	0	0	0	10	45	0	0	0	104	6	196	1,007
Count Total	0	543	536	2	0	0	0	1	2	302	2,236	0	0	1	2,854	318	6,795	0
AM 2-Hour Peak (0:00 - 2:00)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
PM 2-Hour Peak (2:30 - 4:30)	**0**	**192**	**173**	**0**	**0**	**0**	**0**	**1**	**0**	**101**	**763**	**0**	**0**	**0**	**1,103**	**149**	**2,482**	**0**
AM Peak-Hour (0:00 - 1:00)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
PM Peak-Hour (2:30 - 3:30)	**0**	**123**	**97**	**0**	**0**	**0**	**0**	**1**	**0**	**55**	**425**	**0**	**0**	**0**	**495**	**80**	**1,276**	**0**

SR-29 and Zinfandel Ln Screenline Count
10/18/2019 and 10/19/2019
IDAX Data Solutions

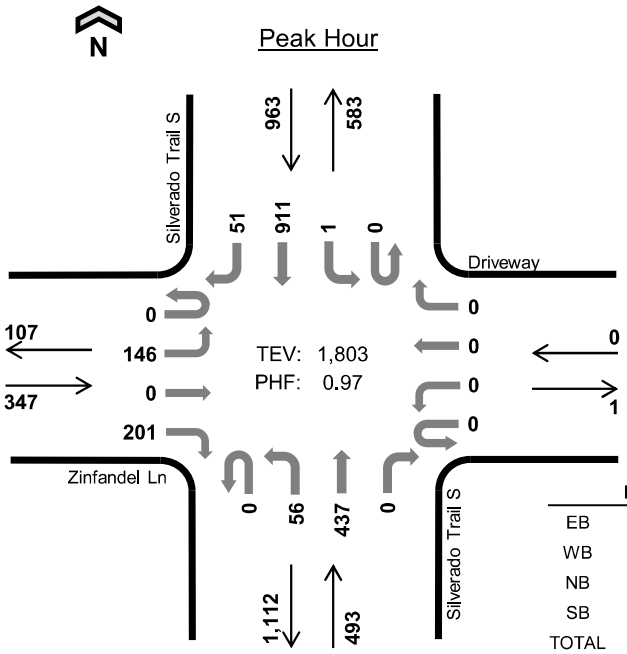
Friday 10/18						
Time	SR-29 (N-Leg) NB	SR-29 (N-Leg) SB	Zinfandel Ln (E-Leg) EB	Zinfandel Ln (E-Leg) WB	SR-29 (S-Leg) NB	SR-29 (S-Leg) SB
12:00:00 AM	29	12	5	3	33	13
12:15:00 AM	22	18	4	3	25	21
12:30:00 AM	13	14	1	1	13	14
12:45:00 AM	7	12	7	1	12	11
1:00:00 AM	12	16	2	3	13	18
1:15:00 AM	13	11	3	6	12	13
1:30:00 AM	15	17	2	4	12	17
1:45:00 AM	5	13	3	1	9	14
2:00:00 AM	6	11	6	2	10	11
2:15:00 AM	15	13	1	3	13	13
2:30:00 AM	14	13	5	1	18	14
2:45:00 AM	11	21	6	3	13	21
3:00:00 AM	34	9	5	4	35	10
3:15:00 AM	10	17	3	5	12	20
3:30:00 AM	21	16	2	6	20	19
3:45:00 AM	17	15	3	10	21	23
4:00:00 AM	14	14	3	2	14	10
4:15:00 AM	18	32	2	2	21	19
4:30:00 AM	27	46	6	5	27	44
4:45:00 AM	20	56	9	7	19	50
5:00:00 AM	27	47	4	10	27	50
5:15:00 AM	39	71	5	16	41	72
5:30:00 AM	50	108	11	15	47	112
5:45:00 AM	66	155	5	27	63	169
6:00:00 AM	69	139	10	19	68	150
6:15:00 AM	89	215	12	25	84	222
6:30:00 AM	109	204	17	23	108	208
6:45:00 AM	108	207	22	32	103	217
7:00:00 AM	113	166	20	18	118	171
7:15:00 AM	147	200	21	40	133	214
7:30:00 AM	111	231	31	22	112	226
7:45:00 AM	128	272	34	28	121	260
8:00:00 AM	126	238	38	41	120	236
8:15:00 AM	147	222	25	35	141	225
8:30:00 AM	181	204	27	40	172	211
8:45:00 AM	190	199	40	41	185	201
9:00:00 AM	168	227	28	38	148	229
9:15:00 AM	176	230	30	39	164	239
9:30:00 AM	159	214	29	42	157	221
9:45:00 AM	176	200	28	61	148	218
10:00:00 AM	181	194	29	36	176	201
10:15:00 AM	160	227	28	50	151	225
10:30:00 AM	175	185	37	53	150	172
10:45:00 AM	190	200	35	70	185	214
11:00:00 AM	190	181	27	47	185	183
11:15:00 AM	192	217	32	56	186	225
11:30:00 AM	171	192	37	49	166	192
11:45:00 AM	210	233	34	54	208	240
12:00:00 PM	183	179	36	60	181	189
12:15:00 PM	196	214	46	66	209	235

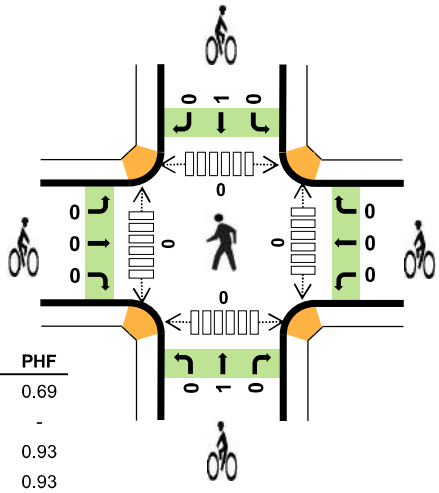
12:30:00 PM	202	201	35	41	202	190
12:45:00 PM	210	217	34	57	205	222
1:00:00 PM	205	175	34	57	206	195
1:15:00 PM	202	214	32	50	195	220
1:30:00 PM	218	189	33	71	198	196
1:45:00 PM	214	198	42	54	224	200
2:00:00 PM	261	222	33	63	249	241
2:15:00 PM	235	178	35	51	227	188
2:30:00 PM	284	223	25	66	260	238
2:45:00 PM	274	208	33	59	261	225
3:00:00 PM	258	209	38	64	237	216
3:15:00 PM	271	190	39	64	262	205
3:30:00 PM	252	191	36	64	237	196
3:45:00 PM	271	177	48	70	256	184
4:00:00 PM	282	150	31	79	264	176
4:15:00 PM	222	187	29	94	182	210
4:30:00 PM	241	179	25	65	215	190
4:45:00 PM	250	177	29	89	206	196
5:00:00 PM	229	154	29	59	200	151
5:15:00 PM	207	129	23	72	181	151
5:30:00 PM	233	182	18	63	203	193
5:45:00 PM	207	196	29	46	196	204
6:00:00 PM	205	152	17	30	207	164
6:15:00 PM	205	129	13	27	194	129
6:30:00 PM	167	127	10	30	163	144
6:45:00 PM	160	117	8	22	156	114
7:00:00 PM	127	125	17	18	134	132
7:15:00 PM	115	103	10	8	122	107
7:30:00 PM	105	110	8	18	100	114
7:45:00 PM	98	77	6	12	102	81
8:00:00 PM	96	64	11	16	96	70
8:15:00 PM	93	77	7	6	94	77
8:30:00 PM	73	72	11	14	73	77
8:45:00 PM	59	71	7	10	59	72
9:00:00 PM	61	66	3	13	54	74
9:15:00 PM	76	93	5	8	66	96
9:30:00 PM	49	63	9	9	53	69
9:45:00 PM	80	62	2	15	66	65
10:00:00 PM	69	45	6	16	65	51
10:15:00 PM	67	51	8	7	70	53
10:30:00 PM	66	44	8	10	67	48
10:45:00 PM	61	52	9	7	66	55
11:00:00 PM	67	45	7	16	64	56
11:15:00 PM	44	35	9	5	51	40
11:30:00 PM	47	23	10	10	51	37
11:45:00 PM	31	25	3	3	31	27
AM Total	4171	5754	774	1099	4019	5878
PM Total	7828	6367	996	1854	7460	6763
Daily Total	11999	12121	1770	2953	11479	12641

Saturday 10/19						
Time	SR-29 (N-Leg) NB	SR-29 (N-Leg) SB	Zinfandel Ln (E-Leg) EB	Zinfandel Ln (E-Leg) WB	SR-29 (S-Leg) NB	SR-29 (S-Leg) SB
12:00:00 AM	31	25	9	2	42	26
12:15:00 AM	27	13	3	9	26	18
12:30:00 AM	11	10	3	1	13	11
12:45:00 AM	14	18	5	3	15	17
1:00:00 AM	11	10	2	6	13	16
1:15:00 AM	13	9	4	9	12	13
1:30:00 AM	18	12	0	4	17	15
1:45:00 AM	14	13	2	3	15	15
2:00:00 AM	12	9	3	0	14	9
2:15:00 AM	4	10	0	1	4	11
2:30:00 AM	17	13	2	4	19	16
2:45:00 AM	28	14	1	1	29	14
3:00:00 AM	29	12	1	2	29	12
3:15:00 AM	16	19	5	2	20	20
3:30:00 AM	8	15	11	11	17	26
3:45:00 AM	16	11	2	15	16	23
4:00:00 AM	10	12	5	4	18	16
4:15:00 AM	16	19	1	2	16	21
4:30:00 AM	25	31	7	5	28	32
4:45:00 AM	17	29	4	4	17	31
5:00:00 AM	23	27	3	5	22	30
5:15:00 AM	17	37	8	3	23	36
5:30:00 AM	38	74	5	14	39	75
5:45:00 AM	30	87	6	10	30	92
6:00:00 AM	49	87	12	20	47	97
6:15:00 AM	39	106	7	15	43	117
6:30:00 AM	47	126	6	17	45	133
6:45:00 AM	48	96	11	13	47	97
7:00:00 AM	59	82	10	12	60	88
7:15:00 AM	67	86	6	15	69	97
7:30:00 AM	71	110	14	16	74	112
7:45:00 AM	96	139	13	18	92	140
8:00:00 AM	80	132	25	23	74	126
8:15:00 AM	101	131	16	26	97	143
8:30:00 AM	87	152	16	19	90	159
8:45:00 AM	93	215	33	22	106	212
9:00:00 AM	100	205	22	25	113	201
9:15:00 AM	110	205	35	25	117	201
9:30:00 AM	123	172	19	41	118	194
9:45:00 AM	121	200	30	53	118	218
10:00:00 AM	143	163	27	45	136	176
10:15:00 AM	137	224	26	58	147	248
10:30:00 AM	154	217	25	40	153	230
10:45:00 AM	151	185	17	38	139	195
11:00:00 AM	159	227	35	48	169	247
11:15:00 AM	135	198	17	40	141	223
11:30:00 AM	159	210	44	39	161	216
11:45:00 AM	157	249	29	54	152	260
12:00:00 PM	175	204	32	53	162	215
12:15:00 PM	181	240	42	51	185	248

12:30:00 PM	207	235	44	41	206	239
12:45:00 PM	211	223	39	70	210	243
1:00:00 PM	200	196	43	66	196	215
1:15:00 PM	196	216	48	46	199	226
1:30:00 PM	233	210	38	82	219	237
1:45:00 PM	222	214	39	59	220	227
2:00:00 PM	230	228	45	60	229	242
2:15:00 PM	254	190	36	80	230	210
2:30:00 PM	242	244	32	81	219	276
2:45:00 PM	270	196	41	70	265	216
3:00:00 PM	261	215	43	58	250	220
3:15:00 PM	241	192	41	44	250	198
3:30:00 PM	241	190	45	67	229	199
3:45:00 PM	237	167	37	57	229	178
4:00:00 PM	241	170	31	55	229	177
4:15:00 PM	253	181	35	48	243	186
4:30:00 PM	227	214	38	46	216	212
4:45:00 PM	256	196	22	50	241	208
5:00:00 PM	218	165	28	43	210	172
5:15:00 PM	264	134	25	49	252	145
5:30:00 PM	230	142	22	56	208	155
5:45:00 PM	226	148	25	53	205	152
6:00:00 PM	223	141	16	47	153	203
6:15:00 PM	219	112	18	31	215	128
6:30:00 PM	168	94	20	24	166	98
6:45:00 PM	173	93	9	23	164	95
7:00:00 PM	146	82	7	20	149	93
7:15:00 PM	146	91	13	11	145	90
7:30:00 PM	119	108	5	12	113	115
7:45:00 PM	114	73	8	13	117	84
8:00:00 PM	126	74	5	8	97	71
8:15:00 PM	85	79	13	14	85	77
8:30:00 PM	112	70	9	9	118	74
8:45:00 PM	81	72	12	7	89	75
9:00:00 PM	87	62	5	4	88	64
9:15:00 PM	84	63	4	11	83	68
9:30:00 PM	97	69	15	5	98	66
9:45:00 PM	91	69	4	10	99	78
10:00:00 PM	95	51	10	12	98	56
10:15:00 PM	84	65	7	7	86	67
10:30:00 PM	83	52	8	4	88	54
10:45:00 PM	72	60	7	4	76	59
11:00:00 PM	63	52	10	7	69	53
11:15:00 PM	72	52	5	6	73	54
11:30:00 PM	47	37	5	7	53	39
11:45:00 PM	39	28	6	6	43	32
AM Total	2931	4446	587	842	3002	4725
PM Total	8142	6459	1092	1687	7867	6889
Daily Total	11073	10905	1679	2529	10869	11614

Silverado Trail S
Zinfandel Ln





Date: 10-18-2019
Count Period: 2:00 PM to 6:00 PM
Peak Hour: 3:30 PM to 4:30 PM

	HV %:	PHF
EB	4.9%	0.69
WB	-	-
NB	2.2%	0.93
SB	2.1%	0.93
TOTAL	2.7%	0.97

Four-Hour Count Summaries

Interval Start		Zinfandel Ln Eastbound				Driveway Westbound				Silverado Trail S Northbound				Silverado Trail S Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:30 PM		0	32	0	40	0	0	0	0	0	22	109	0	0	0	222	14	439	0
3:45 PM		0	25	0	35	0	0	0	0	0	13	119	0	0	1	240	19	452	0
4:00 PM		0	40	0	49	0	0	0	0	0	8	110	0	0	0	232	10	449	0
4:15 PM		0	49	0	77	0	0	0	0	0	13	99	0	0	0	217	8	463	1,803
Peak Hour	All	0	146	0	201	0	0	0	0	0	56	437	0	0	1	911	51	1,803	0
	HV	0	5	0	12	0	0	0	0	0	6	5	0	0	0	15	5	48	0
	HV%	-	3%	-	6%	-	-	-	-	-	11%	1%	-	-	0%	2%	10%	3%	0

Note: For all three-hour count summary, see next page.

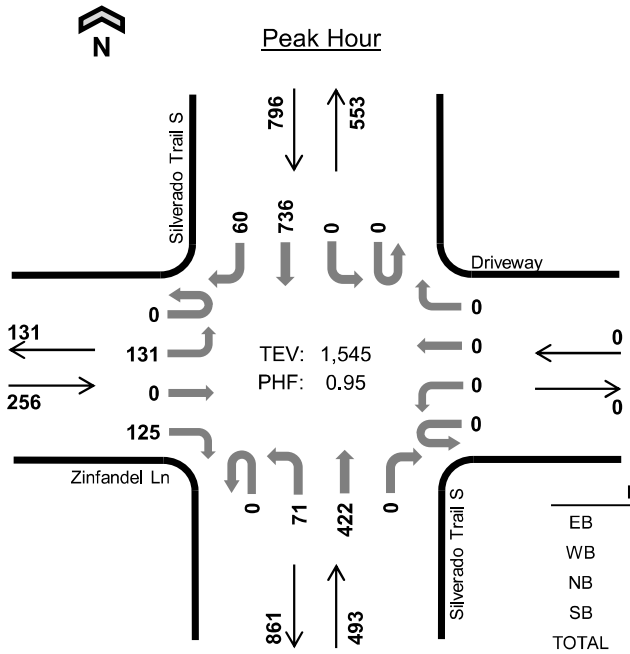
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
3:30 PM	2	0	4	7	*13*	0	0	1	1	*2*	0	0	0	0	*0*
3:45 PM	3	0	3	10	*16*	0	0	0	0	*0*	0	0	0	0	*0*
4:00 PM	6	0	2	1	*9*	0	0	0	0	*0*	0	0	0	0	*0*
4:15 PM	6	0	2	2	*10*	0	0	0	0	*0*	0	0	0	0	*0*
Peak Hour	17	0	11	20	*48*	0	0	1	1	*2*	0	0	0	0	*0*

Saturday 10/19						
Time	SR-29 (N-Leg) NB	SR-29 (N-Leg) SB	Zinfandel Ln (E-Leg) EB	Zinfandel Ln (E-Leg) WB	SR-29 (S-Leg) NB	SR-29 (S-Leg) SB
12:00:00 AM	31	25	9	2	42	26
12:15:00 AM	27	13	3	9	26	18
12:30:00 AM	11	10	3	1	13	11
12:45:00 AM	14	18	5	3	15	17
1:00:00 AM	11	10	2	6	13	16
1:15:00 AM	13	9	4	9	12	13
1:30:00 AM	18	12	0	4	17	15
1:45:00 AM	14	13	2	3	15	15
2:00:00 AM	12	9	3	0	14	9
2:15:00 AM	4	10	0	1	4	11
2:30:00 AM	17	13	2	4	19	16
2:45:00 AM	28	14	1	1	29	14
3:00:00 AM	29	12	1	2	29	12
3:15:00 AM	16	19	5	2	20	20
3:30:00 AM	8	15	11	11	17	26
3:45:00 AM	16	11	2	15	16	23
4:00:00 AM	10	12	5	4	18	16
4:15:00 AM	16	19	1	2	16	21
4:30:00 AM	25	31	7	5	28	32
4:45:00 AM	17	29	4	4	17	31
5:00:00 AM	23	27	3	5	22	30
5:15:00 AM	17	37	8	3	23	36
5:30:00 AM	38	74	5	14	39	75
5:45:00 AM	30	87	6	10	30	92
6:00:00 AM	49	87	12	20	47	97
6:15:00 AM	39	106	7	15	43	117
6:30:00 AM	47	126	6	17	45	133
6:45:00 AM	48	96	11	13	47	97
7:00:00 AM	59	82	10	12	60	88
7:15:00 AM	67	86	6	15	69	97
7:30:00 AM	71	110	14	16	74	112
7:45:00 AM	96	139	13	18	92	140
8:00:00 AM	80	132	25	23	74	126
8:15:00 AM	101	131	16	26	97	143
8:30:00 AM	87	152	16	19	90	159
8:45:00 AM	93	215	33	22	106	212
9:00:00 AM	100	205	22	25	113	201
9:15:00 AM	110	205	35	25	117	201
9:30:00 AM	123	172	19	41	118	194
9:45:00 AM	121	200	30	53	118	218
10:00:00 AM	143	163	27	45	136	176
10:15:00 AM	137	224	26	58	147	248
10:30:00 AM	154	217	25	40	153	230
10:45:00 AM	151	185	17	38	139	195
11:00:00 AM	159	227	35	48	169	247
11:15:00 AM	135	198	17	40	141	223
11:30:00 AM	159	210	44	39	161	216
11:45:00 AM	157	249	29	54	152	260
12:00:00 PM	175	204	32	53	162	215
12:15:00 PM	181	240	42	51	185	248
12:30:00 PM	207	235	44	41	206	239
12:45:00 PM	211	223	39	70	210	243
1:00:00 PM	200	196	43	66	196	215
1:15:00 PM	196	216	48	46	199	226

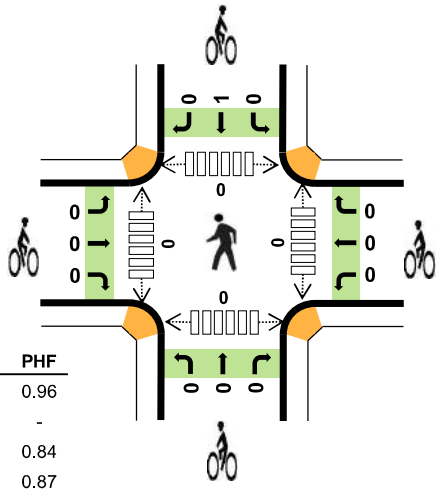
1:30:00 PM	233	210	38	82	219	237
1:45:00 PM	222	214	39	59	220	227
2:00:00 PM	230	228	45	60	229	242
2:15:00 PM	254	190	36	80	230	210
2:30:00 PM	242	244	32	81	219	276
2:45:00 PM	270	196	41	70	265	216
3:00:00 PM	261	215	43	58	250	220
3:15:00 PM	241	192	41	44	250	198
3:30:00 PM	241	190	45	67	229	199
3:45:00 PM	237	167	37	57	229	178
4:00:00 PM	241	170	31	55	229	177
4:15:00 PM	253	181	35	48	243	186
4:30:00 PM	227	214	38	46	216	212
4:45:00 PM	256	196	22	50	241	208
5:00:00 PM	218	165	28	43	210	172
5:15:00 PM	264	134	25	49	252	145
5:30:00 PM	230	142	22	56	208	155
5:45:00 PM	226	148	25	53	205	152
6:00:00 PM	223	141	16	47	153	203
6:15:00 PM	219	112	18	31	215	128
6:30:00 PM	168	94	20	24	166	98
6:45:00 PM	173	93	9	23	164	95
7:00:00 PM	146	82	7	20	149	93
7:15:00 PM	146	91	13	11	145	90
7:30:00 PM	119	108	5	12	113	115
7:45:00 PM	114	73	8	13	117	84
8:00:00 PM	126	74	5	8	97	71
8:15:00 PM	85	79	13	14	85	77
8:30:00 PM	112	70	9	9	118	74
8:45:00 PM	81	72	12	7	89	75
9:00:00 PM	87	62	5	4	88	64
9:15:00 PM	84	63	4	11	83	68
9:30:00 PM	97	69	15	5	98	66
9:45:00 PM	91	69	4	10	99	78
10:00:00 PM	95	51	10	12	98	56
10:15:00 PM	84	65	7	7	86	67
10:30:00 PM	83	52	8	4	88	54
10:45:00 PM	72	60	7	4	76	59
11:00:00 PM	63	52	10	7	69	53
11:15:00 PM	72	52	5	6	73	54
11:30:00 PM	47	37	5	7	53	39
11:45:00 PM	39	28	6	6	43	32
AM Total	2931	4446	587	842	3002	4725
PM Total	8142	6459	1092	1687	7867	6889
Daily Total	11073	10905	1679	2529	10869	11614

Silverado Trail S
Zinfandel Ln

Date: 10-19-2019
Count Period: 12:00 PM to 6:00 PM
Peak Hour: 3:15 PM to 4:15 PM



	HV %:	PHF
EB	3.5%	0.96
WB	-	-
NB	1.2%	0.84
SB	2.0%	0.87
TOTAL	2.0%	0.95



Six-Hour Count Summaries

Interval Start		Zinfandel Ln Eastbound				Driveway Westbound				Silverado Trail S Northbound				Silverado Trail S Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:15 PM		0	36	0	31	0	0	0	0	0	14	98	0	0	0	157	22	358	0
3:30 PM		0	38	0	28	0	0	0	0	0	30	116	0	0	0	181	8	401	0
3:45 PM		0	32	0	29	0	0	0	0	0	12	102	0	0	0	216	14	405	0
4:00 PM		0	25	0	37	0	0	0	0	0	15	106	0	0	0	182	16	381	1,545
Peak Hour	All	0	131	0	125	0	0	0	0	0	71	422	0	0	0	736	60	1,545	0
	HV	0	6	0	3	0	0	0	0	0	0	6	0	0	0	14	2	31	0
	HV%	-	5%	-	2%	-	-	-	-	-	0%	1%	-	-	-	2%	3%	2%	0

Note: For all three-hour count summary, see next page.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
3:15 PM	0	0	1	3	*4*	0	0	0	0	*0*	0	0	0	0	*0*
3:30 PM	1	0	4	3	*8*	0	0	0	0	*0*	0	0	0	0	*0*
3:45 PM	5	0	0	3	*8*	0	0	0	1	*1*	0	0	0	0	*0*
4:00 PM	3	0	1	7	*11*	0	0	0	0	*0*	0	0	0	0	*0*
Peak Hour	9	0	6	16	*31*	0	0	0	1	*1*	0	0	0	0	*0*

Wheeler Farms Main Driveway Daily Traffic Volumes
Friday and Saturday October 18 &19 2019

Date	Time	NB	SB	Total	Date	Time	NB	SB	Total
2019-10-18	12:00 AM	0	0	0	2019-10-19	12:00 AM	0	0	0
2019-10-18	12:15 AM	0	0	0	2019-10-19	12:15 AM	0	0	0
2019-10-18	12:30 AM	0	0	0	2019-10-19	12:30 AM	0	0	0
2019-10-18	12:45 AM	0	0	0	2019-10-19	12:45 AM	0	0	0
2019-10-18	1:00 AM	0	0	0	2019-10-19	1:00 AM	0	0	0
2019-10-18	1:15 AM	0	0	0	2019-10-19	1:15 AM	0	0	0
2019-10-18	1:30 AM	0	0	0	2019-10-19	1:30 AM	0	0	0
2019-10-18	1:45 AM	0	0	0	2019-10-19	1:45 AM	0	0	0
2019-10-18	2:00 AM	0	0	0	2019-10-19	2:00 AM	0	0	0
2019-10-18	2:15 AM	0	0	0	2019-10-19	2:15 AM	0	0	0
2019-10-18	2:30 AM	0	0	0	2019-10-19	2:30 AM	0	0	0
2019-10-18	2:45 AM	0	0	0	2019-10-19	2:45 AM	0	0	0
2019-10-18	3:00 AM	0	0	0	2019-10-19	3:00 AM	0	0	0
2019-10-18	3:15 AM	0	0	0	2019-10-19	3:15 AM	0	0	0
2019-10-18	3:30 AM	0	0	0	2019-10-19	3:30 AM	0	0	0
2019-10-18	3:45 AM	0	0	0	2019-10-19	3:45 AM	0	0	0
2019-10-18	4:00 AM	0	0	0	2019-10-19	4:00 AM	0	0	0
2019-10-18	4:15 AM	0	0	0	2019-10-19	4:15 AM	0	0	0
2019-10-18	4:30 AM	0	0	0	2019-10-19	4:30 AM	0	0	0
2019-10-18	4:45 AM	0	0	0	2019-10-19	4:45 AM	0	0	0
2019-10-18	5:00 AM	0	0	0	2019-10-19	5:00 AM	0	0	0
2019-10-18	5:15 AM	0	0	0	2019-10-19	5:15 AM	0	0	0
2019-10-18	5:30 AM	0	0	0	2019-10-19	5:30 AM	0	0	0
2019-10-18	5:45 AM	0	0	0	2019-10-19	5:45 AM	0	0	0
2019-10-18	6:00 AM	0	0	0	2019-10-19	6:00 AM	0	0	0
2019-10-18	6:15 AM	0	0	0	2019-10-19	6:15 AM	0	0	0
2019-10-18	6:30 AM	0	0	0	2019-10-19	6:30 AM	0	0	0
2019-10-18	6:45 AM	0	0	0	2019-10-19	6:45 AM	0	0	0
2019-10-18	7:00 AM	0	0	0	2019-10-19	7:00 AM	0	0	0
2019-10-18	7:15 AM	0	0	0	2019-10-19	7:15 AM	0	0	0
2019-10-18	7:30 AM	2	0	2	2019-10-19	7:30 AM	2	0	2
2019-10-18	7:45 AM	6	0	6	2019-10-19	7:45 AM	3	0	3
2019-10-18	8:00 AM	2	0	2	2019-10-19	8:00 AM	2	0	2
2019-10-18	8:15 AM	0	0	0	2019-10-19	8:15 AM	2	1	3
2019-10-18	8:30 AM	1	0	1	2019-10-19	8:30 AM	2	0	2
2019-10-18	8:45 AM	2	1	3	2019-10-19	8:45 AM	2	1	3
2019-10-18	9:00 AM	2	0	2	2019-10-19	9:00 AM	0	0	0
2019-10-18	9:15 AM	2	0	2	2019-10-19	9:15 AM	1	0	1
2019-10-18	9:30 AM	0	0	0	2019-10-19	9:30 AM	0	0	0
2019-10-18	9:45 AM	0	0	0	2019-10-19	9:45 AM	3	1	4
2019-10-18	10:00 AM	0	0	0	2019-10-19	10:00 AM	2	0	2
2019-10-18	10:15 AM	3	0	3	2019-10-19	10:15 AM	1	0	1
2019-10-18	10:30 AM	1	2	3	2019-10-19	10:30 AM	1	0	1
2019-10-18	10:45 AM	3	0	3	2019-10-19	10:45 AM	0	0	0
2019-10-18	11:00 AM	1	0	1	2019-10-19	11:00 AM	4	0	4
2019-10-18	11:15 AM	1	0	1	2019-10-19	11:15 AM	0	1	1
2019-10-18	11:30 AM	0	2	2	2019-10-19	11:30 AM	1	2	3
2019-10-18	11:45 AM	2	2	4	2019-10-19	11:45 AM	3	0	3
2019-10-18	12:00 PM	3	0	3	2019-10-19	12:00 PM	1	1	2
2019-10-18	12:15 PM	0	2	2	2019-10-19	12:15 PM	1	0	1
2019-10-18	12:30 PM	2	0	2	2019-10-19	12:30 PM	1	0	1
2019-10-18	12:45 PM	1	1	2	2019-10-19	12:45 PM	1	4	5

2019-10-18	1:00 PM	0	3	3	2019-10-19	1:00 PM	0	0	0
2019-10-18	1:15 PM	1	1	2	2019-10-19	1:15 PM	1	3	4
2019-10-18	1:30 PM	1	0	1	2019-10-19	1:30 PM	1	0	1
2019-10-18	1:45 PM	3	0	3	2019-10-19	1:45 PM	2	0	2
2019-10-18	2:00 PM	0	5	5	2019-10-19	2:00 PM	1	2	3
2019-10-18	2:15 PM	0	0	0	2019-10-19	2:15 PM	2	0	2
2019-10-18	2:30 PM	2	0	2	2019-10-19	2:30 PM	0	2	2
2019-10-18	2:45 PM	1	2	3	2019-10-19	2:45 PM	2	4	6
2019-10-18	3:00 PM	1	1	2	2019-10-19	3:00 PM	0	2	2
2019-10-18	3:15 PM	0	3	3	2019-10-19	3:15 PM	0	1	1
2019-10-18	3:30 PM	0	2	2	2019-10-19	3:30 PM	3	2	5
2019-10-18	3:45 PM	0	2	2	2019-10-19	3:45 PM	1	0	1
2019-10-18	4:00 PM	0	3	3	2019-10-19	4:00 PM	0	1	1
2019-10-18	4:15 PM	0	0	0	2019-10-19	4:15 PM	0	1	1
2019-10-18	4:30 PM	0	1	1	2019-10-19	4:30 PM	0	4	4
2019-10-18	4:45 PM	2	2	4	2019-10-19	4:45 PM	0	2	2
2019-10-18	5:00 PM	0	4	4	2019-10-19	5:00 PM	0	3	3
2019-10-18	5:15 PM	0	2	2	2019-10-19	5:15 PM	0	3	3
2019-10-18	5:30 PM	0	1	1	2019-10-19	5:30 PM	0	1	1
2019-10-18	5:45 PM	0	1	1	2019-10-19	5:45 PM	0	2	2
2019-10-18	6:00 PM	0	1	1	2019-10-19	6:00 PM	0	1	1
2019-10-18	6:15 PM	0	1	1	2019-10-19	6:15 PM	0	1	1
2019-10-18	6:30 PM	0	0	0	2019-10-19	6:30 PM	0	0	0
2019-10-18	6:45 PM	0	0	0	2019-10-19	6:45 PM	0	0	0
2019-10-18	7:00 PM	0	0	0	2019-10-19	7:00 PM	0	0	0
2019-10-18	7:15 PM	0	0	0	2019-10-19	7:15 PM	0	0	0
2019-10-18	7:30 PM	0	0	0	2019-10-19	7:30 PM	0	0	0
2019-10-18	7:45 PM	0	0	0	2019-10-19	7:45 PM	0	0	0
2019-10-18	8:00 PM	0	0	0	2019-10-19	8:00 PM	0	0	0
2019-10-18	8:15 PM	0	0	0	2019-10-19	8:15 PM	0	0	0
2019-10-18	8:30 PM	0	0	0	2019-10-19	8:30 PM	0	0	0
2019-10-18	8:45 PM	0	0	0	2019-10-19	8:45 PM	0	0	0
2019-10-18	9:00 PM	0	0	0	2019-10-19	9:00 PM	0	0	0
2019-10-18	9:15 PM	0	0	0	2019-10-19	9:15 PM	0	0	0
2019-10-18	9:30 PM	0	0	0	2019-10-19	9:30 PM	0	0	0
2019-10-18	9:45 PM	0	0	0	2019-10-19	9:45 PM	0	0	0
2019-10-18	10:00 PM	0	0	0	2019-10-19	10:00 PM	0	0	0
2019-10-18	10:15 PM	0	0	0	2019-10-19	10:15 PM	0	0	0
2019-10-18	10:30 PM	0	0	0	2019-10-19	10:30 PM	0	0	0
2019-10-18	10:45 PM	0	0	0	2019-10-19	10:45 PM	0	0	0
2019-10-18	11:00 PM	0	0	0	2019-10-19	11:00 PM	0	0	0
2019-10-18	11:15 PM	0	0	0	2019-10-19	11:15 PM	0	0	0
2019-10-18	11:30 PM	0	0	0	2019-10-19	11:30 PM	0	0	0
2019-10-18	11:45 PM	0	0	0	2019-10-19	11:45 PM	0	0	0
24 Hour Total		45	45	90	24 Hour Total		46	46	92

compiled by: Crane Transportation Group

Wheeler Farms Main Driveway Daily Traffic Volumes
Friday and Saturday October 25 & 26, 2019

Date	Time	NB	SB	Total	Date	Time	NB	SB	Total
2019-10-25	12:00 AM	0	0	0	2019-10-26	12:00 AM	0	0	0
2019-10-25	12:15 AM	0	0	0	2019-10-26	12:15 AM	0	0	0
2019-10-25	12:30 AM	0	0	0	2019-10-26	12:30 AM	0	0	0
2019-10-25	12:45 AM	0	0	0	2019-10-26	12:45 AM	0	0	0
2019-10-25	1:00 AM	0	0	0	2019-10-26	1:00 AM	0	0	0
2019-10-25	1:15 AM	0	0	0	2019-10-26	1:15 AM	0	0	0
2019-10-25	1:30 AM	0	0	0	2019-10-26	1:30 AM	0	0	0
2019-10-25	1:45 AM	0	0	0	2019-10-26	1:45 AM	0	0	0
2019-10-25	2:00 AM	0	0	0	2019-10-26	2:00 AM	0	0	0
2019-10-25	2:15 AM	0	0	0	2019-10-26	2:15 AM	0	0	0
2019-10-25	2:30 AM	0	0	0	2019-10-26	2:30 AM	0	0	0
2019-10-25	2:45 AM	0	0	0	2019-10-26	2:45 AM	0	0	0
2019-10-25	3:00 AM	0	0	0	2019-10-26	3:00 AM	0	0	0
2019-10-25	3:15 AM	0	0	0	2019-10-26	3:15 AM	0	0	0
2019-10-25	3:30 AM	0	0	0	2019-10-26	3:30 AM	0	0	0
2019-10-25	3:45 AM	0	0	0	2019-10-26	3:45 AM	0	0	0
2019-10-25	4:00 AM	0	0	0	2019-10-26	4:00 AM	0	0	0
2019-10-25	4:15 AM	0	0	0	2019-10-26	4:15 AM	0	0	0
2019-10-25	4:30 AM	0	0	0	2019-10-26	4:30 AM	0	0	0
2019-10-25	4:45 AM	0	0	0	2019-10-26	4:45 AM	0	0	0
2019-10-25	5:00 AM	0	0	0	2019-10-26	5:00 AM	0	0	0
2019-10-25	5:15 AM	0	0	0	2019-10-26	5:15 AM	0	0	0
2019-10-25	5:30 AM	0	0	0	2019-10-26	5:30 AM	0	0	0
2019-10-25	5:45 AM	0	0	0	2019-10-26	5:45 AM	0	0	0
2019-10-25	6:00 AM	0	0	0	2019-10-26	6:00 AM	0	0	0
2019-10-25	6:15 AM	0	0	0	2019-10-26	6:15 AM	0	0	0
2019-10-25	6:30 AM	0	0	0	2019-10-26	6:30 AM	0	0	0
2019-10-25	6:45 AM	1	0	1	2019-10-26	6:45 AM	0	0	0
2019-10-25	7:00 AM	0	0	0	2019-10-26	7:00 AM	0	0	0
2019-10-25	7:15 AM	0	0	0	2019-10-26	7:15 AM	0	0	0
2019-10-25	7:30 AM	2	0	2	2019-10-26	7:30 AM	1	0	1
2019-10-25	7:45 AM	5	0	5	2019-10-26	7:45 AM	4	0	4
2019-10-25	8:00 AM	3	2	5	2019-10-26	8:00 AM	2	0	2
2019-10-25	8:15 AM	1	0	1	2019-10-26	8:15 AM	1	0	1
2019-10-25	8:30 AM	2	0	2	2019-10-26	8:30 AM	2	0	2
2019-10-25	8:45 AM	1	0	1	2019-10-26	8:45 AM	0	0	0
2019-10-25	9:00 AM	1	1	2	2019-10-26	9:00 AM	0	0	0
2019-10-25	9:15 AM	0	0	0	2019-10-26	9:15 AM	1	0	1
2019-10-25	9:30 AM	1	0	1	2019-10-26	9:30 AM	2	1	3
2019-10-25	9:45 AM	2	1	3	2019-10-26	9:45 AM	2	0	2
2019-10-25	10:00 AM	0	1	1	2019-10-26	10:00 AM	1	0	1
2019-10-25	10:15 AM	0	1	1	2019-10-26	10:15 AM	1	0	1
2019-10-25	10:30 AM	2	0	2	2019-10-26	10:30 AM	0	1	1
2019-10-25	10:45 AM	1	1	2	2019-10-26	10:45 AM	0	0	0
2019-10-25	11:00 AM	0	0	0	2019-10-26	11:00 AM	1	0	1
2019-10-25	11:15 AM	1	0	1	2019-10-26	11:15 AM	0	1	1
2019-10-25	11:30 AM	2	0	2	2019-10-26	11:30 AM	0	3	3
2019-10-25	11:45 AM	3	1	4	2019-10-26	11:45 AM	3	3	6
2019-10-25	12:00 PM	0	2	2	2019-10-26	12:00 PM	0	0	0
2019-10-25	12:15 PM	3	1	4	2019-10-26	12:15 PM	2	0	2
2019-10-25	12:30 PM	0	0	0	2019-10-26	12:30 PM	1	0	1
2019-10-25	12:45 PM	1	2	3	2019-10-26	12:45 PM	0	0	0

2019-10-25	1:00 PM	1	1	2	2019-10-26	1:00 PM	2	2	4
2019-10-25	1:15 PM	1	0	1	2019-10-26	1:15 PM	3	0	3
2019-10-25	1:30 PM	1	0	1	2019-10-26	1:30 PM	0	0	0
2019-10-25	1:45 PM	1	2	3	2019-10-26	1:45 PM	2	1	3
2019-10-25	2:00 PM	2	2	4	2019-10-26	2:00 PM	2	2	4
2019-10-25	2:15 PM	2	0	2	2019-10-26	2:15 PM	1	0	1
2019-10-25	2:30 PM	1	0	1	2019-10-26	2:30 PM	2	0	2
2019-10-25	2:45 PM	2	4	6	2019-10-26	2:45 PM	0	3	3
2019-10-25	3:00 PM	0	2	2	2019-10-26	3:00 PM	1	4	5
2019-10-25	3:15 PM	0	3	3	2019-10-26	3:15 PM	0	1	1
2019-10-25	3:30 PM	0	1	1	2019-10-26	3:30 PM	0	4	4
2019-10-25	3:45 PM	0	1	1	2019-10-26	3:45 PM	1	0	1
2019-10-25	4:00 PM	0	0	0	2019-10-26	4:00 PM	1	2	3
2019-10-25	4:15 PM	0	0	0	2019-10-26	4:15 PM	0	2	2
2019-10-25	4:30 PM	0	1	1	2019-10-26	4:30 PM	1	3	4
2019-10-25	4:45 PM	0	4	4	2019-10-26	4:45 PM	0	0	0
2019-10-25	5:00 PM	0	2	2	2019-10-26	5:00 PM	0	2	2
2019-10-25	5:15 PM	0	2	2	2019-10-26	5:15 PM	0	1	1
2019-10-25	5:30 PM	0	1	1	2019-10-26	5:30 PM	0	1	1
2019-10-25	5:45 PM	0	1	1	2019-10-26	5:45 PM	0	1	1
2019-10-25	6:00 PM	0	2	2	2019-10-26	6:00 PM	0	0	0
2019-10-25	6:15 PM	0	0	0	2019-10-26	6:15 PM	0	1	1
2019-10-25	6:30 PM	0	1	1	2019-10-26	6:30 PM	0	0	0
2019-10-25	6:45 PM	0	0	0	2019-10-26	6:45 PM	0	1	1
2019-10-25	7:00 PM	0	0	0	2019-10-26	7:00 PM	0	0	0
2019-10-25	7:15 PM	0	0	0	2019-10-26	7:15 PM	0	0	0
2019-10-25	7:30 PM	0	0	0	2019-10-26	7:30 PM	0	0	0
2019-10-25	7:45 PM	0	0	0	2019-10-26	7:45 PM	0	0	0
2019-10-25	8:00 PM	0	0	0	2019-10-26	8:00 PM	0	0	0
2019-10-25	8:15 PM	0	0	0	2019-10-26	8:15 PM	0	0	0
2019-10-25	8:30 PM	0	0	0	2019-10-26	8:30 PM	0	0	0
2019-10-25	8:45 PM	0	0	0	2019-10-26	8:45 PM	0	0	0
2019-10-25	9:00 PM	0	0	0	2019-10-26	9:00 PM	0	0	0
2019-10-25	9:15 PM	0	0	0	2019-10-26	9:15 PM	0	0	0
2019-10-25	9:30 PM	0	0	0	2019-10-26	9:30 PM	0	0	0
2019-10-25	9:45 PM	0	0	0	2019-10-26	9:45 PM	0	0	0
2019-10-25	10:00 PM	0	0	0	2019-10-26	10:00 PM	0	0	0
2019-10-25	10:15 PM	0	0	0	2019-10-26	10:15 PM	0	0	0
2019-10-25	10:30 PM	0	0	0	2019-10-26	10:30 PM	0	0	0
2019-10-25	10:45 PM	0	0	0	2019-10-26	10:45 PM	0	0	0
2019-10-25	11:00 PM	0	0	0	2019-10-26	11:00 PM	0	0	0
2019-10-25	11:15 PM	0	0	0	2019-10-26	11:15 PM	0	0	0
2019-10-25	11:30 PM	0	0	0	2019-10-26	11:30 PM	0	0	0
2019-10-25	11:45 PM	0	0	0	2019-10-26	11:45 PM	0	0	0
24 Hour Total		43	43	86	24 Hour Total		40	40	80

Compiled by: Crane Transportation Group

Appendix B

Intersection	
Int Delay, s/veh	123.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↰	↑		↰	↑	
Traffic Vol, veh/h	7	1	23	56	1	97	9	878	139	144	961	12
Future Vol, veh/h	7	1	23	56	1	97	9	878	139	144	961	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	7	7	7	0	4	4	4	4	4
Mvmt Flow	8	1	25	61	1	105	10	954	151	157	1045	13

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2469	2491	1052	2429	2422	1030	1058	0	0	1105	0	0
Stage 1	1366	1366	-	1050	1050	-	-	-	-	-	-	-
Stage 2	1103	1125	-	1379	1372	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.17	6.57	6.27	4.1	-	-	4.14	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.17	5.57	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.17	5.57	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.563	4.063	3.363	2.2	-	-	2.236	-	-
Pot Cap-1 Maneuver	21	29	275	~ 21	31	277	666	-	-	624	-	-
Stage 1	182	215	-	269	298	-	-	-	-	-	-	-
Stage 2	256	280	-	174	209	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	10	21	275	~ 15	23	277	666	-	-	624	-	-
Mov Cap-2 Maneuver	10	21	-	~ 15	23	-	-	-	-	-	-	-
Stage 1	179	161	-	265	294	-	-	-	-	-	-	-
Stage 2	156	276	-	118	156	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	282.9	$ 1804.5	0.1	1.6
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	666	-	-	37	37	624	-	-
HCM Lane V/C Ratio	0.015	-	-	0.911	4.524	0.251	-	-
HCM Control Delay (s)	10.5	-	-	282.9	$ 1804.5	12.7	-	-
HCM Lane LOS	B	-	-	F	F	B	-	-
HCM 95th %tile Q(veh)	0	-	-	3.4	19.5	1	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	294	146	1	5	4
Future Vol, veh/h	2	294	146	1	5	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	320	159	1	5	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	160	0	-	0	484	160
Stage 1	-	-	-	-	160	-
Stage 2	-	-	-	-	324	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1419	-	-	-	542	885
Stage 1	-	-	-	-	869	-
Stage 2	-	-	-	-	733	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1419	-	-	-	541	885
Mov Cap-2 Maneuver	-	-	-	-	541	-
Stage 1	-	-	-	-	867	-
Stage 2	-	-	-	-	733	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	10.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1419	-	-	-	654
HCM Lane V/C Ratio	0.002	-	-	-	0.015
HCM Control Delay (s)	7.5	0	-	-	10.6
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	67.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	142	0	184	0	0	0	68	456	0	0	977	61
Future Vol, veh/h	142	0	184	0	0	0	68	456	0	0	977	61
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	25	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	0	0	0	1	1	1	2	2	2
Mvmt Flow	154	0	200	0	0	0	74	496	0	0	1062	66

Major/Minor	Minor2		Minor1			Major1				Major2		
Conflicting Flow All	1739	-	1095	1839	1772	496	1128	0	0	496	0	0
Stage 1	1095	-	-	644	644	-	-	-	-	-	-	-
Stage 2	644	-	-	1195	1128	-	-	-	-	-	-	-
Critical Hdwy	7.12	-	6.22	7.1	6.5	6.2	4.11	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	-	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	-	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	-	3.318	3.5	4	3.3	2.209	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 68	0	260	59	84	578	623	-	-	1068	-	-
Stage 1	259	0	-	465	471	-	-	-	-	-	-	-
Stage 2	461	0	-	230	282	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 62	-	260	12	74	578	623	-	-	1068	-	-
Mov Cap-2 Maneuver	~ 62	-	-	12	74	-	-	-	-	-	-	-
Stage 1	228	-	-	410	415	-	-	-	-	-	-	-
Stage 2	406	-	-	53	282	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 387.1	0	1.5	0
HCM LOS	F	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	623	-	-	62	260	-	1068	-	-
HCM Lane V/C Ratio	0.119	-	-	2.489	0.769	-	-	-	-
HCM Control Delay (s)	11.6	-	-	$ 819.3	53.5	0	0	-	-
HCM Lane LOS	B	-	-	F	F	A	A	-	-
HCM 95th %tile Q(veh)	0.4	-	-	15.3	5.7	-	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	103.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	2	17	81	1	85	9	755	147	105	930	16
Future Vol, veh/h	9	2	17	81	1	85	9	755	147	105	930	16
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	1	1	1	0	1	1	2	2	2
Mvmt Flow	10	2	18	87	1	91	10	812	158	113	1000	17

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2192	2225	1009	2156	2154	891	1017	0	0	970	0	0
Stage 1	1235	1235	-	911	911	-	-	-	-	-	-	-
Stage 2	957	990	-	1245	1243	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.11	6.51	6.21	4.1	-	-	4.12	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.11	5.51	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.11	5.51	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.509	4.009	3.309	2.2	-	-	2.218	-	-
Pot Cap-1 Maneuver	33	44	294	~ 35	48	343	690	-	-	710	-	-
Stage 1	218	251	-	330	354	-	-	-	-	-	-	-
Stage 2	312	327	-	214	247	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	21	36	294	~ 27	40	343	690	-	-	710	-	-
Mov Cap-2 Maneuver	21	36	-	~ 27	40	-	-	-	-	-	-	-
Stage 1	215	211	-	325	349	-	-	-	-	-	-	-
Stage 2	225	322	-	167	208	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	143.9	$ 1301.3	0.1	1.1
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	690	-	-	52	51	710	-	-
HCM Lane V/C Ratio	0.014	-	-	0.579	3.521	0.159	-	-
HCM Control Delay (s)	10.3	-	-	143.9	$ 1301.3	11	-	-
HCM Lane LOS	B	-	-	F	F	B	-	-
HCM 95th %tile Q(veh)	0	-	-	2.3	19.5	0.6	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	248	175	1	6	4
Future Vol, veh/h	1	248	175	1	6	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	270	190	1	7	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	191	0	-	0	463	191
Stage 1	-	-	-	-	191	-
Stage 2	-	-	-	-	272	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1383	-	-	-	557	851
Stage 1	-	-	-	-	841	-
Stage 2	-	-	-	-	774	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1383	-	-	-	556	851
Mov Cap-2 Maneuver	-	-	-	-	556	-
Stage 1	-	-	-	-	840	-
Stage 2	-	-	-	-	774	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1383	-	-	-	646
HCM Lane V/C Ratio	0.001	-	-	-	0.017
HCM Control Delay (s)	7.6	0	-	-	10.7
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	19

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	122	0	119	0	0	0	76	453	0	0	666	74
Future Vol, veh/h	122	0	119	0	0	0	76	453	0	0	666	74
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	1	1	1	0	0	0	1	1	2	1	1	1
Mvmt Flow	130	0	127	0	0	0	81	482	0	0	709	79

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1393	-	749	1456	1432	482	788	0	0	482	0	0
Stage 1	749	-	-	644	644	-	-	-	-	-	-	-
Stage 2	644	-	-	812	788	-	-	-	-	-	-	-
Critical Hdwy	7.11	-	6.21	7.1	6.5	6.2	4.11	-	-	4.11	-	-
Critical Hdwy Stg 1	6.11	-	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.11	-	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.509	-	3.309	3.5	4	3.3	2.209	-	-	2.209	-	-
Pot Cap-1 Maneuver	~ 120	0	413	109	136	588	836	-	-	1086	-	-
Stage 1	405	0	-	465	471	-	-	-	-	-	-	-
Stage 2	463	0	-	376	405	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 111	-	413	70	123	588	836	-	-	1086	-	-
Mov Cap-2 Maneuver	~ 111	-	-	70	123	-	-	-	-	-	-	-
Stage 1	366	-	-	420	425	-	-	-	-	-	-	-
Stage 2	418	-	-	261	405	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	115.8	0	1.4	0
HCM LOS	F	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	836	-	-	111	413	-	1086	-	-
HCM Lane V/C Ratio	0.097	-	-	1.169	0.307	-	-	-	-
HCM Control Delay (s)	9.8	-	-	211.6	17.5	0	0	-	-
HCM Lane LOS	A	-	-	F	C	A	A	-	-
HCM 95th %tile Q(veh)	0.3	-	-	8.2	1.3	-	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	239.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	1	25	62	1	105	10	977	151	156	1066	13
Future Vol, veh/h	9	1	25	62	1	105	10	977	151	156	1066	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	7	7	7	0	4	4	4	4	4
Mvmt Flow	10	1	27	67	1	114	11	1062	164	170	1159	14

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2730	2754	1166	2686	2679	1144	1173	0	0	1226	0	0
Stage 1	1506	1506	-	1166	1166	-	-	-	-	-	-	-
Stage 2	1224	1248	-	1520	1513	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.17	6.57	6.27	4.1	-	-	4.14	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.17	5.57	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.17	5.57	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.563	4.063	3.363	2.2	-	-	2.236	-	-
Pot Cap-1 Maneuver	13	20	236	~ 14	21	238	603	-	-	562	-	-
Stage 1	151	184	-	231	262	-	-	-	-	-	-	-
Stage 2	219	245	-	144	178	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 5	14	236	~ 9	14	238	603	-	-	562	-	-
Mov Cap-2 Maneuver	~ 5	14	-	~ 9	14	-	-	-	-	-	-	-
Stage 1	148	128	-	227	257	-	-	-	-	-	-	-
Stage 2	111	241	-	88	124	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 958.5	$ 3454.1	0.1	1.8
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	603	-	-	18	23	562	-	-
HCM Lane V/C Ratio	0.018	-	-	2.114	7.94	0.302	-	-
HCM Control Delay (s)	11.1	-	-	$ 958.5	$ 3454.1	14.2	-	-
HCM Lane LOS	B	-	-	F	F	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	5.2	22.9	1.3	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	316	160	1	5	4
Future Vol, veh/h	2	316	160	1	5	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	343	174	1	5	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	175	0	-	0	522	175
Stage 1	-	-	-	-	175	-
Stage 2	-	-	-	-	347	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1401	-	-	-	515	868
Stage 1	-	-	-	-	855	-
Stage 2	-	-	-	-	716	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1401	-	-	-	514	868
Mov Cap-2 Maneuver	-	-	-	-	514	-
Stage 1	-	-	-	-	853	-
Stage 2	-	-	-	-	716	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1401	-	-	-	628
HCM Lane V/C Ratio	0.002	-	-	-	0.016
HCM Control Delay (s)	7.6	0	-	-	10.8
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	111.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	152	0	203	0	0	0	73	510	0	0	1081	69
Future Vol, veh/h	152	0	203	0	0	0	73	510	0	0	1081	69
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	0	0	0	1	1	1	2	2	2
Mvmt Flow	165	0	221	0	0	0	79	554	0	0	1175	75

Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	1925	-	1213	2035	1962	554	1250	0	0	554	0	0
Stage 1	1213	-	-	712	712	-	-	-	-	-	-	-
Stage 2	712	-	-	1323	1250	-	-	-	-	-	-	-
Critical Hdwy	7.12	-	6.22	7.1	6.5	6.2	4.11	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	-	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	-	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	-	3.318	3.5	4	3.3	2.209	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 50	0	222	43	64	536	560	-	-	1016	-	-
Stage 1	222	0	-	427	439	-	-	-	-	-	-	-
Stage 2	423	0	-	194	247	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 45	-	222	0	55	536	560	-	-	1016	-	-
Mov Cap-2 Maneuver	~ 45	-	-	0	55	-	-	-	-	-	-	-
Stage 1	191	-	-	367	377	-	-	-	-	-	-	-
Stage 2	363	-	-	1	247	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 654.6	0	1.6	0
HCM LOS	F	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	560	-	-	45	222	-	1016	-	-
HCM Lane V/C Ratio	0.142	-	-	3.671	0.994	-	-	-	-
HCM Control Delay (s)	12.5	-	-	$ 1388.6	105	0	0	-	-
HCM Lane LOS	B	-	-	F	F	A	A	-	-
HCM 95th %tile Q(veh)	0.5	-	-	18.4	9	-	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	164.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	2	19	86	1	91	10	825	157	114	1005	18
Future Vol, veh/h	10	2	19	86	1	91	10	825	157	114	1005	18
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	1	1	1	0	1	1	2	2	2
Mvmt Flow	11	2	20	92	1	98	11	887	169	123	1081	19

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2380	2415	1091	2342	2340	972	1100	0	0	1056	0	0
Stage 1	1337	1337	-	994	994	-	-	-	-	-	-	-
Stage 2	1043	1078	-	1348	1346	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.11	6.51	6.21	4.1	-	-	4.12	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.11	5.51	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.11	5.51	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.509	4.009	3.309	2.2	-	-	2.218	-	-
Pot Cap-1 Maneuver	24	33	264	~ 26	37	308	642	-	-	659	-	-
Stage 1	191	224	-	296	324	-	-	-	-	-	-	-
Stage 2	280	297	-	187	221	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	13	26	264	~ 19	30	308	642	-	-	659	-	-
Mov Cap-2 Maneuver	13	26	-	~ 19	30	-	-	-	-	-	-	-
Stage 1	188	182	-	291	318	-	-	-	-	-	-	-
Stage 2	187	292	-	139	180	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 322.6	$ 2093.8	0.1	1.2
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	642	-	-	34	37	659	-	-
HCM Lane V/C Ratio	0.017	-	-	0.98	5.173	0.186	-	-
HCM Control Delay (s)	10.7	-	-	$ 322.6	$ 2093.8	11.7	-	-
HCM Lane LOS	B	-	-	F	F	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	3.5	22.5	0.7	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	5.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	268	1	191	1	6	4
Future Vol, veh/h	268	1	191	1	6	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	291	1	208	1	7	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	209	0	-	0	792	209
Stage 1	-	-	-	-	209	-
Stage 2	-	-	-	-	583	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1362	-	-	-	358	831
Stage 1	-	-	-	-	826	-
Stage 2	-	-	-	-	558	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1362	-	-	-	281	831
Mov Cap-2 Maneuver	-	-	-	-	281	-
Stage 1	-	-	-	-	649	-
Stage 2	-	-	-	-	558	-

Approach	EB	WB	SB
HCM Control Delay, s	8.3	0	14.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1362	-	-	-	382
HCM Lane V/C Ratio	0.214	-	-	-	0.028
HCM Control Delay (s)	8.4	0	-	-	14.7
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.8	-	-	-	0.1

Intersection	
Int Delay, s/veh	36.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	134	0	131	0	0	0	84	503	0	0	739	82
Future Vol, veh/h	134	0	131	0	0	0	84	503	0	0	739	82
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	25	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	1	1	1	0	0	0	1	1	2	1	1	1
Mvmt Flow	143	0	139	0	0	0	89	535	0	0	786	87

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1543	-	830	1612	1586	535	873	0	0	535	0	0
Stage 1	830	-	-	713	713	-	-	-	-	-	-	-
Stage 2	713	-	-	899	873	-	-	-	-	-	-	-
Critical Hdwy	7.11	-	6.21	7.1	6.5	6.2	4.11	-	-	4.11	-	-
Critical Hdwy Stg 1	6.11	-	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.11	-	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.509	-	3.309	3.5	4	3.3	2.209	-	-	2.209	-	-
Pot Cap-1 Maneuver	~ 94	0	372	85	109	549	777	-	-	1038	-	-
Stage 1	366	0	-	426	438	-	-	-	-	-	-	-
Stage 2	424	0	-	336	370	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 86	-	372	48	96	549	777	-	-	1038	-	-
Mov Cap-2 Maneuver	~ 86	-	-	48	96	-	-	-	-	-	-	-
Stage 1	324	-	-	377	388	-	-	-	-	-	-	-
Stage 2	375	-	-	210	370	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	225.1	0	1.5	0
HCM LOS	F	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	777	-	-	86	372	-	1038	-	-
HCM Lane V/C Ratio	0.115	-	-	1.658	0.375	-	-	-	-
HCM Control Delay (s)	10.2	-	-	$ 425.3	20.4	0	0	-	-
HCM Lane LOS	B	-	-	F	C	A	A	-	-
HCM 95th %tile Q(veh)	0.4	-	-	11.7	1.7	-	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	406.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	1	27	67	1	111	11	1057	150	166	1160	14
Future Vol, veh/h	10	1	27	67	1	111	11	1057	150	166	1160	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	7	7	7	0	4	4	4	4	4
Mvmt Flow	11	1	29	73	1	121	12	1149	163	180	1261	15

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2945	2965	1269	2899	2891	1231	1276	0	0	1312	0	0
Stage 1	1629	1629	-	1255	1255	-	-	-	-	-	-	-
Stage 2	1316	1336	-	1644	1636	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.17	6.57	6.27	4.1	-	-	4.14	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.17	5.57	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.17	5.57	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.563	4.063	3.363	2.2	-	-	2.236	-	-
Pot Cap-1 Maneuver	~ 9	14	205	~ 10	15	211	551	-	-	521	-	-
Stage 1	128	160	-	205	238	-	-	-	-	-	-	-
Stage 2	194	222	-	122	155	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 3	9	205	~ 6	10	211	551	-	-	521	-	-
Mov Cap-2 Maneuver	~ 3	9	-	~ 6	10	-	-	-	-	-	-	-
Stage 1	125	105	-	200	233	-	-	-	-	-	-	-
Stage 2	81	217	-	~ 68	102	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, $	1920.2	$ 5880.5	0.1	1.9
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	551	-	-	11	15	521	-	-
HCM Lane V/C Ratio	0.022	-	-	3.755	12.971	0.346	-	-
HCM Control Delay (s)	11.7	-	-	$ 1920.2	$ 5880.5	15.5	-	-
HCM Lane LOS	B	-	-	F	F	C	-	-
HCM 95th %tile Q(veh)	0.1	-	-	6.3	25.3	1.5	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	335	170	1	5	4
Future Vol, veh/h	2	335	170	1	5	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	364	185	1	5	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	186	0	-	0	554	186
Stage 1	-	-	-	-	186	-
Stage 2	-	-	-	-	368	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1388	-	-	-	493	856
Stage 1	-	-	-	-	846	-
Stage 2	-	-	-	-	700	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1388	-	-	-	492	856
Mov Cap-2 Maneuver	-	-	-	-	492	-
Stage 1	-	-	-	-	844	-
Stage 2	-	-	-	-	700	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	11
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1388	-	-	-	607
HCM Lane V/C Ratio	0.002	-	-	-	0.016
HCM Control Delay (s)	7.6	0	-	-	11
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	159.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	159	0	213	0	0	0	75	553	0	0	1165	73
Future Vol, veh/h	159	0	213	0	0	0	75	553	0	0	1165	73
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	25	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	0	0	0	1	1	1	2	2	2
Mvmt Flow	173	0	232	0	0	0	82	601	0	0	1266	79

Major/Minor	Minor2		Minor1			Major1				Major2		
Conflicting Flow All	2071	-	1306	2187	2110	601	1345	0	0	601	0	0
Stage 1	1306	-	-	765	765	-	-	-	-	-	-	-
Stage 2	765	-	-	1422	1345	-	-	-	-	-	-	-
Critical Hdwy	7.12	-	6.22	7.1	6.5	6.2	4.11	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	-	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	-	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	-	3.318	3.5	4	3.3	2.209	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 40	0	~ 195	33	52	504	515	-	-	976	-	-
Stage 1	197	0	-	399	415	-	-	-	-	-	-	-
Stage 2	396	0	-	171	222	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 35	-	~ 195	-	44	504	515	-	-	976	-	-
Mov Cap-2 Maneuver	~ 35	-	-	-	44	-	-	-	-	-	-	-
Stage 1	~ 166	-	-	336	349	-	-	-	-	-	-	-
Stage 2	333	-	-	-	222	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 954.5	0	1.6	0
HCM LOS	F	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	515	-	-	35	195	-	976	-	-
HCM Lane V/C Ratio	0.158	-	-	4.938	1.187	-	-	-	-
HCM Control Delay (s)	13.3	-	-	$ 2000.7	173.5	0	0	-	-
HCM Lane LOS	B	-	-	F	F	A	A	-	-
HCM 95th %tile Q(veh)	0.6	-	-	20.4	11.9	-	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	293.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	2	20	92	1	96	11	910	170	121	1120	20
Future Vol, veh/h	11	2	20	92	1	96	11	910	170	121	1120	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	1	1	1	0	1	1	2	2	2
Mvmt Flow	12	2	22	99	1	103	12	978	183	130	1204	22

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2621	2660	1215	2581	2580	1070	1226	0	0	1161	0	0
Stage 1	1475	1475	-	1094	1094	-	-	-	-	-	-	-
Stage 2	1146	1185	-	1487	1486	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.11	6.51	6.21	4.1	-	-	4.12	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.11	5.51	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.11	5.51	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.509	4.009	3.309	2.2	-	-	2.218	-	-
Pot Cap-1 Maneuver	16	23	223	~ 17	26	270	576	-	-	602	-	-
Stage 1	159	192	-	261	291	-	-	-	-	-	-	-
Stage 2	245	265	-	156	189	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 8	18	223	~ 12	20	270	576	-	-	602	-	-
Mov Cap-2 Maneuver	~ 8	18	-	~ 12	20	-	-	-	-	-	-	-
Stage 1	156	151	-	256	285	-	-	-	-	-	-	-
Stage 2	148	259	-	109	148	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 724.6	$ 3856.1	0.1	1.2
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	576	-	-	21	23	602	-	-
HCM Lane V/C Ratio	0.021	-	-	1.69	8.836	0.216	-	-
HCM Control Delay (s)	11.4	-	-	$ 724.6	$ 3856.1	12.6	-	-
HCM Lane LOS	B	-	-	F	F	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	4.7	25.5	0.8	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	5.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	285	1	200	1	6	4
Future Vol, veh/h	285	1	200	1	6	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	310	1	217	1	7	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	218	0	-	0	839	218
Stage 1	-	-	-	-	218	-
Stage 2	-	-	-	-	621	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1352	-	-	-	336	822
Stage 1	-	-	-	-	818	-
Stage 2	-	-	-	-	536	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1352	-	-	-	259	822
Mov Cap-2 Maneuver	-	-	-	-	259	-
Stage 1	-	-	-	-	631	-
Stage 2	-	-	-	-	536	-

Approach	EB	WB	SB
HCM Control Delay, s	8.4	0	15.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1352	-	-	-	357
HCM Lane V/C Ratio	0.229	-	-	-	0.03
HCM Control Delay (s)	8.5	0	-	-	15.4
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.9	-	-	-	0.1

Intersection	
Int Delay, s/veh	52.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	140	0	136	0	0	1	87	544	0	0	798	85
Future Vol, veh/h	140	0	136	0	0	1	87	544	0	0	798	85
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	25	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	1	1	1	0	0	0	1	1	2	1	1	1
Mvmt Flow	149	0	145	0	0	1	93	579	0	0	849	90

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1660	-	894	1732	1704	579	939	0	0	579	0	0
Stage 1	894	-	-	765	765	-	-	-	-	-	-	-
Stage 2	766	-	-	967	939	-	-	-	-	-	-	-
Critical Hdwy	7.11	-	6.21	7.1	6.5	6.2	4.11	-	-	4.11	-	-
Critical Hdwy Stg 1	6.11	-	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.11	-	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.509	-	3.309	3.5	4	3.3	2.209	-	-	2.209	-	-
Pot Cap-1 Maneuver	~ 78	0	341	70	93	519	734	-	-	1000	-	-
Stage 1	337	0	-	399	415	-	-	-	-	-	-	-
Stage 2	397	0	-	308	345	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 70	-	341	36	81	519	734	-	-	1000	-	-
Mov Cap-2 Maneuver	~ 70	-	-	36	81	-	-	-	-	-	-	-
Stage 1	294	-	-	348	362	-	-	-	-	-	-	-
Stage 2	346	-	-	177	345	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 339.7	12	1.5	0
HCM LOS	F	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	734	-	-	70	341	519	1000	-	-
HCM Lane V/C Ratio	0.126	-	-	2.128	0.424	0.002	-	-	-
HCM Control Delay (s)	10.6	-	-	-$ 647.2	23.1	12	0	-	-
HCM Lane LOS	B	-	-	F	C	B	A	-	-
HCM 95th %tile Q(veh)	0.4	-	-	13.9	2	0	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	123.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	1	23	56	1	97	9	878	139	144	961	12
Future Vol, veh/h	7	1	23	56	1	97	9	878	139	144	961	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	7	7	7	0	4	4	4	4	4
Mvmt Flow	8	1	25	61	1	105	10	954	151	157	1045	13

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2469	2491	1052	2429	2422	1030	1058	0	0	1105	0	0
Stage 1	1366	1366	-	1050	1050	-	-	-	-	-	-	-
Stage 2	1103	1125	-	1379	1372	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.17	6.57	6.27	4.1	-	-	4.14	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.17	5.57	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.17	5.57	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.563	4.063	3.363	2.2	-	-	2.236	-	-
Pot Cap-1 Maneuver	21	29	275	~ 21	31	277	666	-	-	624	-	-
Stage 1	182	215	-	269	298	-	-	-	-	-	-	-
Stage 2	256	280	-	174	209	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	10	21	275	~ 15	23	277	666	-	-	624	-	-
Mov Cap-2 Maneuver	10	21	-	~ 15	23	-	-	-	-	-	-	-
Stage 1	179	161	-	265	294	-	-	-	-	-	-	-
Stage 2	156	276	-	118	156	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	282.9	$ 1804.5	0.1	1.6
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	666	-	-	37	37	624	-	-
HCM Lane V/C Ratio	0.015	-	-	0.911	4.524	0.251	-	-
HCM Control Delay (s)	10.5	-	-	282.9	$ 1804.5	12.7	-	-
HCM Lane LOS	B	-	-	F	F	B	-	-
HCM 95th %tile Q(veh)	0	-	-	3.4	19.5	1	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	294	146	1	6	4
Future Vol, veh/h	2	294	146	1	6	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	320	159	1	7	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	160	0	-	0	484	160
Stage 1	-	-	-	-	160	-
Stage 2	-	-	-	-	324	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1419	-	-	-	542	885
Stage 1	-	-	-	-	869	-
Stage 2	-	-	-	-	733	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1419	-	-	-	541	885
Mov Cap-2 Maneuver	-	-	-	-	541	-
Stage 1	-	-	-	-	867	-
Stage 2	-	-	-	-	733	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	10.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1419	-	-	-	641
HCM Lane V/C Ratio	0.002	-	-	-	0.017
HCM Control Delay (s)	7.5	0	-	-	10.7
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	67.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	142	0	185	0	0	0	68	456	0	0	977	61
Future Vol, veh/h	142	0	185	0	0	0	68	456	0	0	977	61
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	0	0	0	1	1	1	2	2	2
Mvmt Flow	154	0	201	0	0	0	74	496	0	0	1062	66

Major/Minor	Minor2		Minor1			Major1				Major2		
Conflicting Flow All	1739	-	1095	1840	1772	496	1128	0	0	496	0	0
Stage 1	1095	-	-	644	644	-	-	-	-	-	-	-
Stage 2	644	-	-	1196	1128	-	-	-	-	-	-	-
Critical Hdwy	7.12	-	6.22	7.1	6.5	6.2	4.11	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	-	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	-	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	-	3.318	3.5	4	3.3	2.209	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 68	0	260	59	84	578	623	-	-	1068	-	-
Stage 1	259	0	-	465	471	-	-	-	-	-	-	-
Stage 2	461	0	-	229	282	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 62	-	260	12	74	578	623	-	-	1068	-	-
Mov Cap-2 Maneuver	~ 62	-	-	12	74	-	-	-	-	-	-	-
Stage 1	228	-	-	410	415	-	-	-	-	-	-	-
Stage 2	406	-	-	52	282	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 386.3	0	1.5	0
HCM LOS	F	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	623	-	-	62	260	-	1068	-	-
HCM Lane V/C Ratio	0.119	-	-	2.489	0.773	-	-	-	-
HCM Control Delay (s)	11.6	-	-	$ 819.3	54	0	0	-	-
HCM Lane LOS	B	-	-	F	F	A	A	-	-
HCM 95th %tile Q(veh)	0.4	-	-	15.3	5.8	-	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	103.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	2	17	81	1	85	9	755	147	105	930	16
Future Vol, veh/h	9	2	17	81	1	85	9	755	147	105	930	16
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	1	1	1	0	1	1	2	2	2
Mvmt Flow	10	2	18	87	1	91	10	812	158	113	1000	17

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2192	2225	1009	2156	2154	891	1017	0	0	970	0	0
Stage 1	1235	1235	-	911	911	-	-	-	-	-	-	-
Stage 2	957	990	-	1245	1243	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.11	6.51	6.21	4.1	-	-	4.12	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.11	5.51	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.11	5.51	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.509	4.009	3.309	2.2	-	-	2.218	-	-
Pot Cap-1 Maneuver	33	44	294	~ 35	48	343	690	-	-	710	-	-
Stage 1	218	251	-	330	354	-	-	-	-	-	-	-
Stage 2	312	327	-	214	247	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	21	36	294	~ 27	40	343	690	-	-	710	-	-
Mov Cap-2 Maneuver	21	36	-	~ 27	40	-	-	-	-	-	-	-
Stage 1	215	211	-	325	349	-	-	-	-	-	-	-
Stage 2	225	322	-	167	208	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	143.9	$ 1301.3	0.1	1.1
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	690	-	-	52	51	710	-	-
HCM Lane V/C Ratio	0.014	-	-	0.579	3.521	0.159	-	-
HCM Control Delay (s)	10.3	-	-	143.9	$ 1301.3	11	-	-
HCM Lane LOS	B	-	-	F	F	B	-	-
HCM 95th %tile Q(veh)	0	-	-	2.3	19.5	0.6	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	248	175	1	7	4
Future Vol, veh/h	1	248	175	1	7	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	270	190	1	8	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	191	0	-	0	463	191
Stage 1	-	-	-	-	191	-
Stage 2	-	-	-	-	272	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1383	-	-	-	557	851
Stage 1	-	-	-	-	841	-
Stage 2	-	-	-	-	774	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1383	-	-	-	556	851
Mov Cap-2 Maneuver	-	-	-	-	556	-
Stage 1	-	-	-	-	840	-
Stage 2	-	-	-	-	774	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1383	-	-	-	636
HCM Lane V/C Ratio	0.001	-	-	-	0.019
HCM Control Delay (s)	7.6	0	-	-	10.8
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	19

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	122	0	120	0	0	0	76	453	0	0	666	74
Future Vol, veh/h	122	0	120	0	0	0	76	453	0	0	666	74
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	1	1	1	0	0	0	1	1	2	1	1	1
Mvmt Flow	130	0	128	0	0	0	81	482	0	0	709	79

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1393	-	749	1457	1432	482	788	0	0	482	0	0
Stage 1	749	-	-	644	644	-	-	-	-	-	-	-
Stage 2	644	-	-	813	788	-	-	-	-	-	-	-
Critical Hdwy	7.11	-	6.21	7.1	6.5	6.2	4.11	-	-	4.11	-	-
Critical Hdwy Stg 1	6.11	-	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.11	-	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.509	-	3.309	3.5	4	3.3	2.209	-	-	2.209	-	-
Pot Cap-1 Maneuver	~ 120	0	413	109	136	588	836	-	-	1086	-	-
Stage 1	405	0	-	465	471	-	-	-	-	-	-	-
Stage 2	463	0	-	375	405	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 111	-	413	70	123	588	836	-	-	1086	-	-
Mov Cap-2 Maneuver	~ 111	-	-	70	123	-	-	-	-	-	-	-
Stage 1	366	-	-	420	425	-	-	-	-	-	-	-
Stage 2	418	-	-	259	405	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	115.4	0	1.4	0
HCM LOS	F	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	836	-	-	111	413	-	1086	-	-
HCM Lane V/C Ratio	0.097	-	-	1.169	0.309	-	-	-	-
HCM Control Delay (s)	9.8	-	-	211.6	17.6	0	0	-	-
HCM Lane LOS	A	-	-	F	C	A	A	-	-
HCM 95th %tile Q(veh)	0.3	-	-	8.2	1.3	-	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	239.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	1	25	62	1	105	10	977	151	156	1066	13
Future Vol, veh/h	9	1	25	62	1	105	10	977	151	156	1066	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	7	7	7	0	4	4	4	4	4
Mvmt Flow	10	1	27	67	1	114	11	1062	164	170	1159	14

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2730	2754	1166	2686	2679	1144	1173	0	0	1226	0	0
Stage 1	1506	1506	-	1166	1166	-	-	-	-	-	-	-
Stage 2	1224	1248	-	1520	1513	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.17	6.57	6.27	4.1	-	-	4.14	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.17	5.57	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.17	5.57	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.563	4.063	3.363	2.2	-	-	2.236	-	-
Pot Cap-1 Maneuver	13	20	236	~ 14	21	238	603	-	-	562	-	-
Stage 1	151	184	-	231	262	-	-	-	-	-	-	-
Stage 2	219	245	-	144	178	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 5	14	236	~ 9	14	238	603	-	-	562	-	-
Mov Cap-2 Maneuver	~ 5	14	-	~ 9	14	-	-	-	-	-	-	-
Stage 1	148	128	-	227	257	-	-	-	-	-	-	-
Stage 2	111	241	-	88	124	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 958.5	$ 3454.1	0.1	1.8
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	603	-	-	18	23	562	-	-
HCM Lane V/C Ratio	0.018	-	-	2.114	7.94	0.302	-	-
HCM Control Delay (s)	11.1	-	-	$ 958.5	$ 3454.1	14.2	-	-
HCM Lane LOS	B	-	-	F	F	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	5.2	22.9	1.3	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	316	160	1	6	4
Future Vol, veh/h	2	316	160	1	6	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	343	174	1	7	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	175	0	-	0	522	175
Stage 1	-	-	-	-	175	-
Stage 2	-	-	-	-	347	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1401	-	-	-	515	868
Stage 1	-	-	-	-	855	-
Stage 2	-	-	-	-	716	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1401	-	-	-	514	868
Mov Cap-2 Maneuver	-	-	-	-	514	-
Stage 1	-	-	-	-	853	-
Stage 2	-	-	-	-	716	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	11
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1401	-	-	-	614
HCM Lane V/C Ratio	0.002	-	-	-	0.018
HCM Control Delay (s)	7.6	0	-	-	11
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	111.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	152	0	204	0	0	0	73	510	0	0	1081	69
Future Vol, veh/h	152	0	204	0	0	0	73	510	0	0	1081	69
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	25	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	0	0	0	1	1	1	2	2	2
Mvmt Flow	165	0	222	0	0	0	79	554	0	0	1175	75

Major/Minor	Minor2		Minor1			Major1				Major2		
Conflicting Flow All	1925	-	1213	2036	1962	554	1250	0	0	554	0	0
Stage 1	1213	-	-	712	712	-	-	-	-	-	-	-
Stage 2	712	-	-	1324	1250	-	-	-	-	-	-	-
Critical Hdwy	7.12	-	6.22	7.1	6.5	6.2	4.11	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	-	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	-	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	-	3.318	3.5	4	3.3	2.209	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 50	0	222	43	64	536	560	-	-	1016	-	-
Stage 1	222	0	-	427	439	-	-	-	-	-	-	-
Stage 2	423	0	-	194	247	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 45	-	222	0	55	536	560	-	-	1016	-	-
Mov Cap-2 Maneuver	~ 45	-	-	0	55	-	-	-	-	-	-	-
Stage 1	191	-	-	367	377	-	-	-	-	-	-	-
Stage 2	363	-	-	0	247	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 653.8	0	1.6	0
HCM LOS	F	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	560	-	-	45	222	-	1016	-	-
HCM Lane V/C Ratio	0.142	-	-	3.671	0.999	-	-	-	-
HCM Control Delay (s)	12.5	-	-	$ 1388.6	106.3	0	0	-	-
HCM Lane LOS	B	-	-	F	F	A	A	-	-
HCM 95th %tile Q(veh)	0.5	-	-	18.4	9.1	-	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	164.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	2	19	86	1	91	10	825	157	114	1005	18
Future Vol, veh/h	10	2	19	86	1	91	10	825	157	114	1005	18
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	1	1	1	0	1	1	2	2	2
Mvmt Flow	11	2	20	92	1	98	11	887	169	123	1081	19

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2380	2415	1091	2342	2340	972	1100	0	0	1056	0	0
Stage 1	1337	1337	-	994	994	-	-	-	-	-	-	-
Stage 2	1043	1078	-	1348	1346	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.11	6.51	6.21	4.1	-	-	4.12	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.11	5.51	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.11	5.51	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.509	4.009	3.309	2.2	-	-	2.218	-	-
Pot Cap-1 Maneuver	24	33	264	~ 26	37	308	642	-	-	659	-	-
Stage 1	191	224	-	296	324	-	-	-	-	-	-	-
Stage 2	280	297	-	187	221	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	13	26	264	~ 19	30	308	642	-	-	659	-	-
Mov Cap-2 Maneuver	13	26	-	~ 19	30	-	-	-	-	-	-	-
Stage 1	188	182	-	291	318	-	-	-	-	-	-	-
Stage 2	187	292	-	139	180	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 322.6	$ 2093.8	0.1	1.2
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	642	-	-	34	37	659	-	-
HCM Lane V/C Ratio	0.017	-	-	0.98	5.173	0.186	-	-
HCM Control Delay (s)	10.7	-	-	$ 322.6	$ 2093.8	11.7	-	-
HCM Lane LOS	B	-	-	F	F	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	3.5	22.5	0.7	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	5.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	268	1	191	1	7	4
Future Vol, veh/h	268	1	191	1	7	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	291	1	208	1	8	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	209	0	-	0	792	209
Stage 1	-	-	-	-	209	-
Stage 2	-	-	-	-	583	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1362	-	-	-	358	831
Stage 1	-	-	-	-	826	-
Stage 2	-	-	-	-	558	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1362	-	-	-	281	831
Mov Cap-2 Maneuver	-	-	-	-	281	-
Stage 1	-	-	-	-	649	-
Stage 2	-	-	-	-	558	-

Approach	EB	WB	SB
HCM Control Delay, s	8.3	0	15.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1362	-	-	-	370
HCM Lane V/C Ratio	0.214	-	-	-	0.032
HCM Control Delay (s)	8.4	0	-	-	15.1
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.8	-	-	-	0.1

Intersection	
Int Delay, s/veh	36.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	134	0	132	0	0	0	84	503	0	0	739	82
Future Vol, veh/h	134	0	132	0	0	0	84	503	0	0	739	82
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	1	1	1	0	0	0	1	1	2	1	1	1
Mvmt Flow	143	0	140	0	0	0	89	535	0	0	786	87

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1543	-	830	1613	1586	535	873	0	0	535	0	0
Stage 1	830	-	-	713	713	-	-	-	-	-	-	-
Stage 2	713	-	-	900	873	-	-	-	-	-	-	-
Critical Hdwy	7.11	-	6.21	7.1	6.5	6.2	4.11	-	-	4.11	-	-
Critical Hdwy Stg 1	6.11	-	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.11	-	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.509	-	3.309	3.5	4	3.3	2.209	-	-	2.209	-	-
Pot Cap-1 Maneuver	~ 94	0	372	85	109	549	777	-	-	1038	-	-
Stage 1	366	0	-	426	438	-	-	-	-	-	-	-
Stage 2	424	0	-	336	370	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 86	-	372	48	96	549	777	-	-	1038	-	-
Mov Cap-2 Maneuver	~ 86	-	-	48	96	-	-	-	-	-	-	-
Stage 1	324	-	-	377	388	-	-	-	-	-	-	-
Stage 2	375	-	-	209	370	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	224.4	0	1.5	0
HCM LOS	F	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	777	-	-	86	372	-	1038	-	-
HCM Lane V/C Ratio	0.115	-	-	1.658	0.377	-	-	-	-
HCM Control Delay (s)	10.2	-	-	$ 425.3	20.4	0	0	-	-
HCM Lane LOS	B	-	-	F	C	A	A	-	-
HCM 95th %tile Q(veh)	0.4	-	-	11.7	1.7	-	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	406.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	1	27	67	1	111	11	1057	150	166	1160	14
Future Vol, veh/h	10	1	27	67	1	111	11	1057	150	166	1160	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	7	7	7	0	4	4	4	4	4
Mvmt Flow	11	1	29	73	1	121	12	1149	163	180	1261	15

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2945	2965	1269	2899	2891	1231	1276	0	0	1312	0	0
Stage 1	1629	1629	-	1255	1255	-	-	-	-	-	-	-
Stage 2	1316	1336	-	1644	1636	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.17	6.57	6.27	4.1	-	-	4.14	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.17	5.57	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.17	5.57	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.563	4.063	3.363	2.2	-	-	2.236	-	-
Pot Cap-1 Maneuver	~ 9	14	205	~ 10	15	211	551	-	-	521	-	-
Stage 1	128	160	-	205	238	-	-	-	-	-	-	-
Stage 2	194	222	-	122	155	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 3	9	205	~ 6	10	211	551	-	-	521	-	-
Mov Cap-2 Maneuver	~ 3	9	-	~ 6	10	-	-	-	-	-	-	-
Stage 1	125	105	-	200	233	-	-	-	-	-	-	-
Stage 2	81	217	-	~ 68	102	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, $	1920.2	$ 5880.5	0.1	1.9
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	551	-	-	11	15	521	-	-
HCM Lane V/C Ratio	0.022	-	-	3.755	12.971	0.346	-	-
HCM Control Delay (s)	11.7	-	-	$ 1920.2	$ 5880.5	15.5	-	-
HCM Lane LOS	B	-	-	F	F	C	-	-
HCM 95th %tile Q(veh)	0.1	-	-	6.3	25.3	1.5	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	335	170	1	6	4
Future Vol, veh/h	2	335	170	1	6	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	364	185	1	7	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	186	0	-	0	554	186
Stage 1	-	-	-	-	186	-
Stage 2	-	-	-	-	368	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1388	-	-	-	493	856
Stage 1	-	-	-	-	846	-
Stage 2	-	-	-	-	700	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1388	-	-	-	492	856
Mov Cap-2 Maneuver	-	-	-	-	492	-
Stage 1	-	-	-	-	844	-
Stage 2	-	-	-	-	700	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	11.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1388	-	-	-	593
HCM Lane V/C Ratio	0.002	-	-	-	0.018
HCM Control Delay (s)	7.6	0	-	-	11.2
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	159.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	159	0	214	0	0	0	75	553	0	0	1165	73
Future Vol, veh/h	159	0	214	0	0	0	75	553	0	0	1165	73
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	25	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	0	0	0	1	1	1	2	2	2
Mvmt Flow	173	0	233	0	0	0	82	601	0	0	1266	79

Major/Minor	Minor2		Minor1			Major1				Major2		
Conflicting Flow All	2071	-	1306	2187	2110	601	1345	0	0	601	0	0
Stage 1	1306	-	-	765	765	-	-	-	-	-	-	-
Stage 2	765	-	-	1422	1345	-	-	-	-	-	-	-
Critical Hdwy	7.12	-	6.22	7.1	6.5	6.2	4.11	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	-	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	-	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	-	3.318	3.5	4	3.3	2.209	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 40	0	~ 195	33	52	504	515	-	-	976	-	-
Stage 1	197	0	-	399	415	-	-	-	-	-	-	-
Stage 2	396	0	-	171	222	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 35	-	~ 195	-	44	504	515	-	-	976	-	-
Mov Cap-2 Maneuver	~ 35	-	-	-	44	-	-	-	-	-	-	-
Stage 1	~ 166	-	-	336	349	-	-	-	-	-	-	-
Stage 2	333	-	-	-	222	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 953.5	0	1.6	0
HCM LOS	F	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	515	-	-	35	195	-	976	-	-
HCM Lane V/C Ratio	0.158	-	-	4.938	1.193	-	-	-	-
HCM Control Delay (s)	13.3	-	-	$ 2000.7	175.5	0	0	-	-
HCM Lane LOS	B	-	-	F	F	A	A	-	-
HCM 95th %tile Q(veh)	0.6	-	-	20.4	12	-	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	293.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	2	20	92	1	96	11	910	170	121	1120	20
Future Vol, veh/h	11	2	20	92	1	96	11	910	170	121	1120	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	1	1	1	0	1	1	2	2	2
Mvmt Flow	12	2	22	99	1	103	12	978	183	130	1204	22

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2621	2660	1215	2581	2580	1070	1226	0	0	1161	0	0
Stage 1	1475	1475	-	1094	1094	-	-	-	-	-	-	-
Stage 2	1146	1185	-	1487	1486	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.11	6.51	6.21	4.1	-	-	4.12	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.11	5.51	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.11	5.51	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.509	4.009	3.309	2.2	-	-	2.218	-	-
Pot Cap-1 Maneuver	16	23	223	~ 17	26	270	576	-	-	602	-	-
Stage 1	159	192	-	261	291	-	-	-	-	-	-	-
Stage 2	245	265	-	156	189	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 8	18	223	~ 12	20	270	576	-	-	602	-	-
Mov Cap-2 Maneuver	~ 8	18	-	~ 12	20	-	-	-	-	-	-	-
Stage 1	156	151	-	256	285	-	-	-	-	-	-	-
Stage 2	148	259	-	109	148	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 724.6	$ 3856.1	0.1	1.2
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	576	-	-	21	23	602	-	-
HCM Lane V/C Ratio	0.021	-	-	1.69	8.836	0.216	-	-
HCM Control Delay (s)	11.4	-	-	$ 724.6	$ 3856.1	12.6	-	-
HCM Lane LOS	B	-	-	F	F	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	4.7	25.5	0.8	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	5.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	285	1	200	1	7	4
Future Vol, veh/h	285	1	200	1	7	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	310	1	217	1	8	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	218	0	-	0	839	218
Stage 1	-	-	-	-	218	-
Stage 2	-	-	-	-	621	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1352	-	-	-	336	822
Stage 1	-	-	-	-	818	-
Stage 2	-	-	-	-	536	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1352	-	-	-	259	822
Mov Cap-2 Maneuver	-	-	-	-	259	-
Stage 1	-	-	-	-	631	-
Stage 2	-	-	-	-	536	-

Approach	EB	WB	SB
HCM Control Delay, s	8.4	0	15.8
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1352	-	-	-	345
HCM Lane V/C Ratio	0.229	-	-	-	0.035
HCM Control Delay (s)	8.5	0	-	-	15.8
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.9	-	-	-	0.1

Intersection	
Int Delay, s/veh	52.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	140	0	137	0	0	1	87	544	0	0	798	85
Future Vol, veh/h	140	0	137	0	0	1	87	544	0	0	798	85
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	25	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	1	1	1	0	0	0	1	1	2	1	1	1
Mvmt Flow	149	0	146	0	0	1	93	579	0	0	849	90

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1660	-	894	1732	1704	579	939	0	0	579	0	0
Stage 1	894	-	-	765	765	-	-	-	-	-	-	-
Stage 2	766	-	-	967	939	-	-	-	-	-	-	-
Critical Hdwy	7.11	-	6.21	7.1	6.5	6.2	4.11	-	-	4.11	-	-
Critical Hdwy Stg 1	6.11	-	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.11	-	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.509	-	3.309	3.5	4	3.3	2.209	-	-	2.209	-	-
Pot Cap-1 Maneuver	~ 78	0	341	70	93	519	734	-	-	1000	-	-
Stage 1	337	0	-	399	415	-	-	-	-	-	-	-
Stage 2	397	0	-	308	345	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 70	-	341	36	81	519	734	-	-	1000	-	-
Mov Cap-2 Maneuver	~ 70	-	-	36	81	-	-	-	-	-	-	-
Stage 1	294	-	-	348	362	-	-	-	-	-	-	-
Stage 2	346	-	-	176	345	-	-	-	-	-	-	-

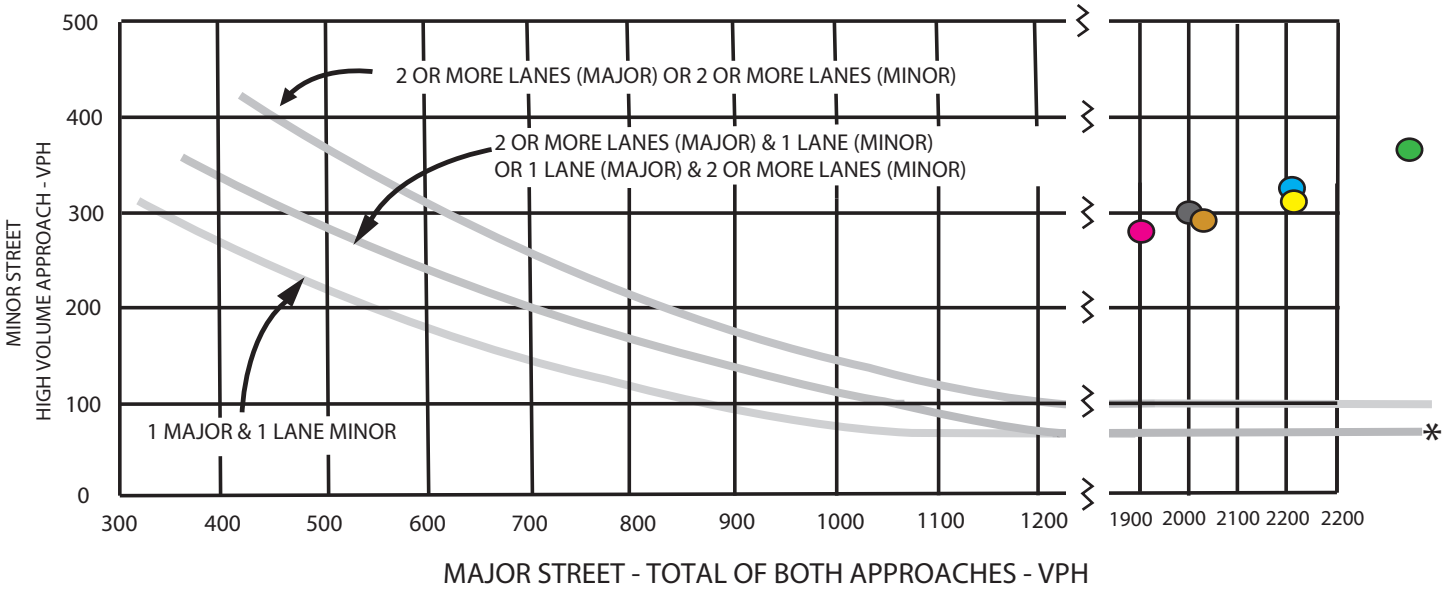
Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 338.6	12	1.5	0
HCM LOS	F	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	734	-	-	70	341	519	1000	-	-
HCM Lane V/C Ratio	0.126	-	-	2.128	0.427	0.002	-	-	-
HCM Control Delay (s)	10.6	-	-	$ 647.2	23.2	12	0	-	-
HCM Lane LOS	B	-	-	F	C	B	A	-	-
HCM 95th %tile Q(veh)	0.4	-	-	13.9	2.1	0	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Appendix C

PEAK HOUR VOLUME WARRANT #3
(Rural Area)
Zinfandel Lane/SR29



- = Existing (2019) Friday without Project
- = Existing (2019) Saturday without Project
- = 2025 Friday without Project
- = 2025 Saturday without Project
- = 2030 Friday without Project
- = 2030 Saturday without Project

* NOTE

100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE

Source: Year 2014 Manual on Uniform Traffic Control Devices, Federal Highway Administration

Appendix Figure C-1

PEAK HOUR VOLUME WARRANT #3
(Rural Area)
Zinfandel Lane/SR29

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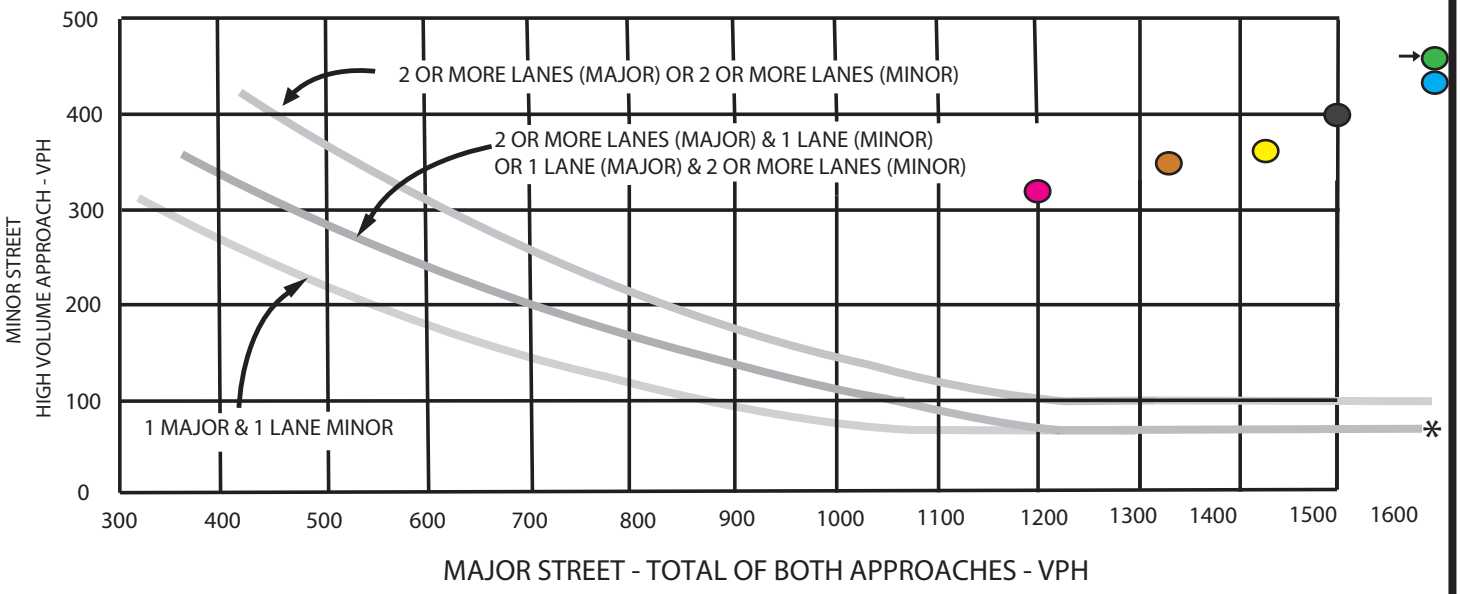
PEAK HOUR VOLUME WARRANT #3
(Rural Area)
Zinfandel Lane/Silverado Trail



= Existing (2019) Friday without Project
= Existing (2019) Saturday without Project
= 2025 Friday without Project
= 2025 Saturday without Project
= 2030 Friday without Project
= 2030 Saturday without Project

* NOTE

100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE

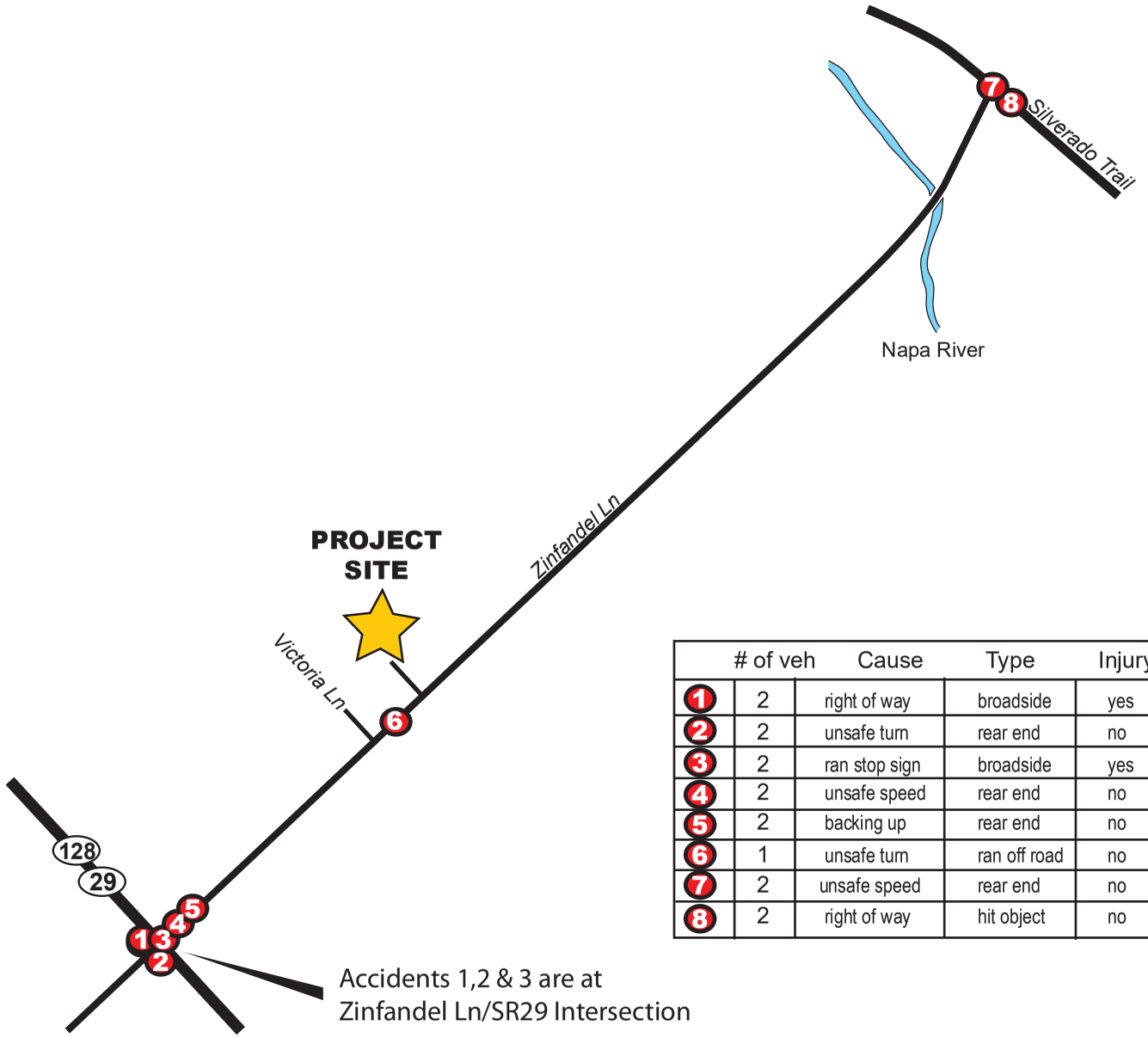
Source: Year 2014 Manual on Uniform Traffic Control Devices, Federal Highway Administration

CRANE TRANSPORTATION GROUP

Appendix Figure C-2

PEAK HOUR VOLUME WARRANT #3
(Rural Area)
Zinfandel Lane/Silverado Trail

Appendix D



	# of veh	Cause	Type	Injury
1	2	right of way	broadside	yes
2	2	unsafe turn	rear end	no
3	2	ran stop sign	broadside	yes
4	2	unsafe speed	rear end	no
5	2	backing up	rear end	no
6	1	unsafe turn	ran off road	no
7	2	unsafe speed	rear end	no
8	2	right of way	hit object	no

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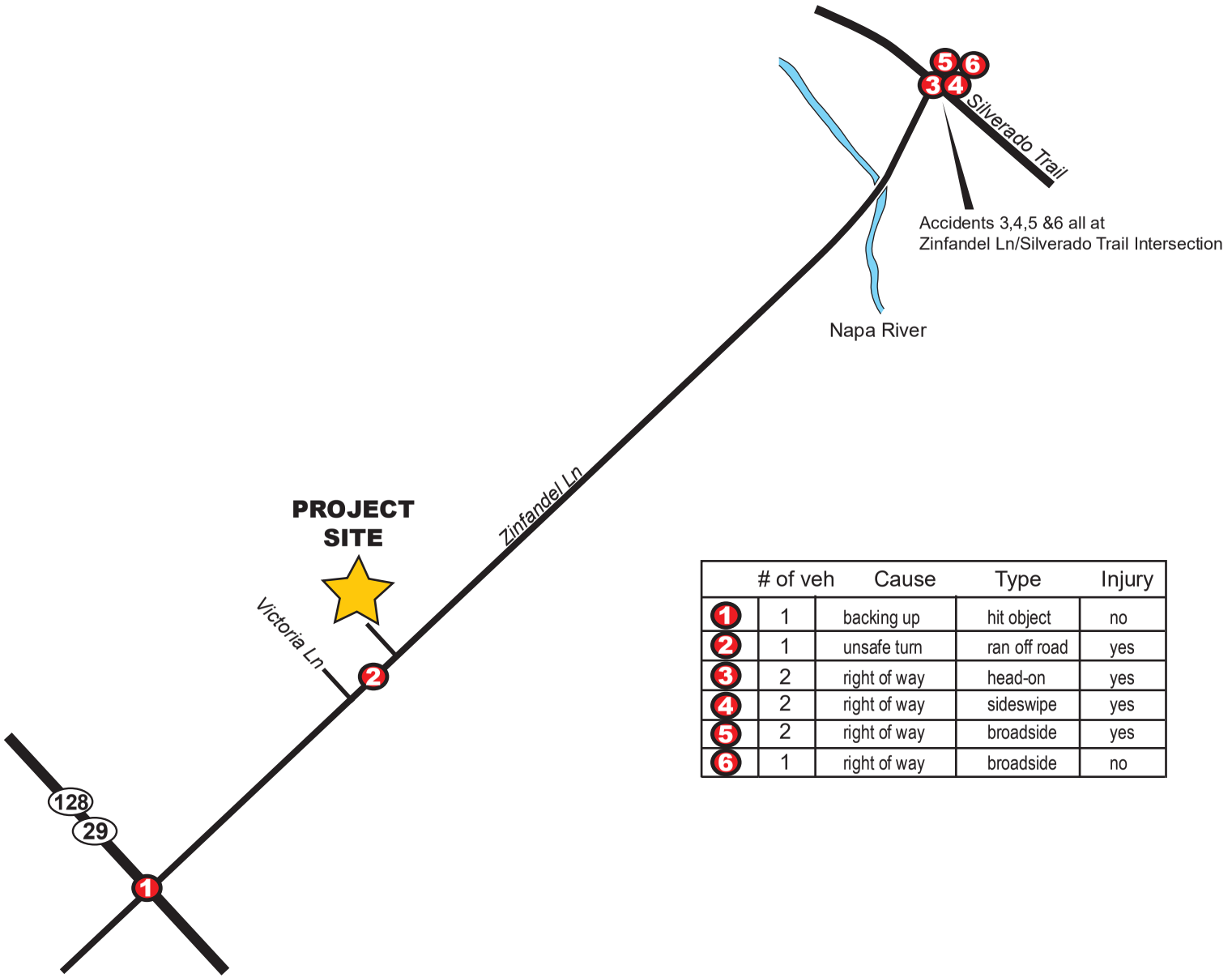
Appendix Figure D-1

Accidents on Zinfandel Lane between SR29 and Silverado Trail - 2014



	# of veh	Cause	Type	Injury
1	1	backing up	hit object	no
2	1	unsafe turn	ran off road	yes
3	2	right of way	head-on	yes
4	2	right of way	sideswipe	yes
5	2	right of way	broadside	yes
6	1	right of way	broadside	no

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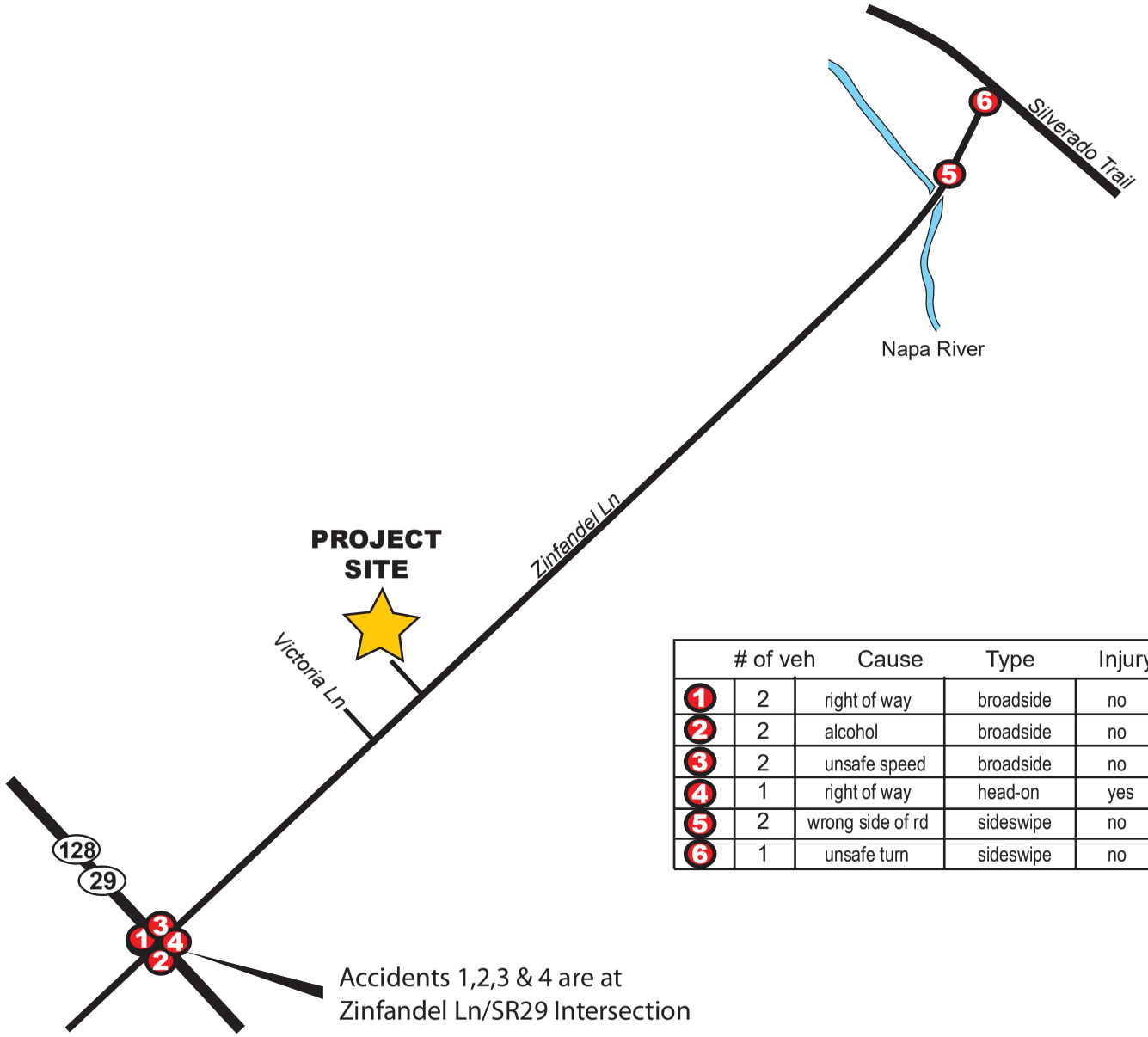
Appendix Figure D-2

Accidents on Zinfandel Lane between SR29 and Silverado Trail - 2015



	# of veh	Cause	Type	Injury
1	2	right of way	broadside	no
2	2	alcohol	broadside	no
3	2	unsafe speed	broadside	no
4	1	right of way	head-on	yes
5	2	wrong side of rd	sideswipe	no
6	1	unsafe turn	sideswipe	no

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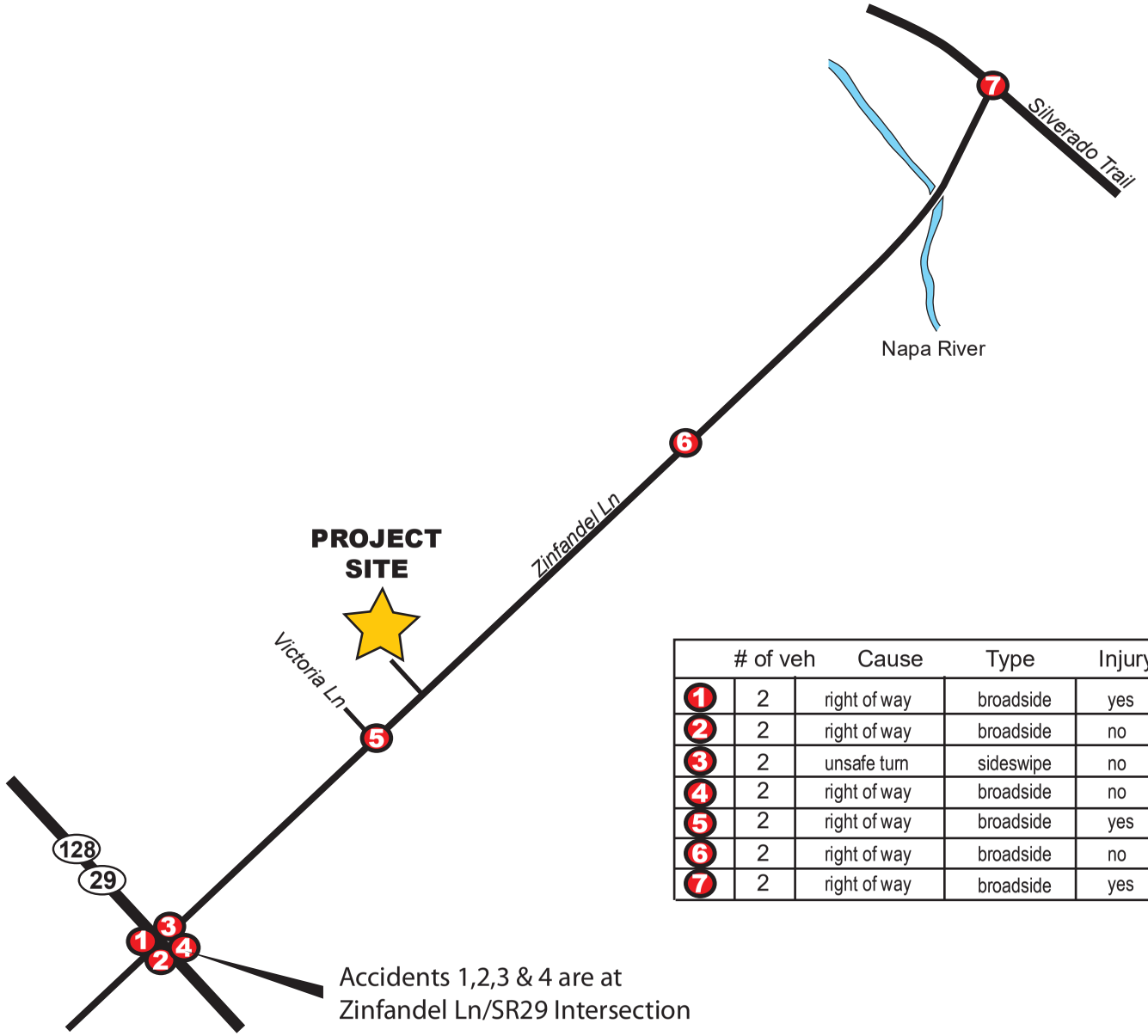
Appendix Figure D-3

Accidents on Zinfandel Lane between SR29 and Silverado Trail - 2016

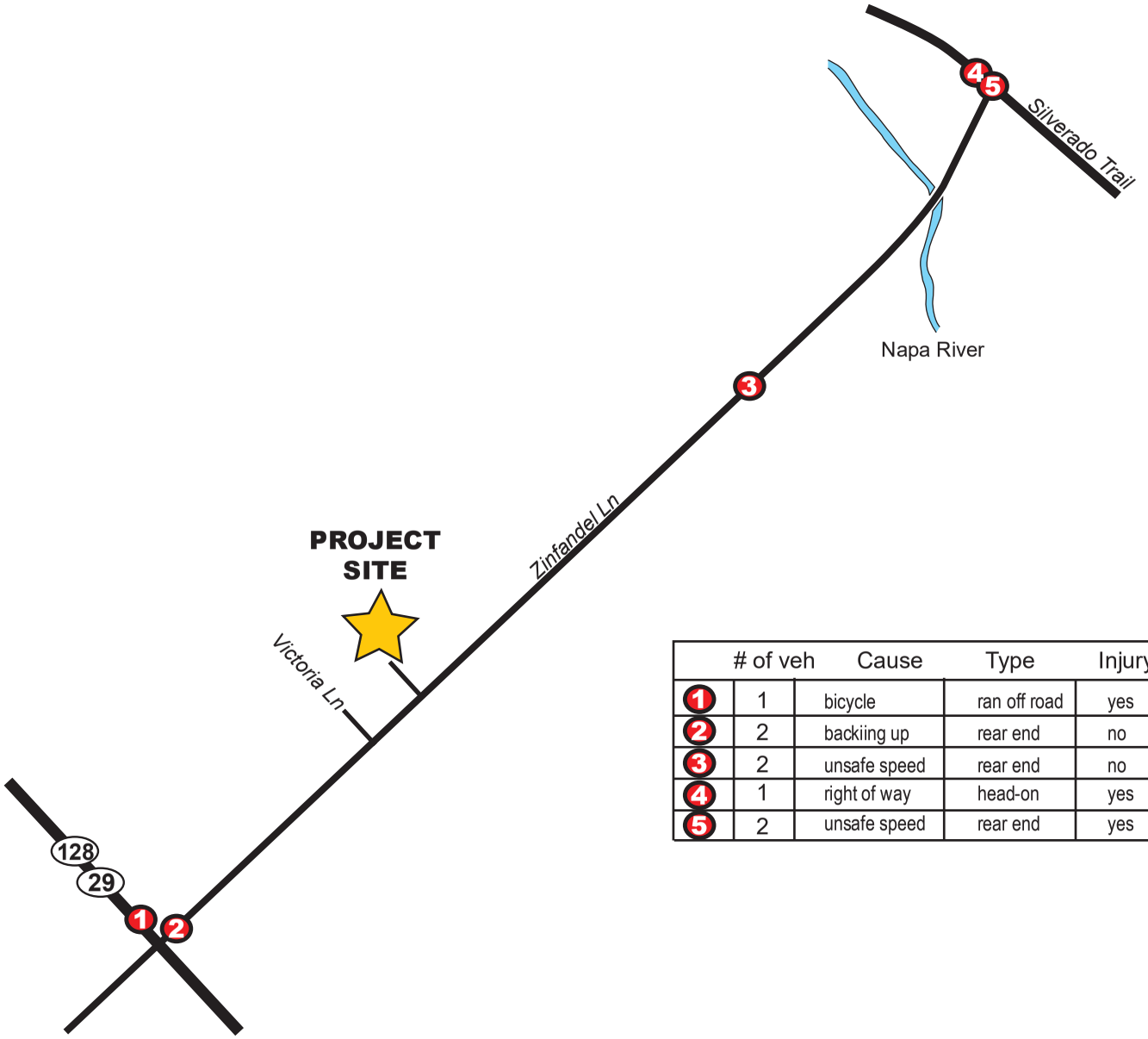


	# of veh	Cause	Type	Injury
1	2	right of way	broadside	yes
2	2	right of way	broadside	no
3	2	unsafe turn	sideswipe	no
4	2	right of way	broadside	no
5	2	right of way	broadside	yes
6	2	right of way	broadside	no
7	2	right of way	broadside	yes

CRANE TRANSPORTATION GROUP

Appendix Figure D-4

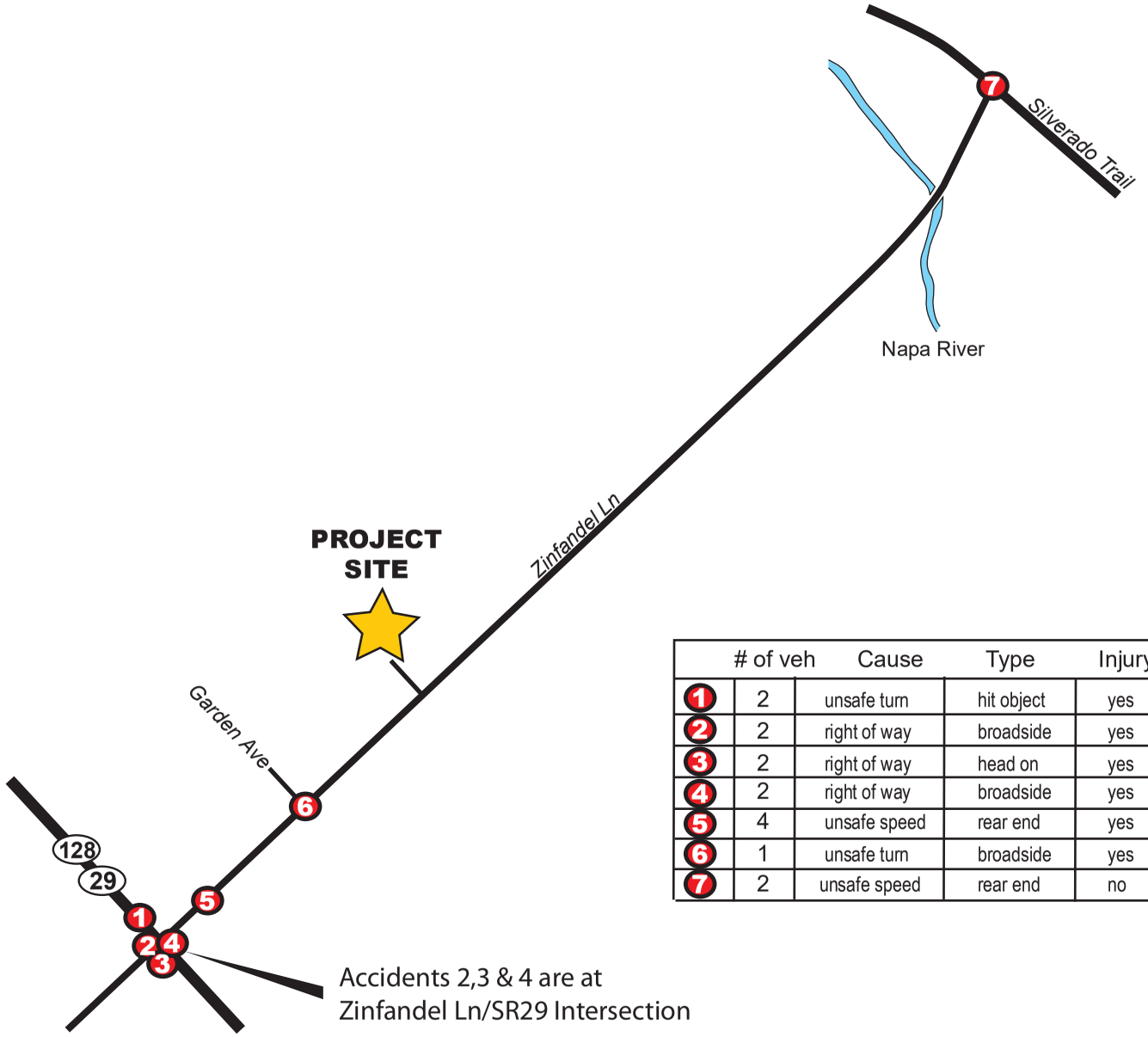
Accidents on Zinfandel Lane between SR29 and Silverado Trail - 2017



	# of veh	Cause	Type	Injury
1	1	bicycle	ran off road	yes
2	2	backiing up	rear end	no
3	2	unsafe speed	rear end	no
4	1	right of way	head-on	yes
5	2	unsafe speed	rear end	yes

CRANE TRANSPORTATION GROUP

Appendix Figure D-5
Accidents on Zinfandel Lane between SR29 and Silverado Trail - 2018



	# of veh	Cause	Type	Injury
1	2	unsafe turn	hit object	yes
2	2	right of way	broadside	yes
3	2	right of way	head on	yes
4	2	right of way	broadside	yes
5	4	unsafe speed	rear end	yes
6	1	unsafe turn	broadside	yes
7	2	unsafe speed	rear end	no

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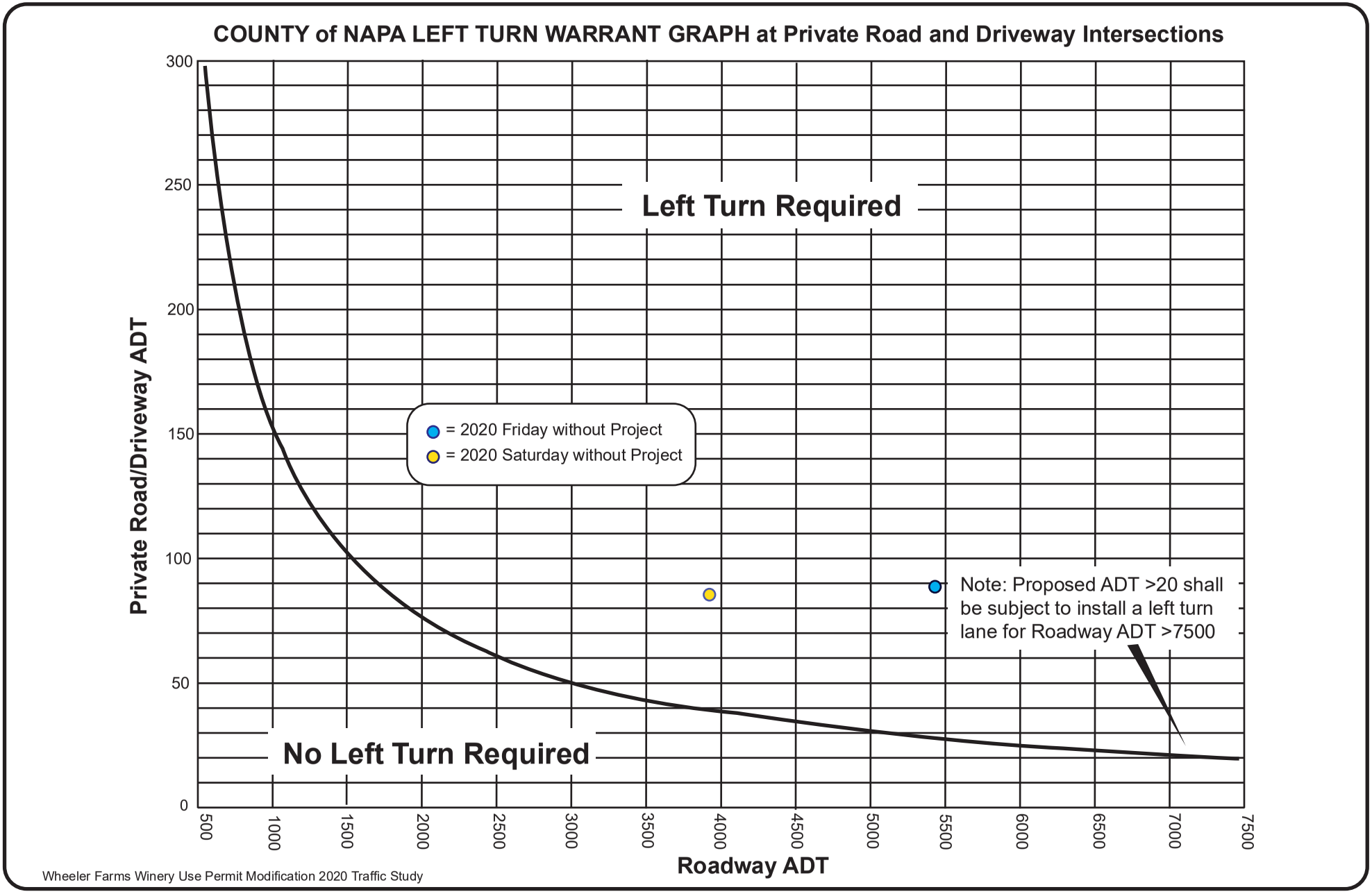
* to October 25, 2019

Appendix Figure D-6

Accidents on Zinfandel Lane between SR29 and Silverado Trail - 2019*

Appendix E



Wheeler Farms Winery Use Permit Modification 2020 Traffic Study

CRANE TRANSPORTATION GROUP

Appendix Figure E-1

COUNTY of NAPA LEFT TURN WARRANT GRAPH

Left Turn from Zinfandel Ln to Project Main Driveway

Appendix F

Appendix F

Trip Generation from Approved (Not Built) Projects in Close Proximity to Wheeler Farms Winery

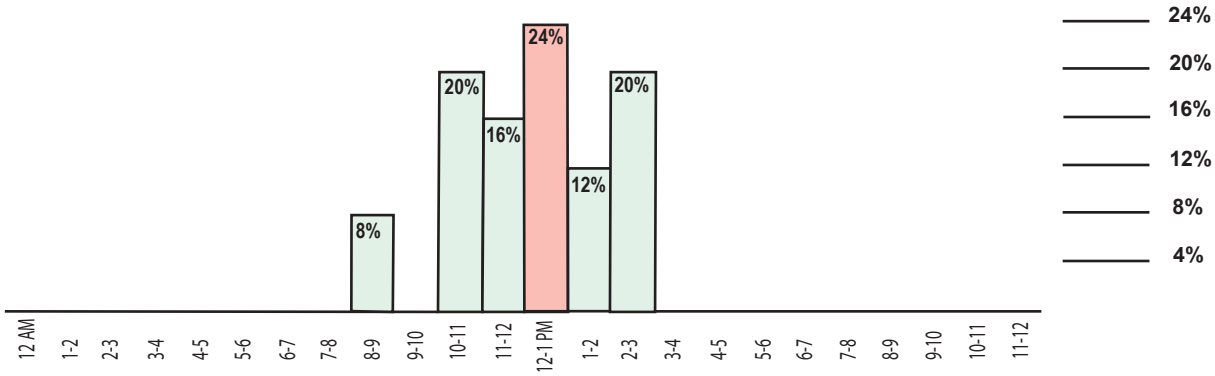
	Harvest Friday PM Peak Hour Trips		Harvest Saturday PM Peak Hour Trips	
	IN	OUT	IN	OUT
Castelluci Family Winery	0	4	4	5
Raymond-Ticen Winery - Access via SR 29 & Zinfandel Lane	36	49	29	41

Traffic Volume Source:
Castelluci Family Winery Traffic Study - November 19, 2013 by Crane Transportation Group
Raymond-Ticen Ranch Traffic Study - January 27, 2016 by Crane Transportation Group

Compiled by: Crane Transportation Group

Appendix G

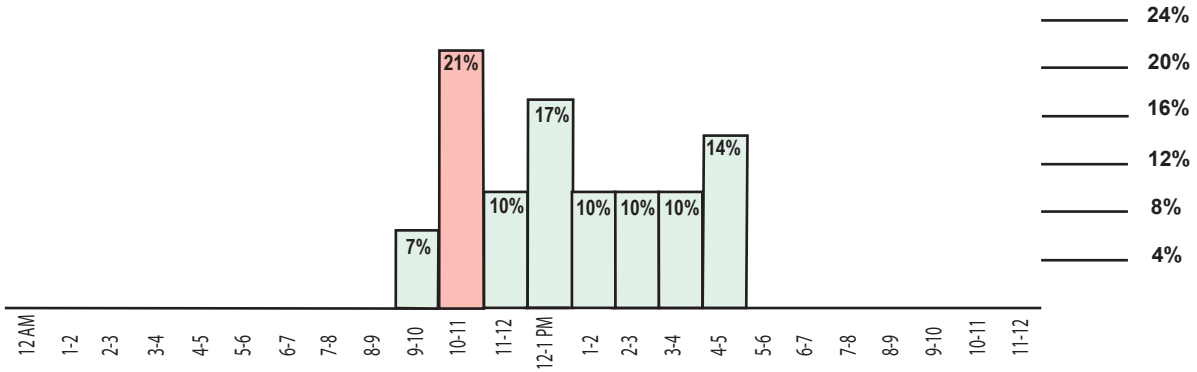
WHEELER FARMS WINERY DRIVEWAY
Friday Hourly Percent of TOTAL Trips
October 18, 2019



Friday, October 18, 2019
Total In/Out - 25 Vehicles

WHEELER FARMS WINERY DRIVEWAY
Friday Hourly Percent of TOTAL Trips

October 25, 2019

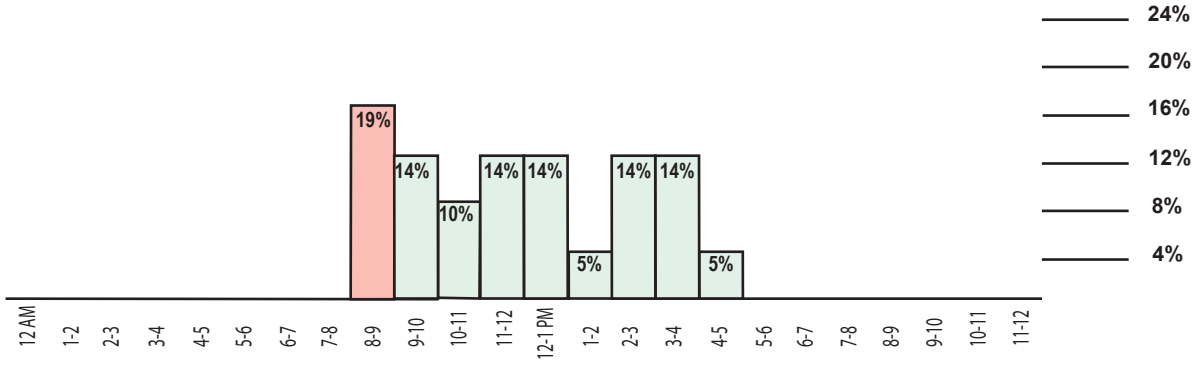


Friday, October 25, 2019
Total In/Out - 29 Vehicles

Figure G-1

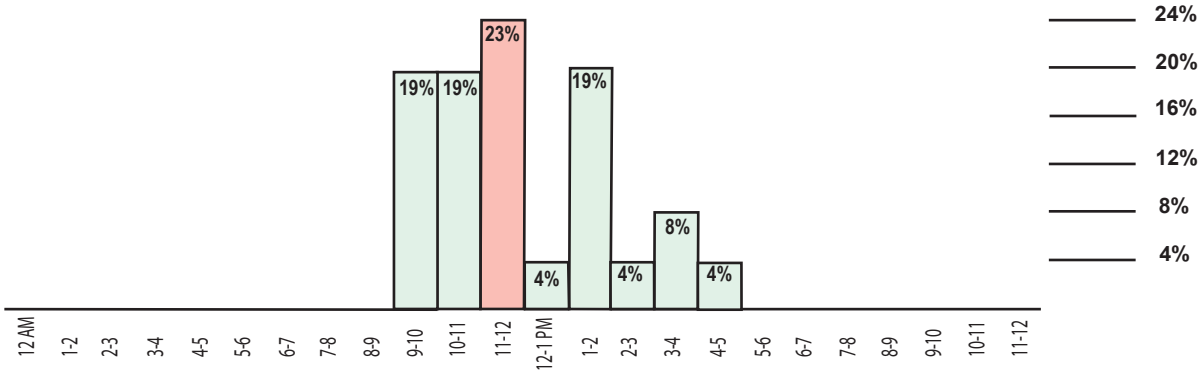
Friday Traffic Totals and Percentages
Wheeler Farms Winery (by Hour) - Oct 18 & Oct 25, 2019

WHEELER FARMS WINERY DRIVEWAY
Saturday Hourly Percent of TOTAL Trips
October 19, 2019



Saturday, October 19, 2019
Total In/Out - 21 Vehicles

WHEELER FARMS WINERY DRIVEWAY
Saturday Hourly Percent of TOTAL Trips
October 26, 2019



Saturday, October 26, 2019
Total In/Out - 26 Vehicles

Figure G-2

Saturday Traffic Totals and Percentages
Wheeler Farms Winery (by Hour) - Oct 19 & Oct 26, 2019

WHEELER FARMS WINERY

Existing Conditions Winery Traffic Information / Trip Generation

Determine Winery Daily Trips. Complete Sections A through I below to determine your winery project's estimated baseline daily, peak hour trips, and annual trips.

Section A. Maximum Daily Weekday Traffic (Friday, non-harvest season)

1.	Total number of FT employees[1]: 14 x 3.05 one-way trips per employee	= 42.7	daily trips
2.	Total number of PT employees[1]: 0 x 1.90 one-way trips per employee	= 0	daily trips
3.	Maximum weekday visitors[2]: 32 /2.6 visitors per vehicle x 2 one-way trips	= 24.6	daily trips
4.	Gallons of production: 50,000/1,000 x 0.009 daily truck trips[3] x 2 one-way trips	= 0.9	daily trips
5.	**TOTAL**	= 69	**daily trips**

Section B. Maximum Daily Weekday Traffic (Friday, harvest season)

6.	Total number of FT employees[1]: 14 x 3.05 one-way trips per employee	= 42.7	daily trips
7.	Total number of PT employees[1]: 8 x 1.90 one-way trips per employee	= 15.2	daily trips
8.	Maximum weekday visitors[2]: 32 /2.6 visitors per vehicle x 2 one-way trips	= 24.6	daily trips
9.	Gallons of production: 50,000/1,000 x 0.009 daily truck trips x 2 one-way trips	= 0.9	daily trips
10.	Avg. annual tons of grape on-haul: 300 / 144 truck trips x 2 one-way trips	= 4.2	daily trips
11.	**TOTAL**	= 88	**daily trips**

Section C. Maximum Daily Weekend Traffic (Saturday, non-harvest season)

12.	Total number of FT Sat. employees[1]: 14 x 3.05 one-way trips per employee	= 42.7	daily trips
13.	Total number of PT Sat. employees[1]: 0 x 1.90 one-way trips per employee	= 0	daily trips
14.	Maximum Saturday visitors[2]: 32 /2.8 visitors per vehicle x 2 one-way trips	= 22.9	daily trips
15.	Gallons of production: 50,000 /1,000 x 0.009 daily truck trips[3] x 2 one-way trips	= 0.9	daily trips
16.	**TOTAL**	= 67	**daily trips**

Section D. Maximum Daily Weekend Traffic (Saturday, harvest season)

17.	Total number of FT Sat. employees[1]: 14 x 3.05 one-way trips per employee	= 42.7	daily trips
18.	Total number of PT Sat. employees[1]: 8 x 1.90 one-way trips per employee	= 15.2	daily trips
19.	Maximum Saturday visitors[2]: 32 /2.8 visitors per vehicle x 2 one-way trips	= 22.9	daily trips
20.	Gallons of production: 50,000/1,000 x 0.009 daily truck trips x 2 one-way trips	= 0.9	daily trips
21.	Avg. annual tons of grape on-haul: 300 / 144 truck trips x 2 one-way trips	= 4.2	daily trips
22.	**TOTAL**	= 86	**daily trips**

[1] Full-Time and part-time employees that staff the largest of any event that is proposed to occur two or more times in a month, on average.

[2] The number of weekday visitors shall include guests of the largest of any event that is proposed to occur two or more times in a month, on average.

[3] Assumes 1.47 materials and supplies trips + 0.8 case goods trips per 1,000 gallons of production / 250 days per year

WHEELER FARMS WINERY

Existing Conditions Winery Traffic Information / Trip Generation (continued)

Section E. PM Peak Hour Trip Generation (Friday, non-harvest season)

(Sum of daily trips from Sec. A, lines 3 and 4) x 0.38 + (No. of FTE) + (line 2 / 2) = 24 PM peak trips

9.7 + 14 + 0

Section F. PM Peak Hour Trip Generation (Friday, harvest season)

(Sum of daily trips, Sec. B, lines 8, 9, 10) x 0.38 + (No. of FTE) + (line 7 / 2) = 33 PM peak trips

11.3 + 14 + 7.6

Section G. PM Peak Hour Trip Generation (Saturday, non-harvest season)

(Sum of daily trips from Sec. C, line 14 and 15) x 0.57 + (No. of FTE) + (line 13 / 2) = 28 PM peak trips

13.6 + 14 + 0

Section H. PM Peak Hour Trip Generation (Saturday, harvest season)

(Sum of daily trips Sec. D, lines 19, 20, and 21) x 0.57 + (No. of FTE) + (line 18 / 2) = 38 PM peak trips

16.0 + 14 + 7.6

Section I. Maximum Annual Trips

(Sec. A, line 5 x 206) + (Sec. B, line 11 x 55) + (Sec. C, line 16 x 82) + (Sec. D, line 22 x 22) = **26,440** Annual trips

14,214 + 4,840 + 5,494 + 1,892

WHEELER FARMS WINERY

Proposed Project Winery Traffic Information / Trip Generation

Determine Winery Daily Trips. Complete Sections J through R below to determine your winery project's estimated future daily, peak hour trips, and annual trips.

Section J. Maximum Daily Weekday Traffic (Friday, non-harvest season)

1.	Total number of FT employees[1]: 15 x 3.05 one-way trips per employee	= 45.8	daily trips
2.	Total number of PT employees[1]: 0 x 1.90 one-way trips per employee	= 0	daily trips
3.	Maximum weekday visitors[2]: 32/2.6 visitors per vehicle x 2 one-way trips	= 24.6	daily trips
4.	Gallons of production: 70,000/1,000 x 0.009 daily truck trips[3] x 2 one-way trips	= 1.3	daily trips
5.	**TOTAL**	= 71	**daily trips**

Section K. Maximum Daily Weekday Traffic (Friday, harvest season)

6.	Total number of FT employees[1]: 15 x 3.05 one-way trips per employee	= 45.8	daily trips
7.	Total number of PT employees[1]: 8 x 1.90 one-way trips per employee	= 15.2	daily trips
8.	Maximum weekday visitors[2]: 32/2.6 visitors per vehicle x 2 one-way trips	= 24.6	daily trips
9.	Gallons of production: 70,000/1,000 x 0.009 daily truck trips x 2 one-way trips	= 1.3	daily trips
10.	Avg. annual tons of grape on-haul: 400 / 144 truck trips x 2 one-way trips	= 5.6	daily trips
11.	**TOTAL**	= 93	**daily trips**

Section L. Maximum Daily Weekend Traffic (Saturday, non-harvest season)

12.	Total number of FT Sat. employees[1]: 15 x 3.05 one-way trips per employee	= 45.8	daily trips
13.	Total number of PT Sat. employees[1]: 0 x 1.90 one-way trips per employee	= 0	daily trips
14.	Maximum Saturday visitors[2]: 32/2.8 visitors per vehicle x 2 one-way trips	= 22.9	daily trips
15.	Gallons of production: 70,000/1,000 x 0.009 daily truck trips[3] x 2 one-way trips	= 1.3	daily trips
16.	**TOTAL**	= 70	**daily trips**

Section M. Maximum Daily Weekend Traffic (Saturday, harvest season)

17.	Total number of FT Sat. employees[1]: 15 x 3.05 one-way trips per employee	= 45.8	daily trips
18.	Total number of PT Sat. employees[1]: 8 x 1.90 one-way trips per employee	= 15.2	daily trips
19.	Maximum Saturday visitors[2]: 32/2.8 visitors per vehicle x 2 one-way trips	= 22.9	daily trips
20.	Gallons of production: 70,000/1,000 x 0.009 daily truck trips x 2 one-way trips	= 1.3	daily trips
21.	Avg. annual tons of grape on-haul: 400/ 144 truck trips x 2 one-way trips	= 5.6	daily trips
22.	**TOTAL**	= 91	**daily trips**

[1] Full-Time and part-time employees that staff the largest of any event that is proposed to occur two or more times in a month, on average.

[2] The number of weekday visitors shall include guests of the largest of any event that is proposed to occur two or more times in a month, on average.

[3] Assumes 1.47 materials and supplies trips + 0.8 case goods trips per 1,000 gallons of production / 250 days per year

WHEELER FARMS WINERY

Proposed Project Winery Traffic Information / Trip Generation (continued)

Determine Winery Peak Hour Trips. ***If the number of daily trips on either Section K, line 11, or Section M, line 21, is greater than 20, or Public Works Director determines that other circumstances such as access safety or other potential network impacts warrant further analysis, then the potential transportation impacts of your project must be evaluated in a traffic impact study (TIS) prepared in accordance with*** **Napa County Public Works TIS Guidelines.** ***Follow the direction outlined in*** **Traffic Impact Study Analysis,** ***below. If the number of daily trips on either Section K, line 11, or Section M, line 22, is equal to or less than 20, complete Sections N through R below to determine your project's estimated peak hour trips and annual trips. In lieu of completing Sections N through R, you may opt to prepare a project-specific traffic impact analysis if you anticipate the number of peak hour trips from your proposal is different from that estimated here.***

Section N. PM Peak Hour Trip Generation (Friday, non-harvest season)

(Sum of daily trips from Sec. J, lines 3 and 4) x 0.38 + (No. of FTE) + (line 2 / 2) = 25 PM peak trips

9.8 + 15 + 0

Section O. PM Peak Hour Trip Generation (Friday, harvest season)

(Sum of daily trips from Sec. K, lines 8, 9, 10) x 0.38 + (No. of FTE) + (line 7 / 2) = 35 PM peak trips

12 + 15 + 7.6

Section P. PM Peak Hour Trip Generation (Saturday, non-harvest season)

(Sum of daily trips from Sec. L, line 14 and 15) x 0.57 + (No. of FTE) + (line 13/ 2) = 29 PM peak trips

13.8 + 15 + 0

Section Q. PM Peak Hour Trip Generation (Saturday, harvest season)

(Sum of daily trips, Sec. M, lines 19, 20, and 21) x 0.57 + (No. of FTE) + (line 18 / 2) = 40 PM peak trips

17 + 15 + 7.6

Section R. Maximum Annual Trips

(Sec. J, line 5 x 206) + (Sec. K, line 11 x 55) + (Sec. L, line 16 x 82) + (Sec. M, line 22 x 22) = **27,483** Annual trips

14,626 + 5,115 + 5,740 + 2,002

Traffic Impact Study Analysis. ***If the number of daily trips on either Section K, line 11, or Section M, line 22, is greater than 20, then the potential transportation impacts of your project must be evaluated in a traffic impact study (TIS) prepared in accordance with*** **Napa County Public Works TIS Guidelines.** ***Existing trip counts on the transportation network should be collected during the harvest season (August 16 – October 31). If collected outside of the harvest season, during the months of November through February, counts shall be adjusted upward by 15 percent to estimate harvest season network volumes. If collected during the weeks between March 1 and August 15, counts shall be adjusted upward by seven percent.***

WHEELER FARMS WINERY

For peak hour analysis in the TIS, the County will allow any one of the following methodologies:

a) ***Use the peak hour factors in Sections E through I, above, to estimate the peak hour trips and annual trips generated by the project. To determine the potential peak hour impacts of the project, apply the harvest season estimated peak hour project trips (Sections F and H for the existing condition, and Sections O and Q for the proposed project) to roadway volumes during the hour between 3:00 p.m. and 4:00 p.m. on Fridays and Saturdays; or***

b) ***For New Wineries use peak hour trip counts as projected using the Institute for Transportation Engineers' (ITE) peak hour factors for winery land uses from the most current version of ITE*** Trip Generation. ***To determine the potential peak hour impacts of the project, apply the estimated peak hour project trips from ITE to roadway volumes during the hour between 4:00 p.m. and 5:00 p.m. on a Friday and 1:45 p.m. and 2:45 p.m. on a Saturday; or***

c) ***Conduct a site-specific analysis informed by actual trip counts at the driveway of the project (for winery use permit modifications) or at the driveway of a project with comparable operating characteristics to that proposed (for new winery use permits). To determine the potential peak hour impacts of the project, apply the site-specific peak hour of generator to the peak hour of the network on a Friday and the peak hour of the roadway on a Saturday, based on the assembled trip count data.***

For Average Daily Traffic (ADT) analysis in the TIS, the County will utilize one of the following methodologies:

a) ***Average of the Maximum Daily Weekday Traffic and the Maximum Daily Weekend Traffic during the harvest season, as given in the Winery Traffic Information / Trip Generation worksheet.***

b) ***A site specific analysis which at a minimum 24-hour vehicle counts shall be collected during a continuous week period (7-days) for which traffic count data is collected for each day of the week. Existing trip counts should be collected during the harvest season (August 16 – October 31). If collected outside of the harvest season, during the months of November through February, counts shall be adjusted upward by 15 percent to estimate harvest season network volumes. If collected during the weeks between March 1 and August 15, counts shall be adjusted upward by seven percent. Projected daily trip counts shall be based on total number of full-time employee, part-time employees, daily visitors, gallons of production, grape on-haul and the factors identified in the Proposed Winery Traffic Information and Trip Generation worksheet, respectively.***

c) ***For land uses other than wineries, the ADT shall be determined using the most current version of ITE Trip Generation.***

Appendix H

APPENDIX H

Wheeler Farms Winery

Transportation Demand Management (TDM) Plan

1. A Signorello administrative employee will be appointed TDM manager
2. Financial incentives will be provided for employees to participate in carpools & vanpools
3. Electric car charging facilities will be provided for employees and guests
4. Bike racks and storage areas will be provided for employees and guests
5. High occupancy vehicle use (vans and shuttle buses) will be encouraged for large marketing events
6. Employee work hours will be staggered to the greatest extent possible to avoid congestion during the peak traffic hours along Silverado Trail
7. Work at home or at remote location opportunities (telecommuting) will be offered when possible
8. Guest appointments will be scheduled, to the extent possible, to avoid travel during the peak traffic hours along Silverado Trail
9. The Winery will enroll in “Napa Valley Forward”, a program aimed at reducing traffic along major roads in the Napa Valley by promoting carpooling, vanpooling, bike riding, and use of transit
10. The Winery will enroll in the “Bay Area Commuter Benefits Program” whereby employees report their carpooling activities and receive company paid subsidies

CRANE TRANSPORTATION GROUP

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2621 E. Windrim Court
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(916) 647-3408 *Fax*

San Francisco Bay Area Office
6220 Bay View Avenue
San Pablo, CA 94806
(510) 236-9375 *Phone*
(510) 236-1091 *Fax*

MEMORANDUM

TO: Ahsan Kazmi (SyedAhsan.Kazmi@countyofnapa.org)

CC: Donna Oldford (dboldford@aol.com)

FROM: Mark Crane, P.E. (cranetransgroup@gmail.com)

DATE: November 20, 2020

RE: **WHEELER FARMS WINERY (P19-00130) NOVEMBER 17, 2020 TRAFFIC STUDY COMMENTS BY JANICE SPULLER**

Hi Ahsan,

This memo is a response to Janice's November 17, 2020 comments on our October 29, 2020 Wheeler Farms Winery Traffic Study. In our opinion, no changes in the traffic study are required and I will explain the reasoning below. I will first provide details of the differences between our April 29, 2020 TIS compared to the more recent October 29, 2020 Traffic Study. Based upon the explanation of this difference, I will then provide responses to both comments from Janice.

I. INTRODUCTION

The difference between our April and October Wheeler Farms Traffic Studies is the number of Full Time (FT) and Part Time (PT) employees used for Existing (Baseline) versus "With Project" conditions. Please note that there was never a request to change visitation levels in the Use Permit Modification. Based upon direction from the County the Existing (Without Project) condition for Wheeler Farms' April traffic analysis was the number of FT and PT harvest employees allowed by their current Use Permit (2 FT and 2 PT), even though they currently had employee levels virtually the same as the number of employees being requested by their 2019 Use Permit Modification (15 FT and 8 PT). While the traffic counts on the Wheeler Farms driveway reflected this higher level of traffic, they were reduced for analysis purposes to coincide with their visitation levels and 2 FT and 2 PT employees. All traffic associated with increased

employment above this permitted level was considered as part of "The Project". Resultant Project harvest volumes were 11 Friday PM peak hour and 11 Saturday PM peak hour vehicles.

This fall (2020), PBES staff notified the applicant and Donna Oldford that the Wheeler Farms traffic analysis needed to be revised using an Existing (Baseline) traffic condition reflective of the actual Winery Driveway volumes and employment levels in the fall of 2019, even though these employee levels were well above those in the current Use Permit and almost the same as what the applicant was requesting in his Use Permit Modification.

- Actual 2019 harvest employee levels: 14 FT and 8 PT
- "With Project" harvest employee levels requested in the Use Permit Modification: 15 FT and 8 PT

The significantly reduced difference between "With" versus "Without" harvest Project employee levels resulted in the Project traffic increment being 1 new Friday and 1 new Saturday PM peak hour vehicle. Consequently, the increased Existing condition set of traffic volumes in combination with the significantly reduced Project traffic increment produced the following changes between the October and April 2020 traffic studies.

- The October study showed that Project Existing volumes warranted provision of a left turn lane on the Zinfandel Lane eastbound approach to the Winery Main Driveway. The previous study indicated the warrant was only met with the addition of the higher Project traffic increment.
- The harvest Project traffic increment determined in the October study declined so substantially from the April evaluations (from 11 to 1 PM peak hour vehicles on both Friday and Saturday) that there were no longer significant Project traffic impacts at either the Zinfandel Lane/SR 29 or Zinfandel Lane/Silverado Trail intersections.

II. RESPONSES TO PUBLIC WORKS NOVEMBER 17, 2020 COMMENT MEMO REGARDING THE OCTOBER 2020 REVISED WHEELER FARMS TRAFFIC STUDY BY CRANE TRANSPORTATION GROUP

Comment 1. There is a lack of consistency in employee numbers use in the October 2020 Traffic Study versus the March 27, 2019 Permit Application and the April 2020 Traffic Study.

Response 1. Employee numbers used in the October 2020 Traffic Study are final, based upon direction from the applicant. Previous employee numbers listed in the 2019 Permit Application will be changed.

Comment 2. Additional measures need to be detailed to eliminate significant project traffic impacts at the Zinfandel Lane/SR 29 and Zinfandel Lane/Silverado Trail intersections.

Response 2. As detailed above, the revised Baseline and "With Project" employee numbers are so close, they result in only 1 new Friday and 1 new Saturday PM peak hour trip, which eliminate significant Project traffic impacts at both intersections.

Mark Crane, P.E.