A Tradition of Stewardship
A Commitment to Service

Department of Public Works

1195 Third Street, Suite 101
Napa, CA 94559-3092
www.countyofnapa.org/publicworks

Main: (707) 253-4351
Fax: (707) 253-4627

Steven Lederer
Director

MEMORANDUM

To:	Emily Hedge, PBES	From:	Rick Marshall Deputy Director of Public Works
Date:	October 17, 2015	Re:	Summers Winery P14-00232

Thank you for the opportunity to clarify my earlier response summarizing my review of the subject permit application and the additional materials submitted with it. In my earlier response, I had reviewed the original traffic impact study prepared by Crane Transportation Group, as well as the additional analysis prepared by RSA+, in a letter dated April 21, 2015 to this department. I noted my concurrence with the conclusion reached by RSA+, that a left-turn lane is not warranted at the access to this site.

To expand on my comments, the original study by Crane utilized traffic volumes representative of peak season activity, based on counts taken during September, 2014. The additional analysis performed by RSA+ utilized annual average figures for the amount of traffic on the access driveway, based on calculations from the County's standard worksheet for determining trip generation of winery projects. This use of annual average figures to evaluate warrants for left-turn lane improvements is more appropriate, and is consistent with this County's standard practice for this determination.

Please contact me at Rick.Marshall@countyofnapa.org or call (707) 259-8381 if you have questions or need additional information.

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Steven Lederer
Director

MEMORANDUM

To:	PBES Staff	From:	Rick Marshall Deputy Director of Public Works
Date:	May 26, 2015	Re:	Summers Winery P14-00232

Thank you for the opportunity to review the subject permit application and the additional materials submitted with it. I have reviewed the original traffic impact study prepared by Crane Transportation Group, as well as the additional analysis prepared by RSA+, in a letter dated April 21, 2015 to this department. I concur with the conclusion reached by RSA+, that a left-turn lane is not warranted at the access to this site.

Please contact me at Rick.Marshall@countyofnapa.org or call (707) 259-8381 if you have questions or need additional information.

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707 | 252.3301 | RSAcivil.com

HUGH LINN, PE, QSD, QSP
PRINCIPAL + PRESIDENT
hLinn@RSAcivil.com

RYAN GREGORY, PE
PRINCIPAL + VICE PRESIDENT
rGregory@RSAcivil.com

CHRISTOPHER TIBBITS, PE, LS
PRINCIPAL + VICE PRESIDENT
cTibbits@RSAcivil.com

1515 FOURTH STREET
NAPA, CALIFORNIA
94559
FAX | 707 | 252.4966
OFFICE | 707 | 252.3301
RSAcivil.com

#4114023.0
April 21, 2015

Steve Lederer
Napa County Department of Public Works
1195 Third Street, Room 101
Napa, CA 94559

RE: Left Turn Lane Analysis -- Summers Estate Winery Expansion
1171 Tubbs Lane, Napa (APN 017-160-015)

Dear Mr. Lederer:

Summers Estate Winery is proposing a use permit modification to increasing wine production and daily visitors. The number of employees and marketing events will remain unchanged. As part of the application use permit modification process, RSA+ has evaluated the wineries compliance to the Napa County Road and Street Standards (RSS). Specifically, we have compared the driveways projected ADT with the Napa County Left Turn Lane warrants prescribed on page 21 of the RSS. We have also reviewed the Traffic Study prepared by Mark D. Crane, dated December 19, 2014.

It is our findings that the proposed winery does not meet the warrant for a left turn lane. We are requesting that your office review this letter and supporting information and verify that Napa County Public Works agrees with our findings.

Background

Tubbs Lane is an arterial county road (via Napa County Code 18.112.070) with stop sign controlled approaches at its intersection with S.R. 128 and S.R. 29. Tubbs Lane also hosts a continuous double yellow centerline with no left-turn lanes. The driveway for Summers Estate Winery is located approximately 940 feet east of S.R. 128 on the north side of Tubbs Lane. The use permit plans include measure to upgrade the entrance to comply with Napa County Road and Street Standards, as shown in Exhibit 1.

Evaluation of Traffic Volumes

December 2014 Traffic Study prepared by Crane Transportation Group (CTG) was conducted over three days during crush season, in September. In this study, CTG observed averages of 6,236 trips per day for Tubbs Lane, and 39 trips per day for the Summers Estate Winery Driveway. As this study was conducted during peak crush season, we further evaluated Tubbs Lane and the projected driveway volumes to develop more representative Average Daily Trips (ADT) to use in an evaluation of the left turn lane warrant.

The calculated Driveway ADT from Napa County Use Permit Traffic Calculations (page 15 of the Use Permit Application) is 23 trips, as shown in Exhibit 2. We have also compiled the most current traffic volumes reported on Tubbs lane. Recent studies for this same road segment utilized an AADT of 5,400 trips. For the basis of our evaluation, we have evaluated the left turn lane warrant under a full range of ADTS for Tubbs lane ranging between 5,400 and 6,236 trips and have determined that the driveway does not meet the warrant for a left turn lane.

Conclusion

Based on the RSS left turn lane warrant graph and the winery traffic information and trip generation guidelines, the proposed Summers Winery use permit modification will not exceed the traffic volumes that would require a left turn lane. Please review the information included above and attached Exhibits in order to confirm that the Public Works Department confirms with our findings.

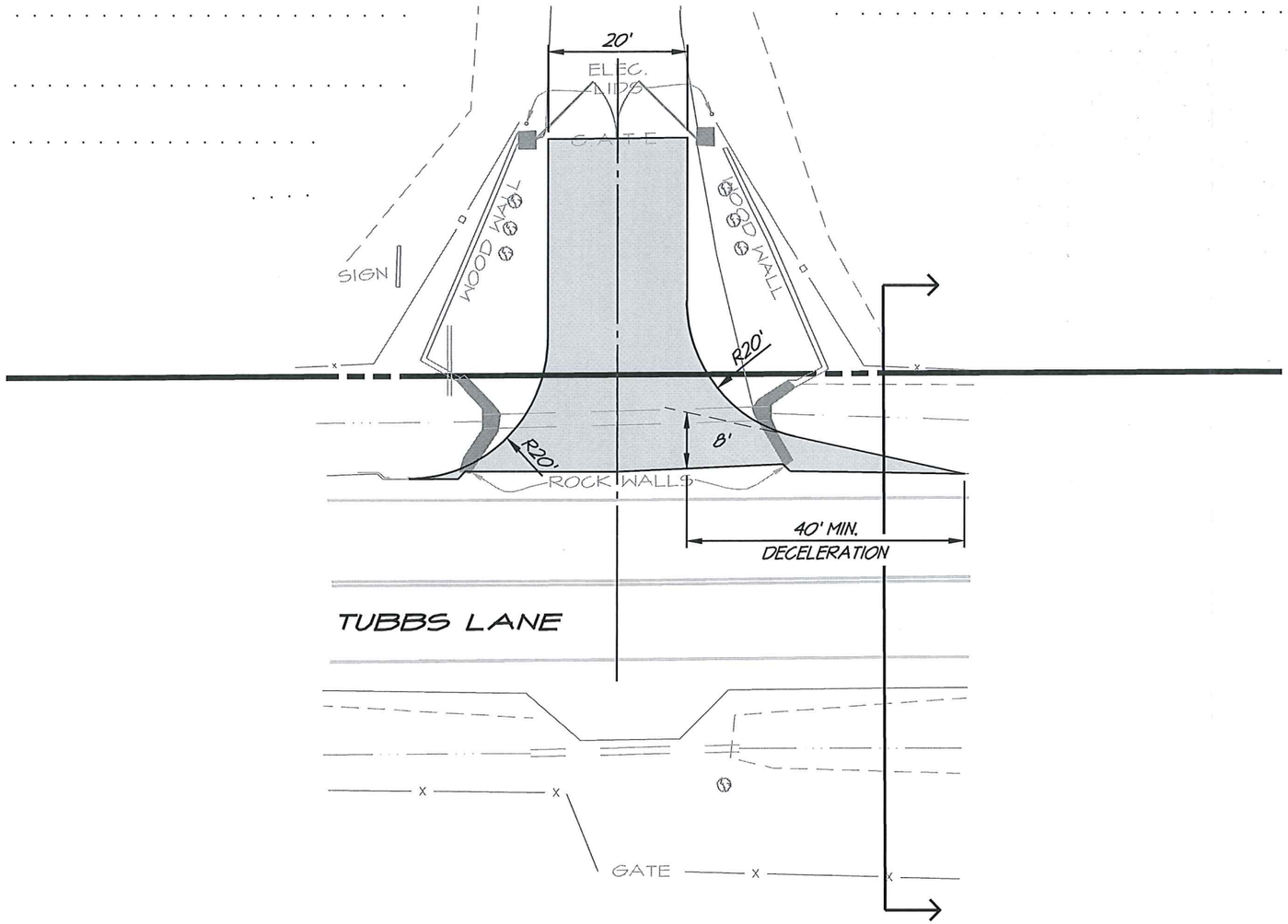
Respectfully,

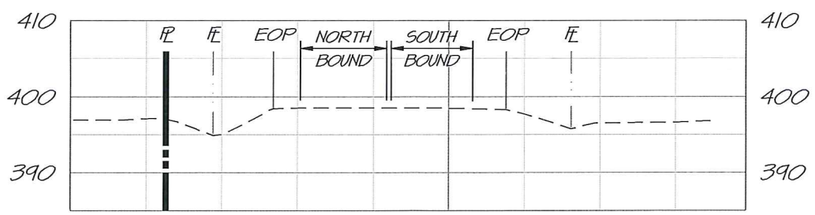
Bruce Fenton, PE, MBA
Project Manager

BF/pw/sb

SUMMERS ESTATE WINES
DRIVEWAY EXHIBIT

EXHIBIT 1





SECTION
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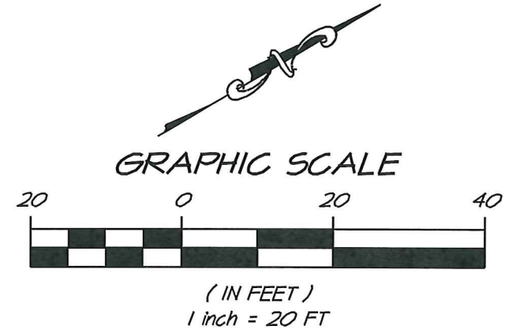

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1515 FOURTH STREET
NAPA, CALIF. 94559
OFFICE | 707 | 252.3301
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JAN. 27, 2015 4114023.0 Exh-LTL - P2 DWY.dwg

EXHIBIT 2

Winery Traffic Information / Trip Generation Sheet

Traffic during a Typical Weekday

Number of FT employees: 2 x 3.05 one-way trips per employee = 6.10 daily trips.

Number of PT employees: 2 x 1.90 one-way trips per employee = 3.80 daily trips.

Average number of weekday visitors: 15 / 2.6 visitors per vehicle x 2 one-way trips = 11.54 daily trips.

Gallons of production: 100,000 / 1,000 x .009 truck trips daily[3] x 2 one-way trips = 1.80 daily trips.

Total = 23.24 **daily trips.**

(№ of FT employees) + (№ of PT employees/2) + (sum of visitor and truck trips x .38) = 8.07 **PM peak trips.**

Traffic during a Typical Saturday

Number of FT employees (on Saturdays): 2 x 3.05 one-way trips per employee = 6.10 daily trips.

Number of PT employees (on Saturdays): 1 x 1.90 one-way trips per employee = 1.90 daily trips.

Average number of Saturday visitors: 15 / 2. 8 visitors per vehicle x 2 one-way trips = 10.71 daily trips.

Total = 18.71 **daily trips.**

(№ of FT employees) + (№ of PT employees/2) + (visitor trips x .57) = 8.60 **PM peak trips.**

Traffic during a Crush Saturday

Number of FT employees (during crush): 2 x 3.05 one-way trips per employee = 6.10 daily trips.

Number of PT employees (during crush): 2 x 1.90 one-way trips per employee = 3.80 daily trips.

Average number of Saturday visitors: 15 / 2. 8 visitors per vehicle x 2 one-way trips = 10.71 daily trips.

Gallons of production: 100,000 / 1,000 x .009 truck trips daily x 2 one-way trips = 1.80 daily trips.

Avg. annual tons of grape on-haul: 606 / 144 truck trips daily[4] x 2 one-way trips = 8.42 daily trips.

Total = 30.83 **daily trips.**

Largest Marketing Event- Additional Traffic

Number of event staff (largest event): 1 x 2 one-way trips per staff person = 2.0 trips.

Number of visitors (largest event): 30 / 2.8 visitors per vehicle x 2 one-way trips = 21.42 trips.

Number of special event truck trips (largest event): 1 x 2 one-way trips = 2.0 trips.

[3] Assumes 1.47 materials & supplies trips + 0.8 case goods trips per 1,000 gallons of production / 250 days per year (see *Traffic Information Sheet Addendum* for reference).

[4] Assumes 4 tons per trip / 36 crush days per year (see *Traffic Information Sheet Addendum* for reference).

Left Turn Lane Warrant Graph

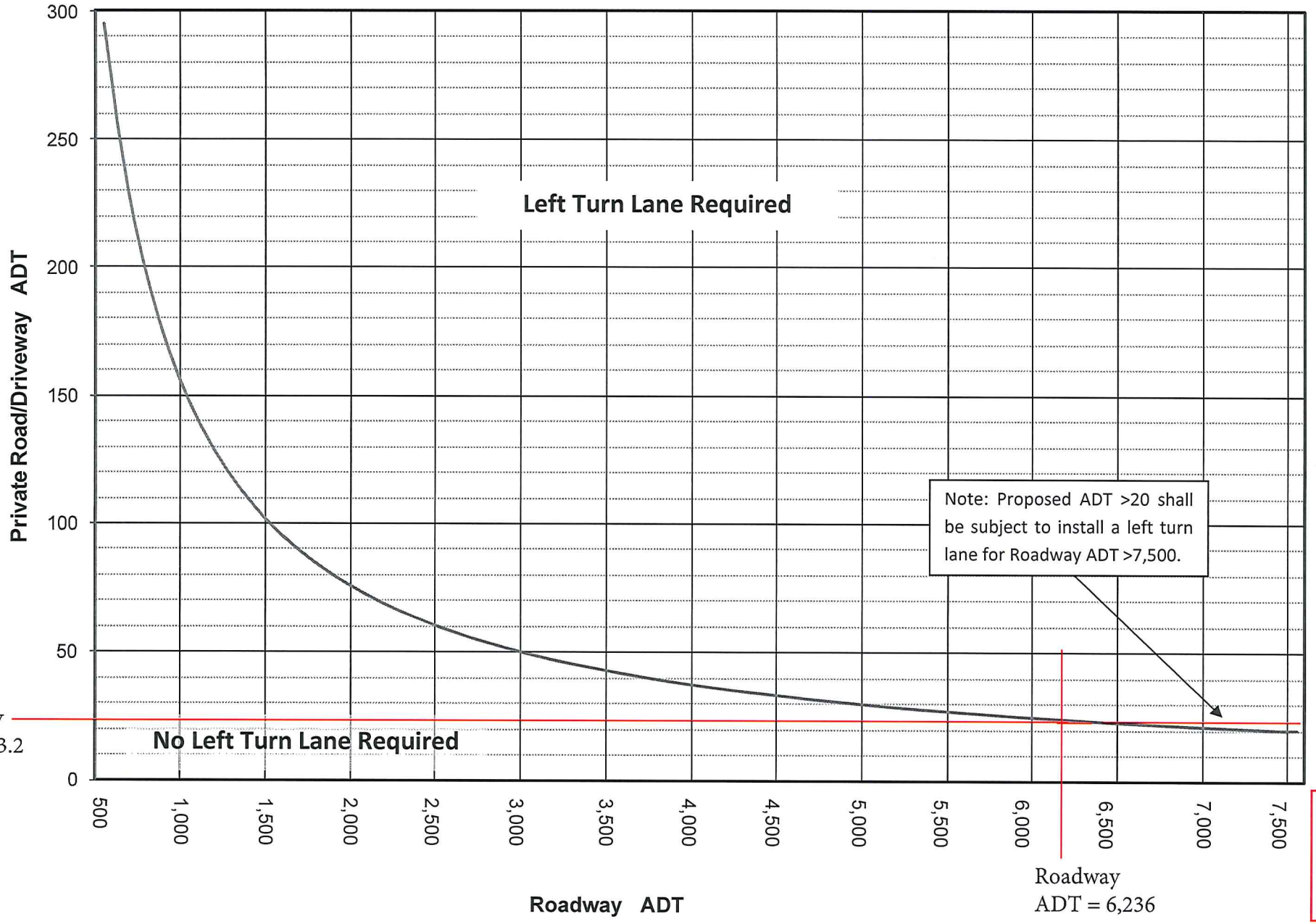


EXHIBIT 3

TRAFFIC IMPACT REPORT

PROPOSED SUMMERS WINERY EXPANSION
ALONG TUBBS LANE
IN THE NAPA VALLEY

December 19, 2014

Prepared for: **Summers Winery**

Prepared by: **Mark D. Crane, P.E.**
California Registered Traffic Engineer (#1381)
CRANE TRANSPORTATION GROUP
2621 E. Windrim Court
Elk Grove, CA 95758
(916) 647-3406

I. INTRODUCTION

This report has been prepared at the request of the Napa County Public Works and Planning, Building & Environmental Services departments as authorized by the Summers Winery applicant to determine if the proposed Summers Winery expansion along Tubbs Lane will result in any significant circulation system impacts along Tubbs Lane, S.R. 128 or S.R. 29 as well as at the Tubbs Lane intersections with the project entrance, S.R. 128 or S.R. 29. Analysis has been provided for harvest Friday and Saturday PM peak hour conditions for existing, year 2015 (first year of expanded production) and year 2030 (general plan buildout) horizons.

II. SUMMARY OF FINDINGS

A. "WITHOUT PROJECT" OPERATING CONDITIONS

1. Sight lines are acceptable at the project's driveway connection to Tubbs Lane.

2. Tubbs Lane adjacent to the proposed project site now has higher September two-way traffic volumes during the Friday PM peak traffic hour compared to the Saturday afternoon peak traffic hours (about 605 two-way peak hour vehicles from 4:15 to 5:15 on Friday versus about 475 two-way peak hour vehicles from 3:00 to 4:00 on Saturday). Along S.R. 128, two-way volumes south of Tubbs Lane are higher during the Friday PM peak hour compared to the Saturday PM peak hour (760 versus 645 two-way vehicles), while on S.R. 29 volumes both north and south of Tubbs Lane are higher during the Friday PM peak traffic hour.

3. Weekday daily two-way volumes along Tubbs Lane adjacent to the project site now average 6,236 vehicles over a three-day period (Tuesday to Thursday in September 2014), while daily volumes on the project access driveway now average 39 vehicles.

4. During 2014 harvest conditions, all segments of Tubbs Lane, S.R. 128 and S.R. 29 in the project area evaluated for this study were operating at acceptable levels of service during Friday and Saturday PM peak traffic conditions. In addition, the S.R. 128/Tubbs Lane and S.R. 29/Tubbs Lane intersections were also operating at acceptable levels of service during these same time periods. However, peak hour volumes at the S.R. 128/Tubbs Lane intersection now exceed rural peak hour signal warrant criteria levels during both the Friday and Saturday peak traffic hours, while volumes at the S.R. 29/Tubbs Lane intersection now exceed rural warrant criteria levels during the Friday PM peak traffic hour.

5. By the near term (year 2015) horizon, circulation system operating conditions during harvest would be similar to 2014 conditions.

6. By 2030, all roadway segments would be operating at acceptable levels of service, with the poorest (but still acceptable) operation along Tubbs Lane, S.R. 128 south of Tubbs

Lane and S.R. 29 north of Tubbs Lane. The S.R. 128/Tubbs Lane intersection would be operating at unacceptable levels of service during both the Friday and Saturday PM peak traffic hours, with the S.R. 29/Tubbs Lane intersection operating unacceptably during just the Friday PM peak hour. Both the S.R. 128/Tubbs Lane and S.R. 29/Tubbs Lane intersections would have volumes exceeding rural peak hour signal warrant criteria levels during both the Friday and Saturday PM peak traffic hours.

7. Weekday daily volumes at the Tubbs Lane/project access driveway intersection already meet County warrant criteria for provision of a left turn lane on the eastbound Tubbs Lane intersection approach.

B. PROJECT IMPACTS

1. The proposed project would only result in 1-2 more visitor vehicles per day accessing the project site on a weekday, with only 3 additional visitor vehicles per day accessing the project site on a weekend day. There would be no new employees and no changes in special events. The project will result in, at most, only 1 outbound trip during the harvest Friday PM peak traffic hour along Tubbs Lane, with, at most, only 1 inbound and/or 1 outbound trip during the harvest Saturday PM peak traffic hour.

2. Project traffic during harvest will not produce any significant Friday or Saturday PM peak hour operational impacts at the Tubbs Lane intersections with S.R. 128 or S.R. 29 or along Tubbs Lane, S.R. 128 and S.R. 29 near the project site for the near term or long term analysis horizons.

3. The project will add 2 trips on a weekday to the Tubbs Lane/project access driveway intersection, which already has volumes meeting County warrant criteria for provision of a left turn lane on the eastbound Tubbs Lane intersection approach. However, provision of the left turn would be expensive due to the requirements for relocating one or both deep drainage channels along Tubbs Lane.

C. CONCLUSIONS & RECOMMENDATIONS

The project's additional one visitor vehicle per hour would result in no significant off-site circulation system operational impacts at either Tubbs Lane intersection with S.R. 128 or S.R. 29, nor along any nearby segments of Tubbs Lane, S.R. 128 or S.R. 29. Sight lines at the project driveway connection to Tubbs Lane are excellent and exceed stopping sight distance requirements. Average daily weekday volumes along Tubbs Lane in conjunction with those along the project driveway currently exceed County left turn lane warrant criteria. However, the project would only be adding 2 trips to Tubbs Lane and the project driveway on a weekday.

III. PROJECT LOCATION & DESCRIPTION

The Summers Winery is located on the north side of Tubbs Lane just north of the City of Calistoga (see **Figure 1**). There is currently a driveway along Tubbs Lane serving an existing residence and a 50,000 gallons per year winery. The driveway is about 940 feet east of the S.R. 128 intersection.

The proposed project will expand production from 50,000 up to 100,000 gallons per year. However, there will be no new employees and no additional importation of grapes. The added production will come from bulk wine deliveries. Also, there will be an additional 3 visitors/day by appointment on weekdays and an additional 8 visitors/day by appointment on weekend days.

The proposed Summers Winery expansion will have the following increases in yearly production and visitors.

- 50,000 additional gallons per year production (total 100,000 gallons after expansion).
- Bottling on-site.
- No new grapes will be transported to site. Additional 50,000 gallons from bulk wine delivery.
- Tours and tasting by appointment only – 7 days per week from 10:00 AM to 5:00 PM.
  - Weekdays maximum + 3 new visitors (1-2 vehicles)
  - Weekend Days maximum + 8 new visitors (3 vehicles)
- No new or increased attendance at special events.

IV. EXISTING CIRCULATION SYSTEM OPERATION

A. ANALYSIS LOCATIONS

At County request, the following locations have been evaluated.

- Tubbs Lane between S.R. 128 and S.R. 29
- S.R. 29 north and south of Tubbs Lane
- S.R. 128 north and south of Tubbs Lane
- The Tubbs Lane intersections with S.R. 128 and S.R. 29
- The Tubbs Lane/Project Driveway intersection

Figure 2 presents approach geometrics and control at each analysis intersection.

B. VOLUMES

Friday 3:00 to 6:00 PM and Saturday 1:00 to 6:00 PM turn movement counts were conducted under the direction of Crane Transportation Group (CTG) in September 2014 at the Tubbs Lane intersections with S.R. 128, S.R. 29 and the project access driveway. The project access count also included the entrance to the Envy Winery across Tubbs Lane. The peak traffic hours were

determined to be 4:15-5:15 PM on Friday and 3:00-4:00 PM on Saturday. Resultant peak hour counts are presented in **Figure 3**. Overall, two-way volumes along Tubbs Lane at the project entrance were higher during the Friday PM peak traffic hour (about 605 vehicles per hour [vph] on Friday versus about 475 vph on Saturday). Along S.R. 128, two-way volumes south of Tubbs Lane were higher during the Friday PM peak hour compared to the Saturday PM peak hour (760 two-way vehicles versus 645 two-way vehicles). Daily two-way counts were also conducted along Tubbs Lane adjacent to the project site and on the project access driveway on Tuesday, Wednesday and Thursday, September 9-11, 2014. Daily two-way volumes on Tubbs Lane were 6,190, 6,253 and 6,265 vehicles, respectively, with a three-day daily two-way average of 6,236 vehicles, while daily two-way volumes on the project access driveway were 40, 33 and 44 vehicles, respectively, with a three-day daily two-way average of 39 vehicles.

Resultant projected 2014 Friday and Saturday peak hour harvest volumes are presented in **Figure 4**.

C. ROADWAYS

Roadway descriptions are based upon the assumption that Tubbs Lane runs in a general east-west direction through the project area, while both S.R. 128 and S.R. 29 run in a north-south direction.

Tubbs Lane will provide the only access to the project site (on the north side of the road). It is a two-lane roadway running in a general east-west direction between S.R. 128 on the west and S.R. 29 on the east. It is stop sign controlled on its approaches to both state highways. Adjacent to the site it has 12-foot travel lanes, 3-foot paved shoulders and deep drainage ditches immediately adjacent to the shoulders. The roadway is level and straight and the posted speed limit is 50 miles per hour. There is no left turn lane provided on the eastbound Tubbs Lane approach to the Summers Winery driveway. A continuous double yellow centerline is provided between the S.R. 128 and S.R. 29 intersections, prohibiting passing along the entire length of the roadway.

S.R. 128 is a two-lane highway extending northerly from Tubbs Lane into Sonoma County and a connection with U.S. 101 as well as southerly into the City of Calistoga and a connection with S.R. 29. It is not stop sign controlled at Tubbs Lane, but an exclusive left turn lane is provided on the southbound S.R. 128 intersection approach. The posted speed limit is 45 miles per hour.

S.R. 29 is a two-lane highway extending northerly from Tubbs Lane over Mt. St. Helena into Lake County as well as southerly into the City of Calistoga and the Napa Valley to the south. It also provides a connection to Silverado Trail, an arterial roadway running parallel to S.R. 29 through the Napa Valley to the City of Napa. There are no left or right turn lanes provided on the S.R. 29 approaches to Tubbs Lane.

D. ROADWAY SEGMENTS

1. Analysis Methodology

Roadway segment operation for Tubbs Lane, S.R. 128 and S.R. 29 has been evaluated based upon criteria developed for Napa County roadways as part of the County General Plan Update in

2007: Napa County General Plan update EIR – Technical Memorandum for Traffic and Circulation Supporting the Findings and Recommendations by Dowling Associates, February 2007. Table 5, Peak Hour Roadway Capacities, shows the following directional capacity limit – Level of Service relationships for a two-lane rural highway.

	LOS A	LOS B	LOS C	LOS D	LOS E
Maximum Peak Direction Volume	100	330	620	870	1200
Volume/Capacity Ratio	(.08)	(.28)	(.52)	(.73)	(1.00)

2. Minimum Acceptable Operation

Level of Service D (LOS D) is the poorest acceptable roadway segment operation in Napa County.

3. Existing Harvest Operation

Table 3 shows that all roadway segments in the project vicinity are currently operating at acceptable LOS B or C conditions during harvest Friday and Saturday PM peak traffic conditions. During the Friday peak hour the entire length of Tubbs Lane as well as S.R. 128 south of Tubbs Lane and S.R. 29 north of Tubbs Lane are operating at LOS C, while S.R. 128 north of Tubbs Lane and S.R. 29 south of Tubbs Lane are operating at LOS B. During the Saturday peak hour all roadway segments are operating at LOS B, with the exception of S.R. 128 south of Tubbs Lane, which is operating at LOS C.

E. 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.

Signalized Intersections. For signalized intersections, the 2000 *Highway Capacity Manual* (Transportation Research Board, National Research Council) methodology was utilized. With this methodology, operations are defined by the level of service and average control delay per vehicle (measured in seconds) for the entire intersection. For a signalized intersection, control delay is the portion of the total delay attributed to traffic signal operation. This includes delay associated with deceleration, acceleration, stopping, and moving up in the queue. **Table 1** summarizes the relationship between delay and LOS for signalized intersections.

Unsignalized Intersections. For unsignalized (all-way stop-controlled and side-street stop-controlled) intersections, the 2000 *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, although overall delay is also typically reported for intersections along state highways. 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 2** summarizes the relationship between delay and LOS for unsignalized intersections.

2. Minimum Acceptable Operation

Napa County has no published minimum level of service standards for unsignalized public road or private driveway intersections. The County General Plan (Policy CIR-16) states that the County shall seek to maintain an arterial Level of Service D or better on all County roadways except where maintaining this desired level of service would require installation of more travel lanes than shown on the Circulation Map. For this study, LOS D has been used for unsignalized intersections as the poorest acceptable operation for the entire intersection, with LOS E as the poorest acceptable operation for a side street stop sign controlled intersection approach. The reason for use of LOS E as the criteria for individual movements and LOS D as the criteria for the overall intersection is that the poorest operation at an unsignalized intersection is typically a specific stop sign controlled movement, unless side street volumes are high, in which case both the overall intersection and stop sign controlled movement are LOS F. Stop sign controlled intersections along Silverado Trail with low volumes of side street traffic tend to have poor stop sign controlled levels of service, but good to acceptable overall operation. As side street volumes increase, overall intersection operation also tends to degrade, but will usually remain one to two or more levels of service better than the stop sign controlled movement. When overall operation also degrades to LOS F operation, it is an indication of large volumes on the stop sign controlled approach, and the potential need for intersection signalization. The combined use of both criteria allows the County to identify those stop sign controlled intersections that have unacceptable delay for side street traffic as well as a sufficient amount of side street traffic that may meet signal warrant criteria levels.

3. Existing Harvest Operation

Table 4 shows that currently during the 2014 harvest season both the S.R. 128/Tubbs Lane and S.R. 29/Tubbs Lane intersections have overall acceptable LOS A operation during both the Friday and Saturday PM peak traffic hours. In addition, the stop sign controlled Tubbs Lane approaches to both state highways are operating at an acceptable LOS B during both the Friday and Saturday PM peak traffic hours.

F. INTERSECTION PEAK HOUR SIGNAL WARRANT EVALUATION

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 9 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 *Manual on Uniform Traffic Control Devices* (MUTCD), Federal Highway Administration, 2012, California Supplement, which has been adopted by the State of California as a replacement for *Caltrans Traffic Manual*. Section 4C of the MUTCD provides guidelines, or warrants, which may indicate need for a traffic signal at an unsignalized intersection. As indicated in the MUTCD, 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.

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.

In areas where there are less than 10,000 people in the immediate vicinity of an intersection or where the travel speeds on the uncontrolled intersection approaches are greater than 40 miles per hour, “rural” warrant criteria apply. They require only 70 percent of the volume levels of “urban” warrant criteria. The S.R. 128/Tubbs Lane and S.R. 29/Tubbs Lane intersections are in such locations.

Please see the **Appendix** for the rural warrant chart.

2. Signalization Needs Based Upon Warrant Criteria

Table 5 shows that currently the S.R. 128/Tubbs Lane intersection has both Friday and Saturday harvest peak hour volumes exceeding rural peak hour signal warrant #3 criteria levels, while the S.R. 29/Tubbs Lane intersection only has harvest Friday PM peak hour volumes exceeding rural peak hour signal warrant #3 criteria levels. Saturday peak hour volumes do not exceed warrant criteria at S.R. 29/Tubbs Lane.

G. PLANNED IMPROVEMENTS

There are no planned and funded improvements at any location evaluated in this study.[1]

V. FUTURE HORIZON CIRCULATION SYSTEM OPERATION WITHOUT THE PROJECT

Project traffic impacts have been determined for near and long term horizons. The near term horizon reflects the first year that the project will be at full production with expansion from 50,000 up to 100,000 gallons. Based upon input from the project applicant, the expected first year of full production will be 2015. The long term horizon reflects the County's general plan buildout year, which is 2030. Future horizon year volumes have been determined based upon traffic modeling projections for the year 2030 from the County's General Plan Circulation Element. This document showed the following percent growths in weekday PM peak hour traffic along project area roadways.

PERCENT 2-WAY VOLUME INCREASES FROM 2014 TO 2030

	% INCREASE
Tubbs Lane	+ 48
S.R. 128 North of Tubbs Lane	+ 110
S.R. 128 South of Tubbs Lane	+ 43
S.R. 29 North of Tubbs Lane	+ 22
S.R. 29 South of Tubbs Lane	+ 48

It should be noted that little traffic growth has occurred on local roadways over the past 10 years and that significant development in the northern Napa Valley as well as Sonoma and Lake counties would be required to produce the growth percentages above.

For the near term horizon (2015), projections were developed by first assuming straight line traffic growth between 2014 and 2030, which would indicate about 6 percent of the above growth percentages to 2030. In addition, traffic from three nearby County winery project were added to the system at County request based upon data from traffic studies prepared for each project.

- Envy Winery (Tubbs Lane) — 16 new weekday daily trips and 6 new weekend daily trips

[1] Mr. Paul Wilkinson, Napa County Public Works Department, May 2012.

- Coquerel Winery (S.R. 128 north of Tubbs Lane) — 15 new weekday PM peak hour trips and 9 new Saturday PM peak hour trips
- Tamber Bay Winery (Tubbs Lane) — 6 new weekday PM peak hour trips and 8 new Saturday PM peak hour trips

Finally, a small increment of traffic was added to the system reflecting new residential growth in the City of Calistoga based upon their 2014 Housing Element Update City Council Hearing Draft, September 2014. All prospective units are a half mile or farther to the south of Tubbs Lane.

Since traffic modeling projections were available for a weekday PM peak hour only and not for a Saturday peak hour, Saturday volumes on Tubbs Lane, S.R. 128 and S.R. 29 were uniformly increased by the percentages above.

A. YEAR 2015 WITHOUT PROJECT EVALUATION

1. Volumes

Year 2015 "Without Project" Friday and Saturday PM peak hour harvest volumes are presented in **Figure 5**.

2. Roadway Segment Level of Service

Table 6 shows that all roadway segments in the vicinity of the project would be operating at acceptable LOS B or C conditions during harvest Friday and Saturday PM peak traffic conditions. During the Friday peak hour the entire length of Tubbs Lane as well as S.R. 128 south of Tubbs Lane and S.R. 29 north of Tubbs Lane would be operating at LOS C, while S.R. 128 north of Tubbs Lane and S.R. 29 south of Tubbs Lane would be operating at LOS B. During the Saturday peak hour all roadway segments would be operating at LOS B, with the exception of S.R. 128 south of Tubbs Lane, which would be operating at LOS C.

3. Intersection Level of Service

Table 7 shows that during the 2015 harvest season both the S.R. 128/Tubbs Lane and S.R. 29/Tubbs Lane intersections would have overall acceptable LOS A operation during both the Friday and Saturday PM peak traffic hours. In addition, the stop sign controlled Tubbs Lane approaches to both state highways would be operating at an acceptable LOS B during both the Friday and Saturday PM peak traffic hours.

4. Intersection Signalization Needs

Table 8 shows that in 2015 the S.R. 128/Tubbs Lane intersection would have both Friday and Saturday harvest peak hour volumes exceeding rural peak hour signal warrant #3 criteria levels, while the S.R. 29/Tubbs Lane intersection would only have harvest Friday PM peak hour

volumes exceeding rural peak hour signal warrant #3 criteria levels. Saturday peak hour volumes would not exceed warrant criteria at S.R. 29/Tubbs Lane.

B. YEAR 2030 WITHOUT PROJECT EVALUATION

1. Volumes

Year 2030 "Without Project" Friday and Saturday PM peak hour harvest volumes are presented in **Figure 6**.

2. Roadway Segment Level of Service

Table 9 shows that during a Friday PM peak hour all roadway segments in the vicinity of the project would be operating at acceptable levels in 2030, although operation will have degraded from existing conditions. Tubbs Lane in the project vicinity and S.R. 128 south of Tubbs Lane would be expected to have operation on the LOS C/D border, while S.R. 29 north of Tubbs Lane would have LOS D operation. Only S.R. 29 south of Tubbs Lane would remain with LOS B operation. During a Saturday peak hour all roadway segments would be operating at LOS C, while S.R. 29 south of Tubbs Lane would be operating at LOS B.

3. Intersection Level of Service

Table 10 shows that in 2030 during the Friday PM peak hour, "Without Project" operation of the entire S.R. 128/Tubbs Lane intersection would be at unacceptable LOS F conditions, while S.R. 29/Tubbs Lane overall intersection operation would be an acceptable LOS D. However, operation of the Tubbs Lane stop sign controlled approaches to both intersections would be an unacceptable LOS F. During the Saturday PM peak hour both intersections would have overall acceptable operation, while the Tubbs Lane approach to S.R. 128 would be operating unacceptably at LOS F.

4. Intersection Signalization Needs

Table 11 shows that in 2030 during the harvest season, both the S.R. 128/Tubbs Lane and S.R. 29/Tubbs Lane intersections would have both Friday and Saturday PM peak hour volumes exceeding rural peak hour signal warrant #3 criteria levels.

VI. PROJECT IMPACTS

A. SIGNIFICANCE CRITERIA

The following criteria were developed for recent traffic impact analyses in the County. These same criteria have been utilized in this study to determine the significance of impacts due to the project. An impact is considered to be significant if any of the following conditions are met.

- If a roadway segment has "Without Project" overall LOS A, B, C or D operation and deteriorates to LOS E or F operation with the addition of project traffic, the impact is significant and would require mitigation.

- If an unsignalized intersection has "Without Project" overall LOS A, B, C or D operation and deteriorates to LOS E or F operation with the addition of project traffic – or – has a stop sign controlled movement operating at LOS A, B, C, D or E and deteriorates to LOS F with the additional project traffic, the impact is considered significant and would require mitigation.

- If an unsignalized intersection already has "Without Project" overall LOS E or F operation – or – if a stop sign controlled movement or approach is already operating at LOS F, an increase in traffic passing through the intersection of 1 percent or more due to the project is considered to be significant and would require mitigation.

- If the addition of project traffic to an unsignalized intersection increases "Without Project" volumes to meet peak hour signal warrant criteria levels, the impact is considered significant and would require mitigation.

- If "Without Project" volumes at an unsignalized intersection already meet peak hour signal warrant criteria levels and the level of service is already at an unacceptable level, an increase in traffic of 1 percent or more due to the project is considered significant and would require mitigation.

- If projected daily volumes on the project driveway in combination with volumes on the roadway providing access to the project driveway meet County warrant criteria for provision of a left turn lane on the approach to the project entrance.

B. TRIP GENERATION

Friday and Saturday afternoon trip generation projections were developed with the assistance of the project applicant and their representative for all components of new activities for the proposed Summers Winery expansion (see worksheets in the **Appendix**). Results are presented on an hourly basis in **Tables 12A** and **12B** for Friday and Saturday afternoon conditions. All new trips would be associated with increased visitation: 1-2 new vehicles during a weekday and up to 3 new vehicles during a weekend day. During the Friday PM peak traffic hour, there would be, at most, 1 new inbound trip, while during the Saturday afternoon PM peak traffic hour, there would be, at most, 1 new inbound or outbound trip.

C. TRIP DISTRIBUTION

Project traffic was distributed to Tubbs Lane in a pattern reflective of existing distribution patterns at the Tubbs Lane/Project Entrance intersection as well as at the Tubbs Lane intersections with S.R. 128 and S.R. 29. The single new visitor vehicle would be expected to travel to/from the west on Tubbs Lane to S.R. 128 and then travel to/from the south.

The Friday and Saturday project traffic increments expected on Tubbs Lane, S.R. 128 and S.R. 29 during the times of ambient PM peak traffic flow are presented in **Figure 7**, while Friday and Saturday "With Project" PM peak hour volumes for the years 2015 and 2030 are presented in **Figures 8** and **9,** respectively.

D. PLANNED ROADWAY IMPROVEMENTS

There are no planned and funded capacity increasing roadway improvements by Caltrans or the County on this local roadway network serving the project site.[2]

E. YEAR 2015 IMPACTS

1. Roadway Segment Level of Service

Table 6 shows that project traffic would not produce a significant roadway segment level of service and that all evaluated roadway segments would maintain acceptable LOS B or C operation with the addition of project traffic. There would only be the addition of only 1 project vehicle along Tubbs Lane and S.R. 128 during either the Friday or Saturday peak traffic hours.

2. Intersection Level of Service

Table 7 shows that project traffic would not produce a significant level of service impact at either the S.R. 128/Tubbs Lane or S.R. 29/Tubbs Lane intersections during either the Friday or Saturday year 2015 PM peak traffic hours. Project traffic would not change any acceptable operation to unacceptable conditions. Overall intersection operation would remain LOS A at both intersections and operation of the Tubbs Lane stop sign controlled approaches to both S.R. 128 and S.R. 29 would remain an acceptable LOS B. Also, there would be no change in vehicle delay due to project traffic at either intersection during either the Friday or Saturday PM peak traffic hours.

3. Signalization Needs

Table 8 shows that project traffic would not produce a significant signalization needs impact at either the S.R. 128/Tubbs Lane or S.R. 29/Tubbs Lane intersections during either the Friday or Saturday year 2015 PM peak traffic hours along local roadways. Project traffic would not increase volumes to meet signal warrant #3 criteria nor would it increase volumes by 1 percent or more when "Without Project" volumes would already meet peak hour signal warrant criteria levels. During the Friday PM peak hour, when volumes at both the S.R. 128/Tubbs Lane and S.R. 29/Tubbs Lane intersections would already meet rural peak hour signal warrant #3 criteria levels, increases due to the addition of project traffic would be 0.1% or less. During the Saturday PM peak hour, when volumes at the S.R. 128/Tubbs Lane intersection would already meet rural signal warrant #3 criteria levels, the increase due to the addition of project traffic would only be 0.1%.

[2] Paul Wilkinson, Napa County Public Works Department.

F. YEAR 2030 IMPACTS

1. Roadway Segment Level of Service

Table 6 shows that project traffic would not produce a significant roadway segment level of service and that all evaluated roadway segments would maintain acceptable LOS B to D operation with the addition of project traffic. There would only be the addition of 1 project vehicle along Tubbs Lane and S.R. 128 during either the Friday or Saturday peak traffic hours.

2. Intersection Level of Service

Project traffic would not produce a significant level of service impact at either the S.R. 128/Tubbs Lane or S.R. 29/Tubbs Lane intersections during either the Friday or Saturday year 2030 PM peak traffic hours along local roadways. Project traffic would not change any acceptable operation to unacceptable conditions, nor would it increase volumes by 1 percent or more when "Without Project" operation would be unacceptable. The S.R. 128/Tubbs Lane intersection would have unacceptable operation during both the Friday and Saturday PM peak hours without project traffic. However, project traffic would increase volumes less than 0.1%. In addition, the S.R. 29/Tubbs Lane intersection would have unacceptable operation during the Friday PM peak hour, but the project would also increase volumes less than 0.1% at this location.

3. Signalization Needs

Table 8 shows that project traffic would not produce a significant signalization needs impact at either the S.R. 128/Tubbs Lane or S.R. 29/Tubbs Lane intersections during either the Friday or Saturday year 2030 PM peak traffic hours along local roadways. Project traffic would not increase volumes to meet signal warrant #3 criteria nor would it increase volumes by 1 percent or more when "Without Project" volumes would already meet peak hour signal warrant criteria levels. During the Friday and Saturday PM peak hours, when volumes at both the S.R. 128/Tubbs Lane and S.R. 29/Tubbs Lane intersections would already meet rural peak hour signal warrant #3 criteria levels, increases due to the addition of project traffic would be 0.1% or less.

G. SIGHT LINE ADEQUACY

Sight lines are acceptable for drivers turning from the existing project driveway to Tubbs Lane. Sight lines to the west are about 940 feet (to the S.R. 128 intersection), while sight lines to the east are greater than 1,000 feet. Based upon travel speeds along Tubbs Lane of 55 miles per hour (five miles greater than the posted speed), the required stopping sight distances would be 495 feet for east and westbound drivers. Sight lines would therefore be greater than required stopping sight distances.[3]

[3] *A Policy on Geometric Design of Highways and Streets*, 2011, AASHTO.

H. PROJECT ENTRANCE LEFT TURN LANE REQUIREMENT

1. County Warrant Evaluation

County warrant criteria have been evaluated to determine the need for a left turn lane on the eastbound Tubbs Lane approach to the project driveway. County warrant criteria in **Table 13** shows that existing average weekday two-way daily traffic volumes along Tubbs Lane in combination with existing weekday two-way daily volumes on the project driveway currently meet County warrant criteria for provision of a left turn lane (average 6,236 daily vehicles on Tubbs Lane and 39 vehicles on the project driveway). The proposed project, with 1 additional visitor vehicle per weekday would increase these daily volumes to 6,238 vehicles along Tubbs Lane and 41 vehicles along the project driveway. Although daily volumes were not counted during weekend conditions, based upon the interrelationship of Friday to Saturday peak hour volumes, it is unlikely that weekend daily volumes on Tubbs Lane in combination with those on the project access driveway would meet turn lane warrant criteria.

2. Physical Impacts Due to Provision of Left Turn Lane

An initial determination has been made by Crane Transportation Group of the tree removal as well as utility pole and drainage ditch relocation that would be required to provide a left turn lane on the eastbound Tubbs Lane approach to the existing Summers Winery driveway. For evaluation purposes, it has been assumed that the left turn lane would be 100 feet long and that all widening would occur on the north (project frontage) side of Tubbs Lane.

a) Tree Removal

Three to four heritage oak trees would potentially require removal on the north side of the road to the west of the driveway, with one requiring removal to the east of the driveway (to the west trees at about 85, 140, 210 and 270 feet from the driveway; and to the east about 135 feet from the driveway).

b) Utility Pole Relocation

Three utility poles would require relocation on the north side of the road (one about 130 feet west of the driveway along with two about 90 and 170 feet east of the driveway).

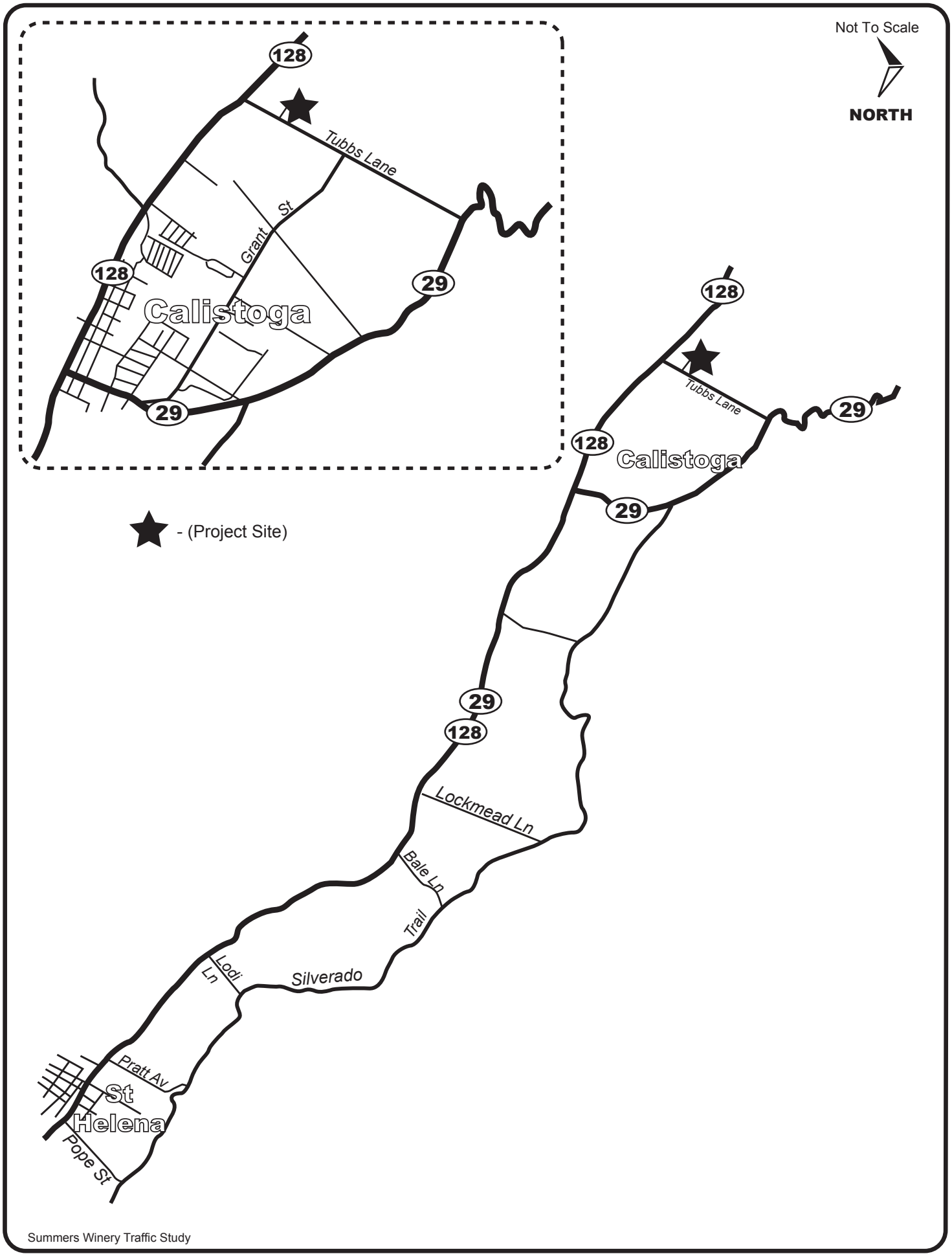
c) Drainage Ditch Relocation

The deep drainage ditch on the north side of the roadway would require relocation to the north, starting about 400 feet west of the driveway and extending about 270 feet east of the driveway. It would also require reconstruction of the project access driveway culvert over the drainage ditch.

VII. CONCLUSIONS & RECOMMENDATIONS

The project's additional one visitor vehicle per hour would result in no significant off-site circulation system operational impacts at either Tubbs Lane intersection with S.R. 128 or S.R. 29, nor along any nearby segments of Tubbs Lane, S.R. 128 or S.R. 29. Sight lines at the project driveway connection to Tubbs Lane are excellent and exceed stopping sight distance requirements. Average daily weekday volumes along Tubbs Lane in conjunction with those along the project driveway currently exceed County left turn lane warrant criteria. However, the project would only be adding 2 trips to Tubbs Lane and the project driveway on a weekday.

Figures



Summers Winery Traffic Study

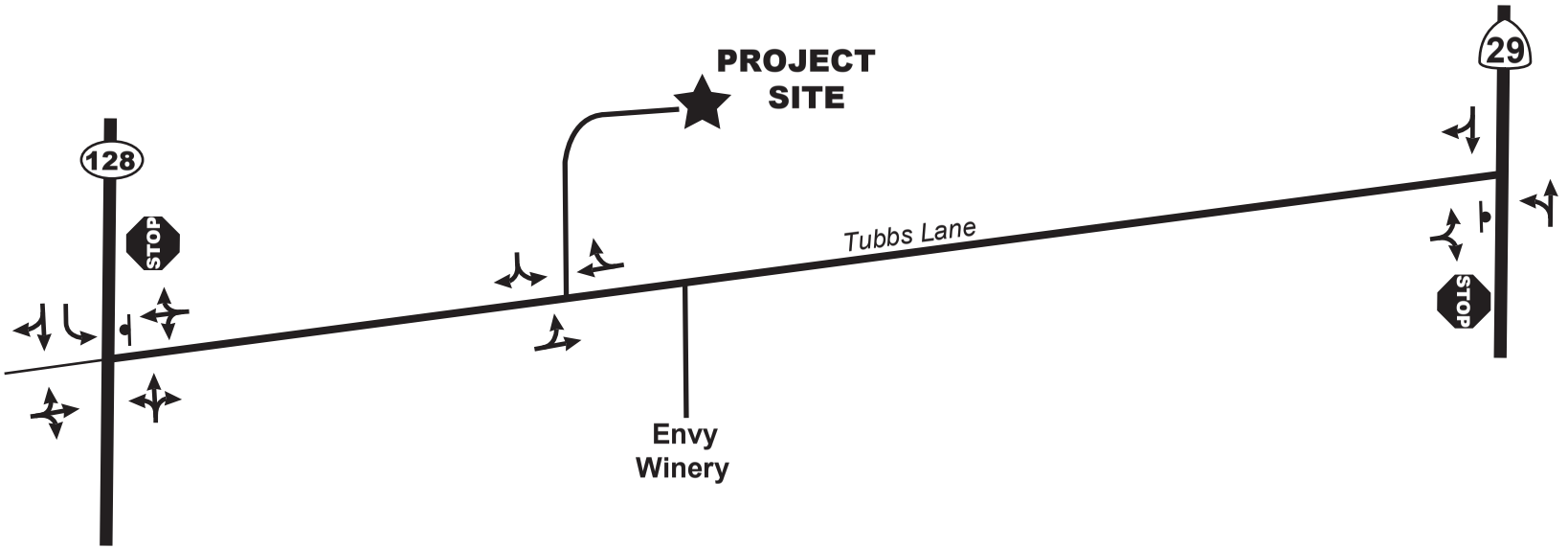
CRANE TRANSPORTATION GROUP

Figure 1

Area Map

Summers Winery

Not To Scale



STOP = Side Street Stop Sign Controlled Intersection

Summers Winery Traffic Study

CRANE TRANSPORTATION GROUP

Figure 2

Existing Intersection Lane Geometrics and Control

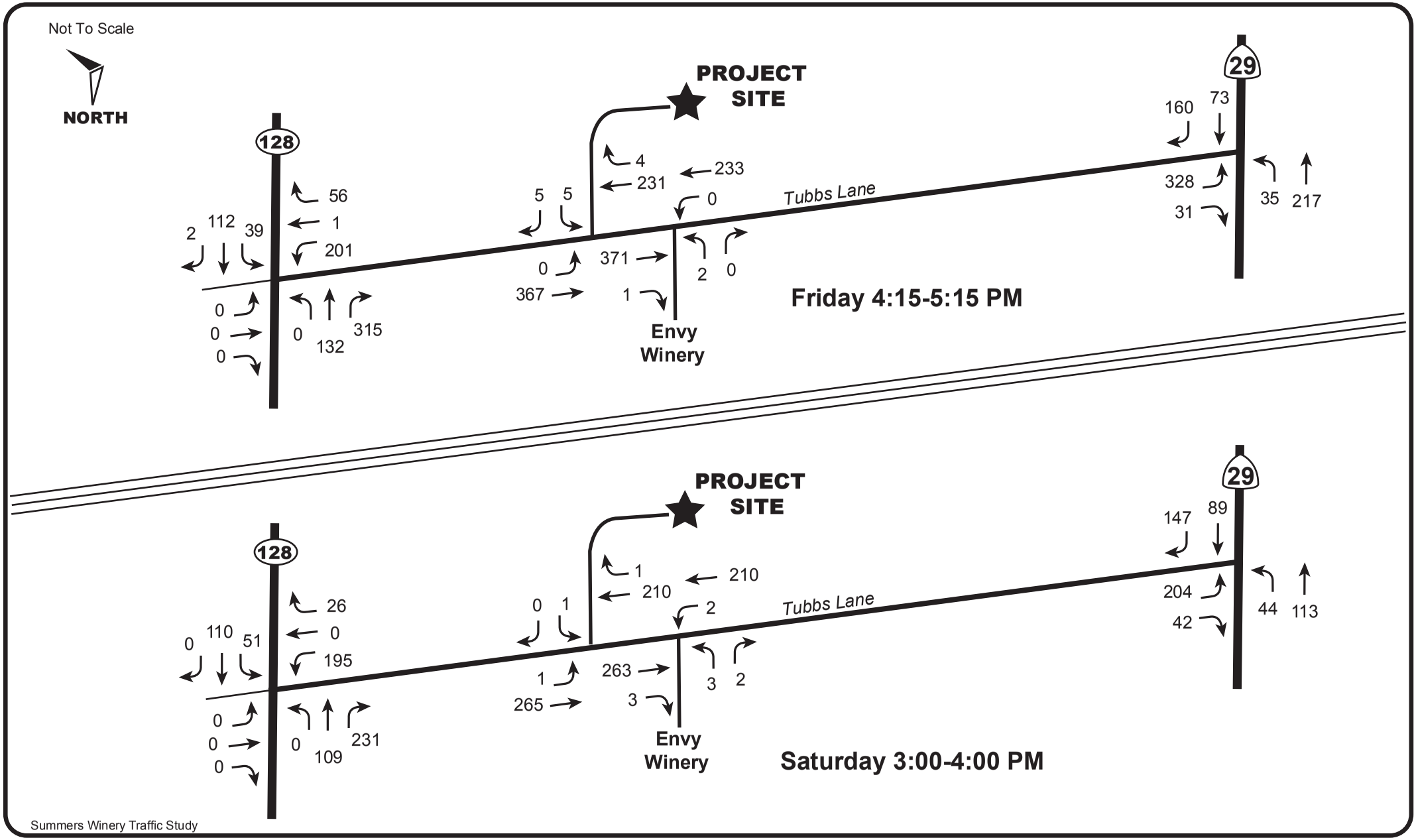


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Figure 3

Existing (without Project) Harvest Friday and Saturday PM Peak Hour Volumes

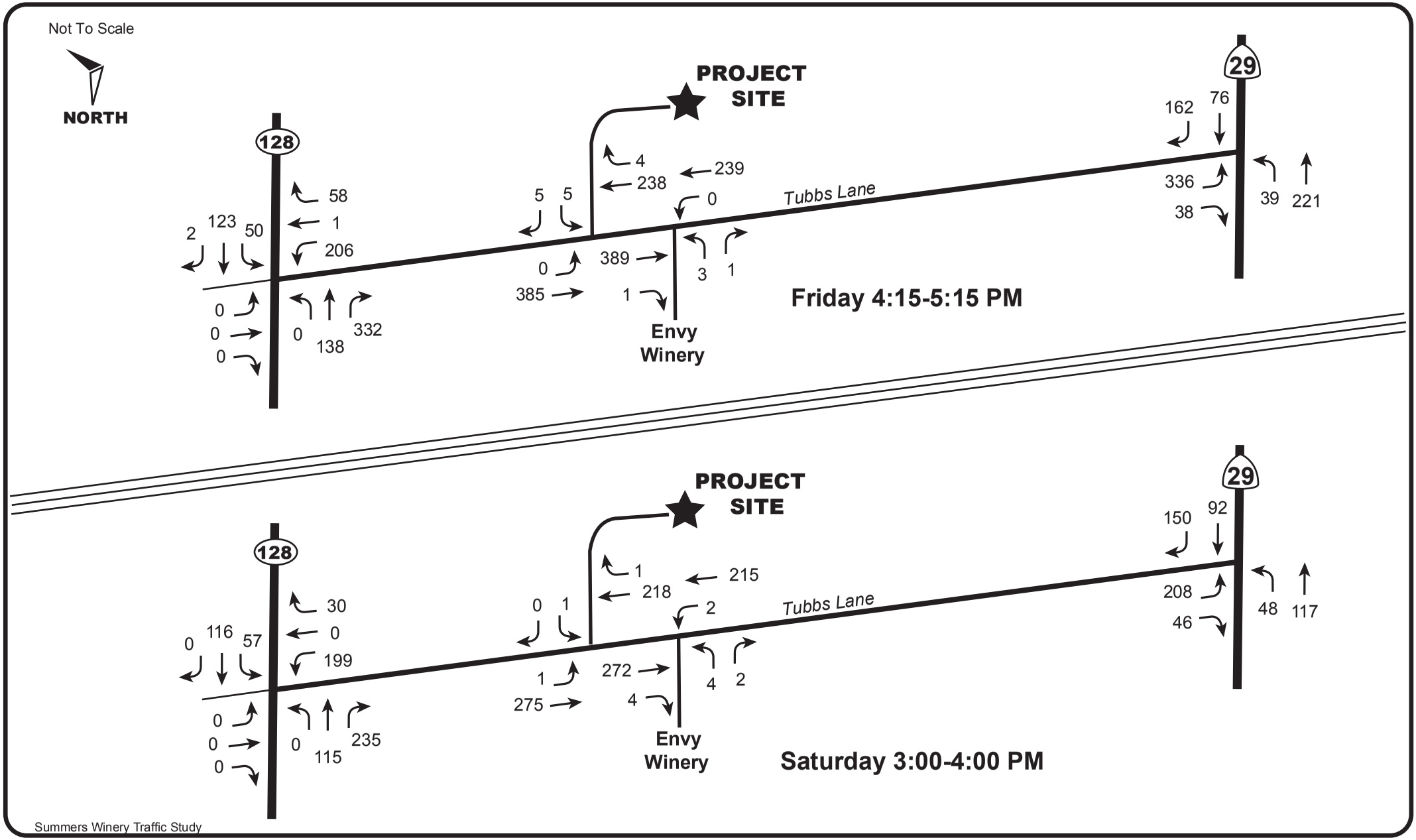

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Figure 4

2015 (without Project) Harvest Friday and Saturday PM Peak Hour Volumes

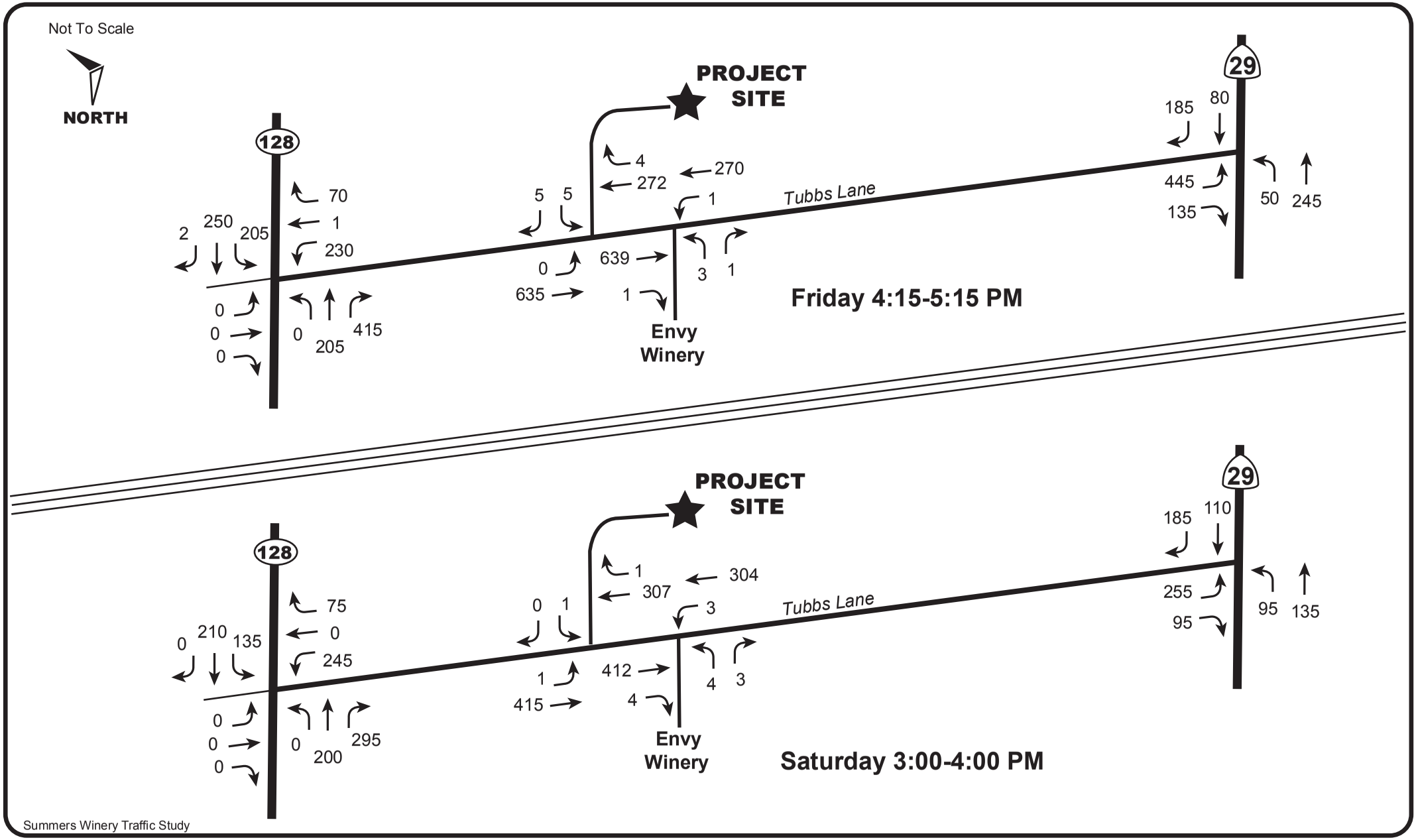

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Figure 5

2030 (without Project) Harvest Friday and Saturday PM Peak Hour Volumes

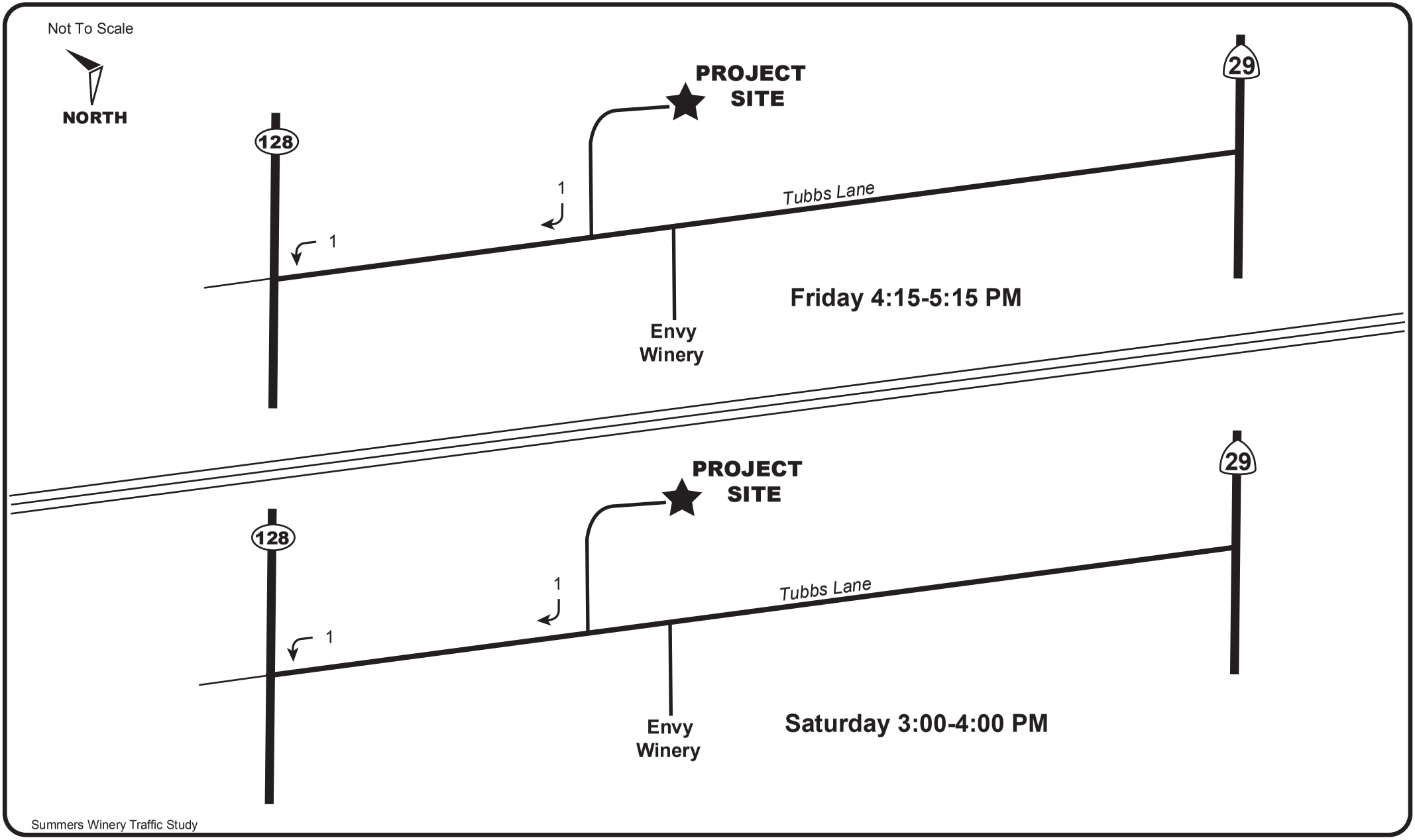

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Figure 6

Harvest Friday and Saturday PM Peak Hour Project Increment

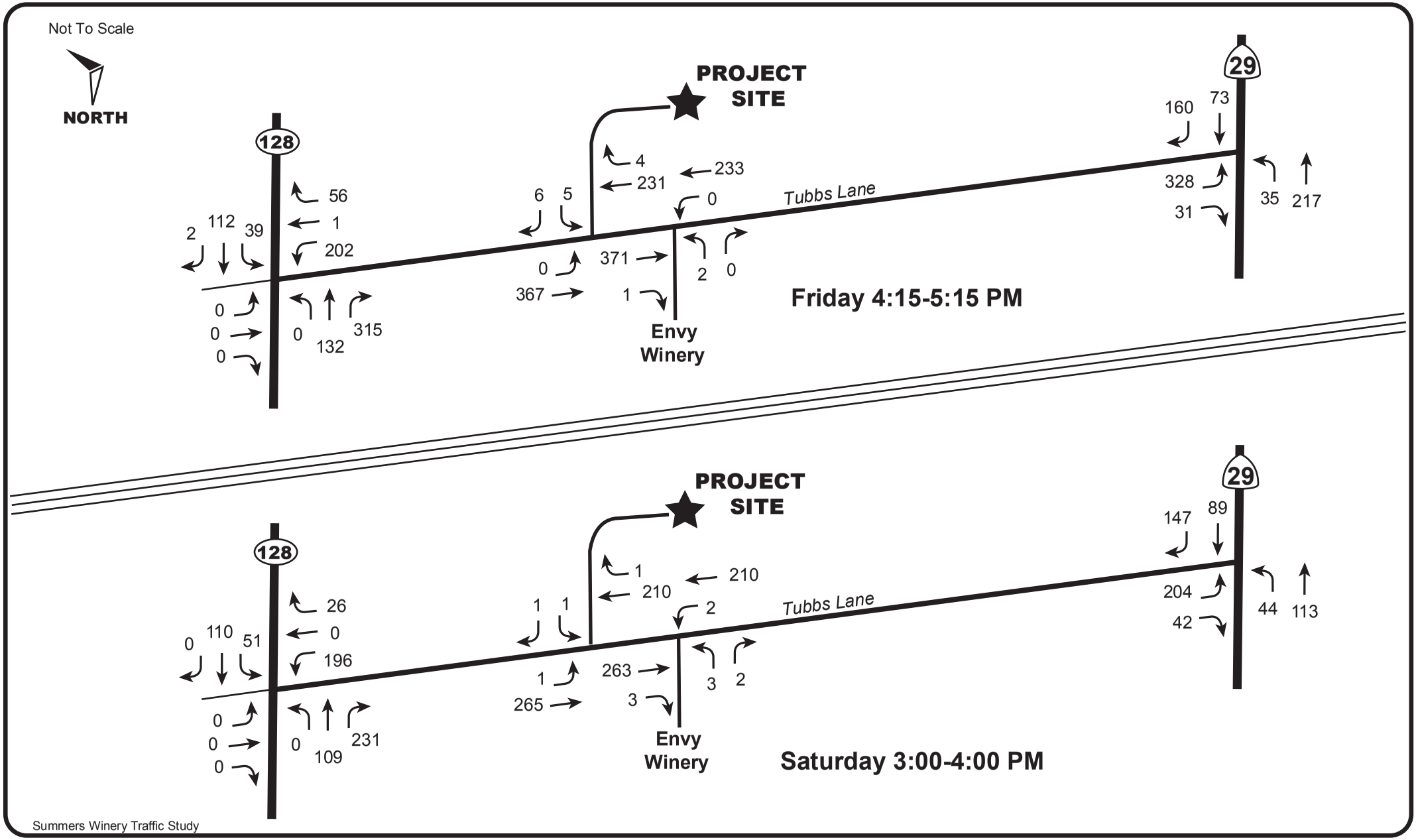

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Figure 7

Existing (with Project) Harvest Friday and Saturday PM Peak Hour Volumes

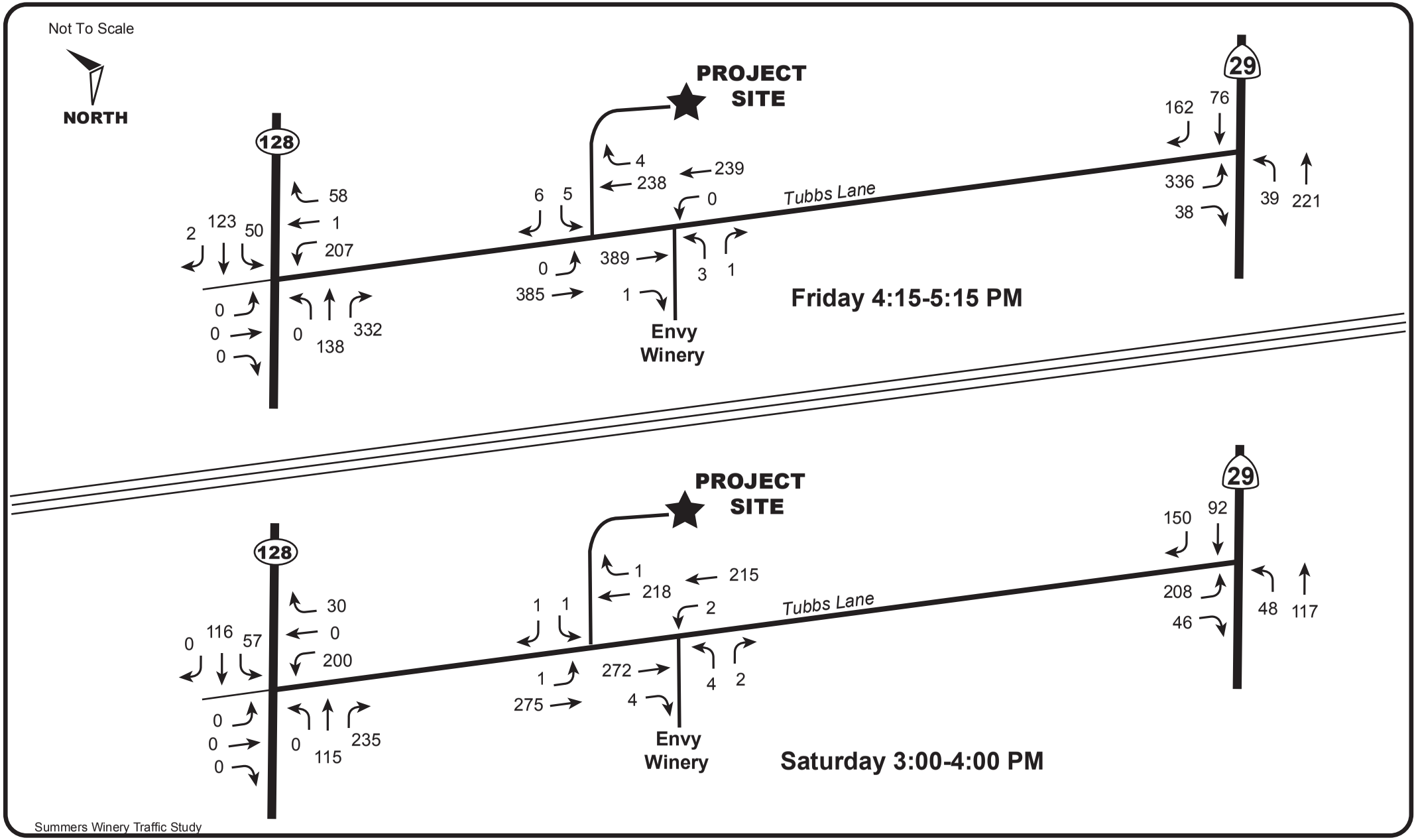

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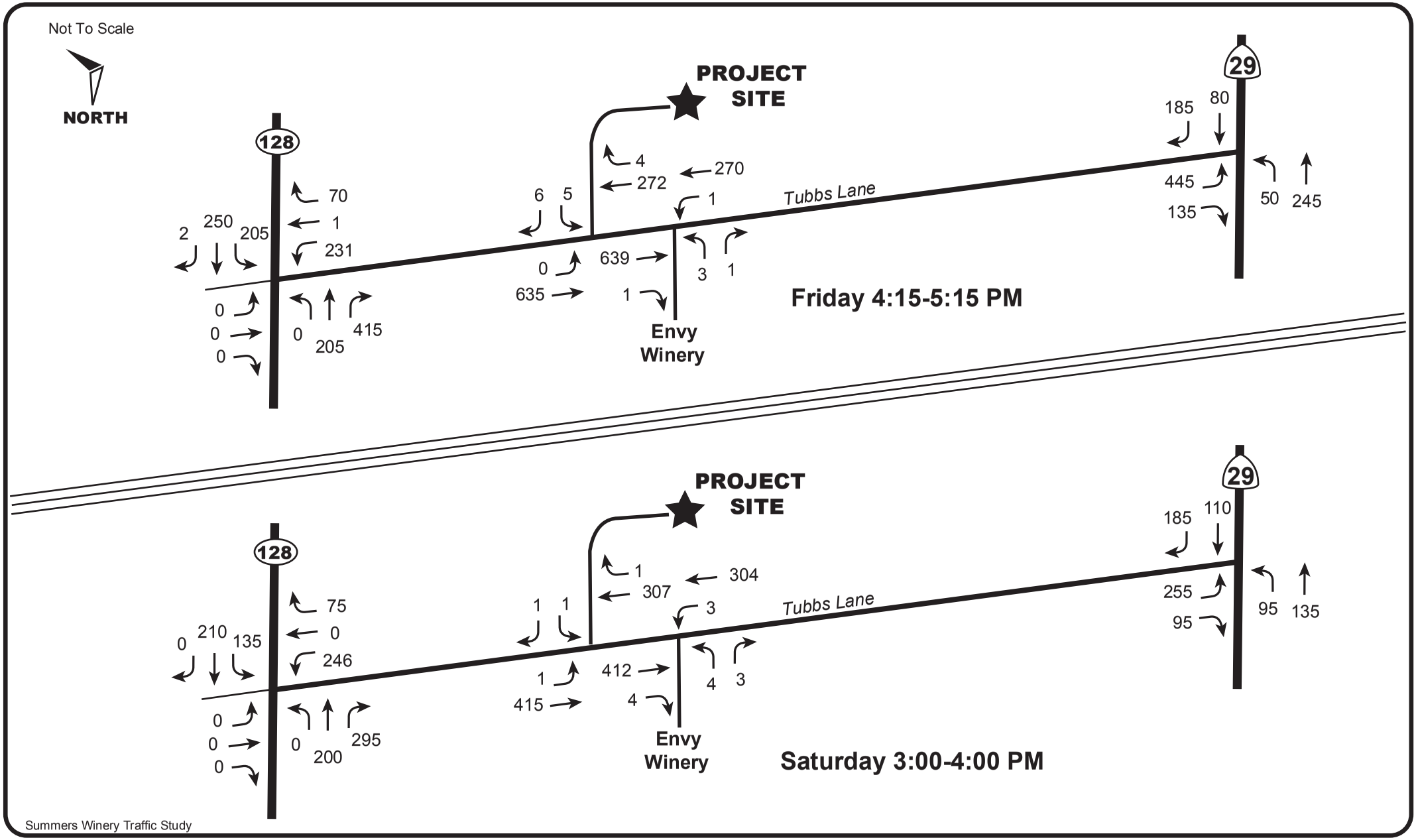
Figure 8

2015 (with Project) Harvest Friday and Saturday PM Peak Hour Volumes



CRANE TRANSPORTATION GROUP

Figure 9

2030 (with Project) Harvest Friday and Saturday PM Peak Hour Volumes

Tables

Table 1

SIGNALIZED INTERSECTION LOS CRITERIA

Level of Service	Description	Average Control Delay (Seconds Per Vehicle)
A	Operations with very low delay occurring with favorable progression and/or short cycle lengths.	≤ 10.0
B	Operations with low delay occurring with good progression and/or short cycle lengths.	10.1 to 20.0
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.1 to 35.0
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, and/or high volume-to-capacity (V/C) ratios. Many vehicles stop and individual cycle failures are noticeable.	35.1 to 55.0
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	55.1 to 80.0
F	Operation with delays unacceptable to most drivers occurring due to oversaturation, poor progression, or very long cycle lengths.	> 80.0

Source: 2000 Highway Capacity Manual (Transportation Research Board).

Table 2

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	10.1 to 15.0
C	Average traffic delays	15.1 to 25.0
D	Long traffic delays	25.1 to 35.0
E	Very long traffic delays	35.1 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: 2000 Highway Capacity Manual (Transportation Research Board).

Table 3

ROADWAY SEGMENT LEVEL OF SERVICE
PEAK TRAVEL DIRECTION

EXISTING & EXISTING + PROJECT

LOCATION	FRIDAY PM PEAK HOUR				SATURDAY PM PEAK HOUR			
	EXISTING		EXISTING + PROJECT		EXISTING		EXISTING + PROJECT	
	VOL	LOS	VOL	LOS	VOL	LOS	VOL	LOS
SR 128 North of Tubbs Lane	188	B	188	B	161	B	161	B
SR 128 South of Tubbs Lane	447	C	448	C	340	C	341	C
Tubbs Lane East of SR 128	354	C	355	C	282	B	283	B
Tubbs Lane West of SR 29	359	C	359	C	246	B	246	B
SR 29 North of Tubbs Lane	545	C	545	C	317	B	317	B
SR 29 South of Tubbs Lane	252	B	252	B	157	B	157	B

Analysis Methodology Source: Napa County General Plan Update EIR Technical Memorandum for Traffic and Circulation Supporting the Findings and recommendations, Dowling Associates, February 9, 2007.

Compiled by: Crane Transportation Group

Table 4

INTERSECTION LEVEL OF SERVICE

EXISTING & EXISTING + PROJECT

LOCATION	FRIDAY PM PEAK HOUR		SATURDAY PM PEAK HOUR	
	W/O PROJECT	+ PROJECT	W/O PROJECT	+ PROJECT
SR 128/Tubbs Lane (Tubbs Lane Approach Stop Sign Controlled)	B-11.0[1] (A-3.7)[2]	B-11.0 (A-3.7)	B-11.0 (A-4.0)	B-11.0 (A-4.0)
SR 29/Tubbs Lane (Tubbs Lane Approach Stop Sign Controlled)	B-14.3[1] (A-6.4)[2]	B-14.3 (A-6.4)	A-9.9 (A-4.4)	A-9.9 (A-4.4)

[1] Unsignalized level of service – control delay in seconds. Tubbs Lane stop sign controlled approach.
[2] (Unsignalized level of service – control delay, entire intersection).

Year 2000 Highway Capacity Manual Analysis Methodology
Compiled by: Crane Transportation Group

Table 5

SIGNAL WARRANT EVALUATION

Do Volumes Met Rural Peak Hour Signal Warrant #3 Criteria Levels?

LOCATION	FRIDAY PM PEAK HOUR		SATURDAY PM PEAK HOUR	
	EXISTING	EXISTING + PROJECT	EXISTING	EXISTING + PROJECT
SR 128/Tubbs Lane	Yes	Yes (0.1%)*	Yes	Yes (0.1%)*
SR 29/Tubbs Lane	Yes	Yes (0%)*	No	No

* Percent project traffic added.

Methodology: California Manual on Uniform Traffic Control Devices, 2012.
Compiled by: Crane Transportation Group

Table 6

ROADWAY SEGMENT LEVEL OF SERVICE
PEAK TRAVEL DIRECTION

2015 WITHOUT & WITH PROJECT

LOCATION	FRIDAY PM PEAK HOUR				SATURDAY PM PEAK HOUR			
	W/O PROJECT		+ PROJECT		W/O PROJECT		+ PROJECT	
	VOL	LOS	VOL	LOS	VOL	LOS	VOL	LOS
SR 128 North of Tubbs Lane	196	B	196	B	173	B	173	B
SR 128 South of Tubbs Lane	460	C	461	C	350	C	351	C
Tubbs Lane East of SR 128	372	C	373	C	292	B	293	B
Tubbs Lane West of SR 29	374	C	374	C	254	B	254	B
SR 29 North of Tubbs Lane	555	C	555	C	323	B	323	B
SR 29 South of Tubbs Lane	255	B	255	B	163	B	163	B

Analysis Methodology Source: Napa County General Plan Update EIR Technical Memorandum for Traffic and Circulation Supporting the Findings and recommendations, Dowling Associates, February 9, 2007.

Compiled by: Crane Transportation Group

Table 7

INTERSECTION LEVEL OF SERVICE

YEAR 2015 WITHOUT & WITH PROJECT

LOCATION	FRIDAY PM PEAK HOUR		SATURDAY PM PEAK HOUR	
	W/O PROJECT	+ PROJECT	W/O PROJECT	+ PROJECT
SR 128/Tubbs Lane (Tubbs Lane Approach Stop Sign Controlled)	B-11.7[1] (A-3.9)[2]	B-11.7 (A-3.9)	B-11.4 (A-4.1)	B-11.4 (A-4.1)
SR 29/Tubbs Lane (Tubbs Lane Approach Stop Sign Controlled)	B-14.9[1] (A-6.8)[2]	B-14.9 (A-6.8)	B-10.1 (A-4.4)	B-10.1 (A-4.4)

[1] Unsignalized level of service – control delay in seconds. Tubbs Lane stop sign controlled approach.
[2] (Unsignalized level of service – control delay, entire intersection).

Year 2000 Highway Capacity Manual Analysis Methodology
Compiled by: Crane Transportation Group

Table 8

SIGNAL WARRANT EVALUATION

Do Volumes Met Rural Peak Hour Signal Warrant #3 Criteria Levels?

2015 WITHOUT & WITH PROJECT

LOCATION	FRIDAY PM PEAK HOUR		SATURDAY PM PEAK HOUR	
	W/O PROJECT	+ PROJECT	W/O PROJECT	+ PROJECT
SR 128/Tubbs Lane	Yes	Yes (0.1%)*	Yes	Yes (0.1%)*
SR 29/Tubbs Lane	Yes	Yes (0%)*	No	No

* Percent project traffic added.

Methodology: California Manual on Uniform Traffic Control Devices, 2012.
Compiled by: Crane Transportation Group

Table 9

ROADWAY SEGMENT LEVEL OF SERVICE
PEAK TRAVEL DIRECTION

2030 WITHOUT & WITH PROJECT

LOCATION	FRIDAY PM PEAK HOUR				SATURDAY PM PEAK HOUR			
	W/O PROJECT		+ PROJECT		W/O PROJECT		+ PROJECT	
	VOL	LOS	VOL	LOS	VOL	LOS	VOL	LOS
SR 128 North of Tubbs Lane	455	C	455	C	345	C	345	C
SR 128 South of Tubbs Lane	620	C/D	621	C/D	495	C	496	C
Tubbs Lane East of SR 128	620	C/D	621	C/D	430	C	431	C
Tubbs Lane West of SR 29	580	C	580	C	350	C	350	C
SR 29 North of Tubbs Lane	690	D	690	D	390	C	390	C
SR 29 South of Tubbs Lane	295	B	295	B	230	B	230	B

Analysis Methodology Source: Napa County General Plan Update EIR Technical Memorandum for Traffic and Circulation Supporting the Findings and recommendations, Dowling Associates, February 9, 2007.

Compiled by: Crane Transportation Group

Table 10

INTERSECTION LEVEL OF SERVICE

YEAR 2030 WITHOUT & WITH PROJECT

LOCATION	FRIDAY PM PEAK HOUR		SATURDAY PM PEAK HOUR	
	W/O PROJECT	+ PROJECT	W/O PROJECT	+ PROJECT
SR 128/Tubbs Lane (Tubbs Lane Approach Stop Sign Controlled)	F-250.7[1] (F-56.3)[2]	F-253.0 (F-56.9)	F-67.5 (C-19.7)	F-72.6 (C-21.1)
SR 29/Tubbs Lane (Tubbs Lane Approach Stop Sign Controlled)	F-53.4[1] (D-27.5)[2]	F-53.4 (D-27.5)	B-14.9 (A-6.8)	B-14.9 (A-6.8)

[1] Unsignalized level of service – control delay in seconds. Tubbs Lane stop sign controlled approach.
[2] (Unsignalized level of service – control delay, entire intersection).

Year 2000 Highway Capacity Manual Analysis Methodology
Compiled by: Crane Transportation Group

Table 11

SIGNAL WARRANT EVALUATION

Do Volumes Met Rural Peak Hour Signal Warrant #3 Criteria Levels?

2030 WITHOUT & WITH PROJECT

LOCATION	FRIDAY PM PEAK HOUR		SATURDAY PM PEAK HOUR	
	W/O PROJECT	+ PROJECT	W/O PROJECT	+ PROJECT
SR 128/Tubbs Lane	Yes	Yes (0.1%)*	Yes	Yes (0.09%)*
SR 29/Tubbs Lane	Yes	Yes (0%)*	Yes	Yes (0%)

* Percent project traffic added.

Methodology: California Manual on Uniform Traffic Control Devices, 2012.
Compiled by: Crane Transportation Group

Table 12A

SUMMERS WINERY EXPANSION
NET NEW TRIP GENERATION ON LOCAL ROADWAY SYSTEM

HARVEST FRIDAY

CATEGORY	NUMBER	HOURS	TRIPS							
			3-4 PM		4-5 PM		5-6 PM		4:15-5:15PM	
			IN	OUT	IN	OUT	IN	OUT	IN	OUT
Admin Employees	0		0	0	0	0	0	0	0	0
Production Employees – Full Time	0		0	0	0	0	0	0	0	0
Production Employees – Part Time	0		0	0	0	0	0	0	0	0
Tours/Tasting Employees	0		0	0	0	0	0	0	0	0
Other Employees (Cleaning/Bookkeeping)	0		0	0	0	0	0	0	0	0
Grape Delivery Trucks	0		0	0	0	0	0	0	0	0
Visitors	3 total = 1-2 vehicles*	10AM-5PM	0	0	0	1	0	0	0	1
Bulk Wine & Glass Delivery + Bottled Product Shipping	1-2 per week	9AM-3PM	0	0	0	0	0	0	0	0
TOTAL			0	0	0	1	0	0	0	1

* 2.6 visitors/vehicle average on weekdays per County data.

Source: Crane Transportation Group

Table 12B

SUMMERS WINERY EXPANSION
NET NEW TRIP GENERATION ON LOCAL ROADWAY SYSTEM

HARVEST SATURDAY

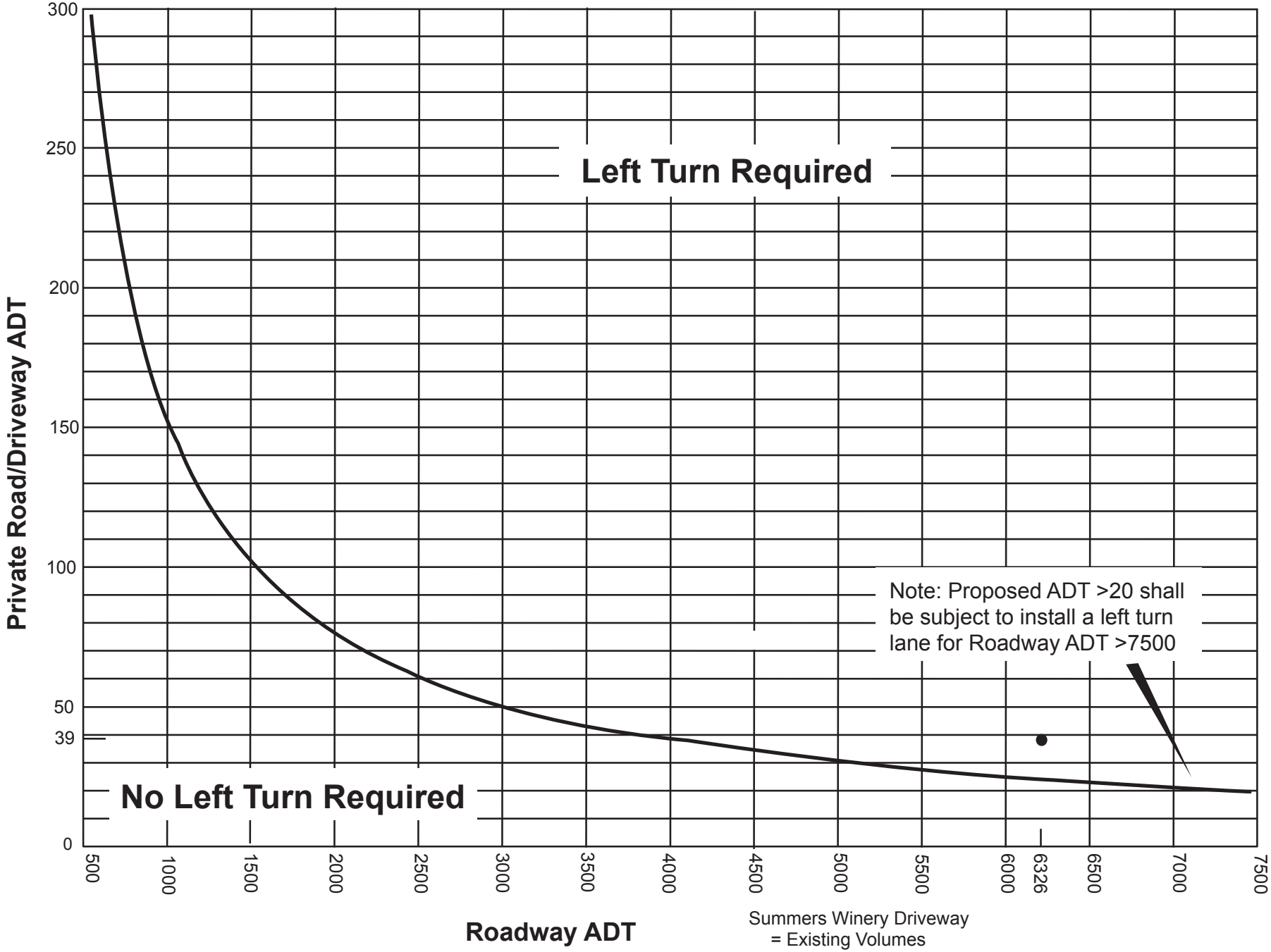
CATEGORY	NUMBER	HOURS	TRIPS									
			2-3 PM		3-4 PM		4-5 PM		5-6 PM		3:00-4:00PM	
			IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
Admin Employees	0		0	0	0	0	0	0	0	0	0	0
Production Employees – Full Time	0		0	0	0	0	0	0	0	0	0	0
Production Employees – Part Time	0		0	0	0	0	0	0	0	0	0	0
Tours/Tasting Employees	0		0	0	0	0	0	0	0	0	0	0
Grape Delivery Trucks	0		0	0	0	0	0	0	0	0	0	0
Visitors	8 total = 3 vehicles*	10AM-5PM	1	0	0	1	1	1	0	0	0	1
Bulk Wine & Glass Delivery + Bottled Product Shipping	1-2 per week	No weekend activity	0	0	0	0	0	0	0	0	0	0
TOTAL			1	0	0	1	1	1	0	0	0	1

* 2.8 visitors/vehicle average on Saturdays per County data.

Source: Crane Transportation Group

Table 13

COUNTY of NAPA LEFT TURN WARRANT GRAPH at Private Road and Driveway Intersections



Appendix

Appendix

SUMMERS WINERY
PROJECT TRAFFIC ACTIVITY DETAILS
NET NEW TRIP GENERATION DUE TO EXPANSION

1st Year of Expected Full Production After Expansion: 2015

	HARVEST CONDITIONS	NON-HARVEST CONDITIONS
A.	**New full-time admin employees** # on Weekdays __0__ # on Saturday __0__ # on Sunday ___0_ Work hours: Weekday 9:00 AM to 5:00 PM Saturday 9:00 AM to 5:00 PM Sunday 9:00 AM to 5:00 PM	**New full-time admin employees** # on Weekdays __0__ # on Saturday __0__ # on Sunday ___0_ Work hours: Weekday 9:00 AM to 5:00 PM Saturday 9:00 AM to 5:00 PM Sunday 9:00 AM to 5:00 PM
B.	**Full-time production employees** # on Weekdays __0__ # on Saturday __0__ # on Sunday ___0_ Work hours: Weekday _____ to ____ Saturday _____ to ____ Sunday _____ to _____	**Full-time production employees** # on Weekdays __0__ # on Saturday __0__ # on Sunday ___0_ Work hours: Weekday _____ to ____ Saturday _____ to ____ Sunday _____ to _____
C.	**Part-time production employees** # on Weekdays __0__ # on Saturday __0__ # on Sunday ___0_ Work hours: Weekday _____ to ____ Saturday _____ to ____ Sunday _____ to _____	**Part-time production employees** # on Weekdays __0__ # on Saturday __0__ # on Sunday ___0_ Work hours: Weekday _____ to ____ Saturday _____ to ____ Sunday _____ to _____
D.	**Tours & tasting employees** # on Weekdays __0__ # on Saturday __0__ # on Sunday ___0_ Work hours: Weekday _____ to ____ Saturday _____ to ____ Sunday _____ to _____	**Tours & tasting employees** # on Weekdays __0__ # on Saturday __0__ # on Sunday ___0_ Work hours: Weekday _____ to ____ Saturday _____ to ____ Sunday _____ to _____

Appendix

SUMMERS WINERY
PROJECT TRAFFIC ACTIVITY DETAILS
NET NEW TRIP GENERATION DUE TO EXPANSION

	HARVEST CONDITIONS	NON-HARVEST CONDITIONS
E.	**New grape delivery trucks** # on Weekdays __0_ # on Saturday _____ # on Sunday _____ Delivery hours: Weekday _____ to ____ Saturday _____ to ____ Sunday _____ to _____ # days of grape delivery: ____	No grape delivery
F.	**New tours/tasting visitors** # on Weekdays __+3__ # on Saturday __+8__ # on Sunday __+8__ Tasting hours: Weekday 10:00 AM to 5:00 PM Saturday 10:00 AM to 5:00 PM Sunday 10:00 AM to 5:00 PM	**New maximum tours/tasting visitors** # on Weekdays __+3__ # on Saturday __+8__ # on Sunday __+8__ Tasting hours: Weekday 10:00 AM to 5:00 PM Saturday 10:00 AM to 5:00 PM Sunday 10:00 AM to 5:00 PM
G.	**New other employees** # on Weekdays __0__ # on Saturday _____ # on Sunday _____ Work hours: Weekday _____ to ____ Saturday _____ to ____ Sunday _____ to _____	**New other employees** # on Weekdays __0__ # on Saturday _____ # on Sunday _____ Work hours: Weekday _____ to ____ Saturday _____ to ____ Sunday _____ to _____
H.	**New other trucks – Please detail** # on Weekdays __1-2/week__ # on Saturday _____ # on Sunday _____ Delivery hours: Weekday 9:00 AM to 4:00 PM Saturday _____ to ____ Sunday _____ to _____ Bulk wine delivery/glass delivery & shipping bottled product	**New other trucks** # on Weekdays __1-2/week__ # on Saturday _____ # on Sunday _____ Delivery hours: Weekday 9:00 AM to 4:00 PM Saturday _____ to ____ Sunday _____ to _____ Bulk wine delivery/glass delivery & shipping bottled product

Appendix

SUMMERS WINERY
PROJECT TRAFFIC ACTIVITY DETAILS
NET NEW TRIP GENERATION DUE TO EXPANSION

I. New Grape Source & Trucks

No new grape delivery. Added bulk wine delivery and shipped product intermittently through the year.

New bulk wine access route to winery entrance

From the west on Tubbs Lane:	SR 128 north of Tubbs Lane: 0%
	SR 128 south of Tubbs Lane: 100%
From the east on Tubbs Lane	SR 29 north of Tubbs Lane: 0%
	SR 29 south of Tubbs Lane: 0%

J. New Special Events

No new special events or increased visitor levels at existing special events.

K. Bottling

New on-site bottling.

TECHNICAL APPENDIX

Capacity Worksheets

Existing
Intersection Level of Service

Existing Friday with Project

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

Intersection #1 SR128/Tubbs Ln

Average Delay (sec/veh): 3.7 Worst Case Level Of Service: B[11.0]

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Uncontrolled						Uncontrolled						Stop Sign						Stop Sign					
Rights:	Include						Include						Include						Include					
Lanes:	0	0	0	1	0		1	0	0	1	0		0	0	1!	0	0		0	0	1!	0	0	
Volume Module:																								
Base Vol:	0	132		315			39	112		2			0	0		0			202	1		56		
Growth Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
Initial Bse:	0	132		315			39	112		2			0	0		0			202	1		56		
User Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
PHF Adj:	0.94	0.94		0.94			0.94	0.94		0.94			0.94	0.94		0.94			0.94	0.94		0.94		
PHF Volume:	0	140		335			41	119		2			0	0		0			215	1		60		
Reduct Vol:	0	0		0			0	0		0			0	0		0			0	0		0		
FinalVolume:	0	140		335			41	119		2			0	0		0			215	1		60		
Critical Gap Module:																								
Critical Gp:	xxxxx	xxxx	xxxxx				4.2	xxxx	xxxxx				7.1	6.5		6.2			6.4	6.5		6.2		
FollowUpTim:	xxxxx	xxxx	xxxxx				2.3	xxxx	xxxxx				3.5	4.0		3.3			3.5	4.0		3.3		
Capacity Module:																								
Cnflict Vol:	xxxx	xxxx	xxxxx				476	xxxx	xxxxx				541	679		120			511	512		308		
Potent Cap.:	xxxx	xxxx	xxxxx				1056	xxxx	xxxxx				455	376		937			521	464		730		
Move Cap.:	xxxx	xxxx	xxxxx				1056	xxxx	xxxxx				404	362		937			505	446		730		
Volume/Cap:	xxxx	xxxx	xxxx				0.04	xxxx	xxxx				0.00	0.00		0.00			0.43	0.00		0.08		
Level Of Service Module:																								
2Way95thQ:	xxxx	xxxx	xxxxx				0.1	xxxx	xxxxx				xxxx	xxxx	xxxxx				xxxx	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx				8.5	xxxx	xxxxx				xxxxx	xxxx	xxxxx				xxxxx	xxxx	xxxxx			
LOS by Move:	*	*	*				A	*	*				*	*	*				*	*	*			
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx	xxxxx				xxxx	xxxx	xxxxx				xxxx	0	xxxxx				xxxx	877	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx				xxxxx	xxxx	xxxxx				xxxxx	xxxx	xxxxx				xxxxx	1.4	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx				xxxxx	xxxx	xxxxx				xxxxx	xxxx	xxxxx				xxxxx	11.0	xxxxx			
Shared LOS:	*	*	*				*	*	*				*	*	*				*	B	*			
ApproachDel:	xxxxxx						xxxxxx						xxxxxx						11.0					
ApproachLOS:	*						*						*						B					

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

Existing Friday w-o Project

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

Intersection #1 SR128/Tubbs Ln

Average Delay (sec/veh): 3.7 Worst Case Level Of Service: B[11.0]

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Uncontrolled						Uncontrolled						Stop Sign						Stop Sign					
Rights:	Include						Include						Include						Include					
Lanes:	0	0	0	1	0		1	0	0	1	0		0	0	1!	0	0		0	0	1!	0	0	
Volume Module:																								
Base Vol:	0	132		315			39	112		2			0	0		0			201		1		56	
Growth Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00		1.00		1.00	
Initial Bse:	0	132		315			39	112		2			0	0		0			201		1		56	
User Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00		1.00		1.00	
PHF Adj:	0.94	0.94		0.94			0.94	0.94		0.94			0.94	0.94		0.94			0.94		0.94		0.94	
PHF Volume:	0	140		335			41	119		2			0	0		0			214		1		60	
Reduct Vol:	0	0		0			0	0		0			0	0		0			0		0		0	
FinalVolume:	0	140		335			41	119		2			0	0		0			214		1		60	
Critical Gap Module:																								
Critical Gp:	xxxxx	xxxx		xxxxx			4.2	xxxx		xxxxx			7.1	6.5		6.2			6.4		6.5		6.2	
FollowUpTim:	xxxxx	xxxx		xxxxx			2.3	xxxx		xxxxx			3.5	4.0		3.3			3.5		4.0		3.3	
Capacity Module:																								
Cnflict Vol:	xxxx	xxxx		xxxxx			476	xxxx		xxxxx			541	679		120			511		512		308	
Potent Cap.:	xxxx	xxxx		xxxxx			1056	xxxx		xxxxx			455	376		937			521		464		730	
Move Cap.:	xxxx	xxxx		xxxxx			1056	xxxx		xxxxx			404	362		937			505		446		730	
Volume/Cap:	xxxx	xxxx		xxxx			0.04	xxxx		xxxx			0.00	0.00		0.00			0.42		0.00		0.08	
Level Of Service Module:																								
2Way95thQ:	xxxx	xxxx		xxxxx			0.1	xxxx		xxxxx			xxxx	xxxx		xxxxx			xxxx		xxxx		xxxxx	
Control Del:	xxxxx	xxxx		xxxxx			8.5	xxxx		xxxxx			xxxxx	xxxx		xxxxx			xxxxx		xxxx		xxxxx	
LOS by Move:	*	*		*			A	*		*			*	*		*			*		*		*	
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx		xxxxx			xxxx	xxxx		xxxxx			xxxx		0	xxxxx			xxxx		878	xxxxx		
SharedQueue:	xxxxx	xxxx		xxxxx			xxxxx	xxxx		xxxxx			xxxxx	xxxx		xxxxx			xxxxx		1.3	xxxxx		
Shrd ConDel:	xxxxx	xxxx		xxxxx			xxxxx	xxxx		xxxxx			xxxxx	xxxx		xxxxx			xxxxx		11.0	xxxxx		
Shared LOS:	*	*		*			*	*		*			*	*		*			*		B		*	
ApproachDel:	xxxxxx						xxxxxx						xxxxxx						11.0					
ApproachLOS:	*						*						*						B					

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

Existing Saturday with Project

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

Intersection #1 SR128/Tubbs Ln

Average Delay (sec/veh): 4.0 Worst Case Level Of Service: B[11.0]

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Uncontrolled						Uncontrolled						Stop Sign						Stop Sign					
Rights:	Include						Include						Include						Include					
Lanes:	0	0	0	1	0		1	0	0	1	0		0	0	1!	0	0		0	0	1!	0	0	
Volume Module:																								
Base Vol:	0	109		231			51	110		0			0	0		0			196	0		26		
Growth Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
Initial Bse:	0	109		231			51	110		0			0	0		0			196	0		26		
User Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
PHF Adj:	0.92	0.92		0.92			0.92	0.92		0.92			0.92	0.92		0.92			0.92	0.92		0.92		
PHF Volume:	0	118		251			55	120		0			0	0		0			213	0		28		
Reduct Vol:	0	0		0			0	0		0			0	0		0			0	0		0		
FinalVolume:	0	118		251			55	120		0			0	0		0			213	0		28		
Critical Gap Module:																								
Critical Gp:	xxxxx	xxxx		xxxxx			4.2	xxxx		xxxxx			7.1	6.5		6.2			6.4	6.5		6.2		
FollowUpTim:	xxxxx	xxxx		xxxxx			2.3	xxxx		xxxxx			3.5	4.0		3.3			3.5	4.0		3.3		
Capacity Module:																								
Cnflict Vol:	xxxx	xxxx		xxxxx			370	xxxx		xxxxx			489	600		120			474	474		244		
Potent Cap.:	xxxx	xxxx		xxxxx			1167	xxxx		xxxxx			493	417		937			549	489		795		
Move Cap.:	xxxx	xxxx		xxxxx			1167	xxxx		xxxxx			458	398		937			529	465		795		
Volume/Cap:	xxxx	xxxx		xxxx			0.05	xxxx		xxxx			0.00	0.00		0.00			0.40	0.00		0.04		
Level Of Service Module:																								
2Way95thQ:	xxxx	xxxx		xxxxx			0.1	xxxx		xxxxx			xxxx	xxxx		xxxxx			xxxx	xxxx		xxxxx		
Control Del:	xxxxx	xxxx		xxxxx			8.2	xxxx		xxxxx			xxxxx	xxxx		xxxxx			xxxxx	xxxx		xxxxx		
LOS by Move:	*		*		*		A		*		*		*		*		*		*		*		*	
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx		xxxxx			xxxx	xxxx		xxxxx			xxxx		0	xxxxx			xxxx		838	xxxxx		
SharedQueue:	xxxxx	xxxx		xxxxx			xxxxx	xxxx		xxxxx			xxxxx	xxxx		xxxxx			xxxxx		1.2	xxxxx		
Shrd ConDel:	xxxxx	xxxx		xxxxx			xxxxx	xxxx		xxxxx			xxxxx	xxxx		xxxxx			xxxxx		11.0	xxxxx		
Shared LOS:	*		*		*		*		*		*		*		*		*		*		B		*	
ApproachDel:	xxxxxx						xxxxxx						xxxxxx						11.0					
ApproachLOS:	*						*						*						B					

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

Existing Saturday w-o Project

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

Intersection #1 SR128/Tubbs Ln

Average Delay (sec/veh): 4.0 Worst Case Level Of Service: B[11.0]

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Uncontrolled						Uncontrolled						Stop Sign						Stop Sign					
Rights:	Include						Include						Include						Include					
Lanes:	0	0	0	1	0		1	0	0	1	0		0	0	1!	0	0		0	0	1!	0	0	
Volume Module:																								
Base Vol:	0	109		231			51	110		0			0	0		0			195	0		26		
Growth Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
Initial Bse:	0	109		231			51	110		0			0	0		0			195	0		26		
User Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
PHF Adj:	0.92	0.92		0.92			0.92	0.92		0.92			0.92	0.92		0.92			0.92	0.92		0.92		
PHF Volume:	0	118		251			55	120		0			0	0		0			212	0		28		
Reduct Vol:	0	0		0			0	0		0			0	0		0			0	0		0		
FinalVolume:	0	118		251			55	120		0			0	0		0			212	0		28		
Critical Gap Module:																								
Critical Gp:	xxxxx	xxxx	xxxxx				4.2	xxxx	xxxxx				7.1	6.5		6.2			6.4	6.5		6.2		
FollowUpTim:	xxxxx	xxxx	xxxxx				2.3	xxxx	xxxxx				3.5	4.0		3.3			3.5	4.0		3.3		
Capacity Module:																								
Cnflict Vol:	xxxx	xxxx	xxxxx				370	xxxx	xxxxx				489	600		120			474	474		244		
Potent Cap.:	xxxx	xxxx	xxxxx				1167	xxxx	xxxxx				493	417		937			549	489		795		
Move Cap.:	xxxx	xxxx	xxxxx				1167	xxxx	xxxxx				458	398		937			529	465		795		
Volume/Cap:	xxxx	xxxx	xxxx				0.05	xxxx	xxxx				0.00	0.00		0.00			0.40	0.00		0.04		
Level Of Service Module:																								
2Way95thQ:	xxxx	xxxx	xxxxx				0.1	xxxx	xxxxx				xxxx	xxxx	xxxxx				xxxx	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx				8.2	xxxx	xxxxx				xxxxx	xxxx	xxxxx				xxxxx	xxxx	xxxxx			
LOS by Move:	*	*	*				A	*	*				*	*	*				*	*	*			
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx	xxxxx				xxxx	xxxx	xxxxx				xxxx	0	xxxxx				xxxx	839	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx				xxxxx	xxxx	xxxxx				xxxxx	xxxx	xxxxx				xxxxx	1.2	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx				xxxxx	xxxx	xxxxx				xxxxx	xxxx	xxxxx				xxxxx	11.0	xxxxx			
Shared LOS:	*	*	*				*	*	*				*	*	*				*	B	*			
ApproachDel:	xxxxxx						xxxxxx						xxxxxx						11.0					
ApproachLOS:	*						*						*						B					

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

Existing Friday with Project

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

Intersection #2 Tubbs Ln/SR29

Average Delay (sec/veh): 6.4 Worst Case Level Of Service: B[14.3]

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Uncontrolled						Uncontrolled						Stop Sign						Stop Sign					
Rights:	Include						Include						Include						Include					
Lanes:	0	1	0	0	0		0	0	0	1	0		0	0	1!	0	0		0	0	0	0	0	
Volume Module:																								
Base Vol:	35	217		0			0	73		160			328		0		31		0		0		0	
Growth Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00		1.00		1.00		1.00		1.00		1.00	
Initial Bse:	35	217		0			0	73		160			328		0		31		0		0		0	
User Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00		1.00		1.00		1.00		1.00		1.00	
PHF Adj:	0.96	0.96		0.96			0.96	0.96		0.96			0.96		0.96		0.96		0.96		0.96		0.96	
PHF Volume:	36	226		0			0	76		167			342		0		32		0		0		0	
Reduct Vol:	0	0		0			0	0		0			0		0		0		0		0		0	
FinalVolume:	36	226		0			0	76		167			342		0		32		0		0		0	
Critical Gap Module:																								
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx							6.4		6.5		6.2	xxxxx	xxxx	xxxxx				
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx							3.5		4.0		3.3	xxxxx	xxxx	xxxxx				
Capacity Module:																								
Cnflict Vol:	243	xxxx	xxxxx	xxxx	xxxx	xxxxx							458		458		159	xxxx	xxxx	xxxxx				
Potent Cap.:	1324	xxxx	xxxxx	xxxx	xxxx	xxxxx							562		501		888	xxxx	xxxx	xxxxx				
Move Cap.:	1324	xxxx	xxxxx	xxxx	xxxx	xxxxx							550		486		888	xxxx	xxxx	xxxxx				
Volume/Cap:	0.03	xxxx	xxxx	xxxx	xxxx	xxxx							0.62		0.00		0.04	xxxx	xxxx	xxxx				
Level Of Service Module:																								
2Way95thQ:	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx												
Control Del:	7.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx												
LOS by Move:	A	*		*		*	*	*		*		*												
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	758	xxxxx	xxxx	xxxx	xxxxx												
SharedQueue:	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	2.8	xxxxx	xxxxx	xxxx	xxxxx												
Shrd ConDel:	7.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	14.3	xxxxx	xxxxx	xxxx	xxxxx												
Shared LOS:	A	*		*		*	*	B		*		*												
ApproachDel:	xxxxxx			xxxxxx			14.3			xxxxxx														
ApproachLOS:	*			*			B			*														

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

Existing Friday w-o Project

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

Intersection #2 Tubbs Ln/SR29

Average Delay (sec/veh): 6.4 Worst Case Level Of Service: B[14.3]

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Uncontrolled						Uncontrolled						Stop Sign						Stop Sign					
Rights:	Include						Include						Include						Include					
Lanes:	0	1	0	0	0		0	0	0	1	0		0	0	1!	0	0		0	0	0	0	0	
Volume Module:																								
Base Vol:	35	217		0			0		73		160		328		0		31		0		0		0	
Growth Adj:	1.00	1.00		1.00			1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
Initial Bse:	35	217		0			0		73		160		328		0		31		0		0		0	
User Adj:	1.00	1.00		1.00			1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Adj:	0.96	0.96		0.96			0.96		0.96		0.96		0.96		0.96		0.96		0.96		0.96		0.96	
PHF Volume:	36	226		0			0		76		167		342		0		32		0		0		0	
Reduct Vol:	0	0		0			0		0		0		0		0		0		0		0		0	
FinalVolume:	36	226		0			0		76		167		342		0		32		0		0		0	
Critical Gap Module:																								
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx							6.4		6.5		6.2		xxxxx	xxxx	xxxxx			
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx							3.5		4.0		3.3		xxxxx	xxxx	xxxxx			
Capacity Module:																								
Cnflict Vol:	243	xxxx	xxxxx	xxxx	xxxx	xxxxx							458		458		159		xxxx	xxxx	xxxxx			
Potent Cap.:	1324	xxxx	xxxxx	xxxx	xxxx	xxxxx							562		501		888		xxxx	xxxx	xxxxx			
Move Cap.:	1324	xxxx	xxxxx	xxxx	xxxx	xxxxx							550		486		888		xxxx	xxxx	xxxxx			
Volume/Cap:	0.03	xxxx	xxxx	xxxx	xxxx	xxxx							0.62		0.00		0.04		xxxx	xxxx	xxxx			
Level Of Service Module:																								
2Way95thQ:	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx												
Control Del:	7.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx												
LOS by Move:	A	*		*		*	*		*	*		*												
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	758	xxxxx	xxxx	xxxx	xxxxx												
SharedQueue:	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	2.8	xxxxx	xxxxx	xxxx	xxxxx												
Shrd ConDel:	7.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	14.3	xxxxx	xxxxx	xxxx	xxxxx												
Shared LOS:	A	*		*		*	*	B		*		*	*											
ApproachDel:	xxxxxx			xxxxxx			14.3			xxxxxx														
ApproachLOS:	*			*			B			*														

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

Existing Saturday with Project

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

Intersection #2 Tubbs Ln/SR29

Average Delay (sec/veh): 4.4 Worst Case Level Of Service: A[9.9]

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Rights:	Include				Include				Include				Include			
Lanes:	0	1	0	0 0	0	0	0	1 0	0	0	1!	0 0	0	0	0	0 0
Volume Module:																
Base Vol:	44	113		0 0	89			147	204			0	42			0 0
Growth Adj:	1.00	1.00		1.00 1.00	1.00			1.00	1.00			1.00	1.00			1.00 1.00
Initial Bse:	44	113		0 0	89			147	204			0	42			0 0
User Adj:	1.00	1.00		1.00 1.00	1.00			1.00	1.00			1.00	1.00			1.00 1.00
PHF Adj:	0.93	0.93		0.93 0.93	0.93			0.93	0.93			0.93	0.93			0.93 0.93
PHF Volume:	47	122		0 0	96			158	219			0	45			0 0
Reduct Vol:	0	0		0 0	0			0	0			0	0			0 0
FinalVolume:	47	122		0 0	96			158	219			0	45			0 0
Critical Gap Module:																
Critical Gp:	4.1	xxxx	xxxxx	xxxxx xxxx xxxxx					6.4		6.5	6.2	xxxxx	xxxx	xxxxx	
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx xxxx xxxxx					3.5		4.0	3.3	xxxxx	xxxx	xxxxx	
Capacity Module:																
Cnflict Vol:	254	xxxx	xxxxx	xxxx xxxx xxxxx					391		391	175	xxxx	xxxx	xxxxx	
Potent Cap.:	1311	xxxx	xxxxx	xxxx xxxx xxxxx					617		548	874	xxxx	xxxx	xxxxx	
Move Cap.:	1311	xxxx	xxxxx	xxxx xxxx xxxxx					600		528	874	xxxx	xxxx	xxxxx	
Volume/Cap:	0.04	xxxx	xxxx	xxxx xxxx xxxx					0.37		0.00	0.05	xxxx	xxxx	xxxx	
Level Of Service Module:																
2Way95thQ:	0.1	xxxx	xxxxx	xxxx xxxx xxxxx					xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx	
Control Del:	7.8	xxxx	xxxxx	xxxxx xxxx xxxxx					xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
LOS by Move:	A	*		* *	*			*	*		*	*	*			*
Movement:	LT - LTR - RT				LT - LTR - RT				LT - LTR - RT				LT - LTR - RT			
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx xxxx xxxxx					xxxx		996	xxxxx	xxxx	xxxx	xxxxx	
SharedQueue:	0.1	xxxx	xxxxx	xxxxx xxxx xxxxx					xxxxx		1.1	xxxxx	xxxxx	xxxx	xxxxx	
Shrd ConDel:	7.8	xxxx	xxxxx	xxxxx xxxx xxxxx					xxxxx		9.9	xxxxx	xxxxx	xxxx	xxxxx	
Shared LOS:	A	*		* *	*			*	A		*	*	*			*
ApproachDel:	xxxxxx			xxxxxx					9.9			xxxxxx				
ApproachLOS:	*			*					A			*				

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

Existing Saturday w-o Project

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

Intersection #2 Tubbs Ln/SR29

Average Delay (sec/veh): 4.4 Worst Case Level Of Service: A[9.9]

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Uncontrolled						Uncontrolled						Stop Sign						Stop Sign					
Rights:	Include						Include						Include						Include					
Lanes:	0	1	0	0	0		0	0	0	1	0		0	0	1!	0	0		0	0	0	0	0	
Volume Module:																								
Base Vol:	44	113		0		0	89		147		204		0		42			0	0		0			
Growth Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00		1.00		1.00			1.00	1.00		1.00			
Initial Bse:	44	113		0		0	89		147		204		0		42			0	0		0			
User Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00		1.00		1.00			1.00	1.00		1.00			
PHF Adj:	0.93	0.93		0.93		0.93	0.93		0.93		0.93		0.93		0.93			0.93	0.93		0.93			
PHF Volume:	47	122		0		0	96		158		219		0		45			0	0		0			
Reduct Vol:	0	0		0		0	0		0		0		0		0			0	0		0			
FinalVolume:	47	122		0		0	96		158		219		0		45			0	0		0			
Critical Gap Module:																								
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx					6.4	6.5		6.2	xxxxx	xxxx	xxxxx							
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx					3.5	4.0		3.3	xxxxx	xxxx	xxxxx							
Capacity Module:																								
Cnflict Vol:	254	xxxx	xxxxx	xxxx	xxxx	xxxxx					391	391		175	xxxx	xxxx	xxxxx							
Potent Cap.:	1311	xxxx	xxxxx	xxxx	xxxx	xxxxx					617	548		874	xxxx	xxxx	xxxxx							
Move Cap.:	1311	xxxx	xxxxx	xxxx	xxxx	xxxxx					600	528		874	xxxx	xxxx	xxxxx							
Volume/Cap:	0.04	xxxx	xxxx	xxxx	xxxx	xxxx					0.37	0.00		0.05	xxxx	xxxx	xxxx							
Level Of Service Module:																								
2Way95thQ:	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx												
Control Del:	7.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx												
LOS by Move:	A	*		*		*	*		*		*													
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	996	xxxxx	xxxx	xxxx	xxxxx												
SharedQueue:	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	1.1	xxxxx	xxxxx	xxxx	xxxxx												
Shrd ConDel:	7.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	9.9	xxxxx	xxxxx	xxxx	xxxxx												
Shared LOS:	A	*		*		*	*	A		*		*												
ApproachDel:	xxxxxx			xxxxxx			9.9			xxxxxx														
ApproachLOS:	*			*			A			*														

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

Year 2015
Intersection Level of Service

2015 Friday with Project

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

Intersection #1 SR128/Tubbs Ln

Average Delay (sec/veh): 3.9 Worst Case Level Of Service: B[11.7]

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Uncontrolled						Uncontrolled						Stop Sign						Stop Sign					
Rights:	Include						Include						Include						Include					
Lanes:	0	0	0	1	0		1	0	0	1	0		0	0	1!	0	0		0	0	1!	0	0	
Volume Module:																								
Base Vol:	0	138		322			50	123		2			0	0		0			207	1		58		
Growth Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
Initial Bse:	0	138		322			50	123		2			0	0		0			207	1		58		
User Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
PHF Adj:	0.94	0.94		0.94			0.94	0.94		0.94			0.94	0.94		0.94			0.94	0.94		0.94		
PHF Volume:	0	147		343			53	131		2			0	0		0			220	1		62		
Reduct Vol:	0	0		0			0	0		0			0	0		0			0	0		0		
FinalVolume:	0	147		343			53	131		2			0	0		0			220	1		62		
Critical Gap Module:																								
Critical Gp:	xxxxx	xxxx		xxxxx			4.2	xxxx		xxxxx			7.1	6.5		6.2			6.4	6.5		6.2		
FollowUpTim:	xxxxx	xxxx		xxxxx			2.3	xxxx		xxxxx			3.5	4.0		3.3			3.5	4.0		3.3		
Capacity Module:																								
Cnflict Vol:	xxxx	xxxx		xxxxx			489	xxxx		xxxxx			588	728		132			556	557		318		
Potent Cap.:	xxxx	xxxx		xxxxx			1043	xxxx		xxxxx			424	353		923			490	437		720		
Move Cap.:	xxxx	xxxx		xxxxx			1043	xxxx		xxxxx			372	335		923			471	415		720		
Volume/Cap:	xxxx	xxxx		xxxx			0.05	xxxx		xxxx			0.00	0.00		0.00			0.47	0.00		0.09		
Level Of Service Module:																								
2Way95thQ:	xxxx	xxxx		xxxxx			0.2	xxxx		xxxxx			xxxx	xxxx		xxxxx			xxxx	xxxx		xxxxx		
Control Del:	xxxxx	xxxx		xxxxx			8.6	xxxx		xxxxx			xxxxx	xxxx		xxxxx			xxxxx	xxxx		xxxxx		
LOS by Move:	*	*		*			A	*		*			*	*		*			*	*		*		
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx		xxxxx			xxxx	xxxx		xxxxx			xxxx	0		xxxxx			xxxx	821		xxxxx		
SharedQueue:	xxxxx	xxxx		xxxxx			xxxxx	xxxx		xxxxx			xxxxx	xxxx		xxxxx			xxxxx	1.5		xxxxx		
Shrd ConDel:	xxxxx	xxxx		xxxxx			xxxxx	xxxx		xxxxx			xxxxx	xxxx		xxxxx			xxxxx	11.7		xxxxx		
Shared LOS:	*	*		*			*	*		*			*	*		*			*	B		*		
ApproachDel:	xxxxxx						xxxxxx						xxxxxx						11.7					
ApproachLOS:	*						*						*						B					

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

2015 Friday w-o Project

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

Intersection #1 SR128/Tubbs Ln

Average Delay (sec/veh): 3.9 Worst Case Level Of Service: B[11.7]

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Uncontrolled						Uncontrolled						Stop Sign						Stop Sign					
Rights:	Include						Include						Include						Include					
Lanes:	0	0	0	1	0		1	0	0	1	0		0	0	1!	0	0		0	0	1!	0	0	
Volume Module:																								
Base Vol:	0	138	322				50	123	2				0	0	0				206	1	58			
Growth Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
Initial Bse:	0	138	322				50	123	2				0	0	0				206	1	58			
User Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
PHF Adj:	0.94	0.94	0.94				0.94	0.94	0.94				0.94	0.94	0.94				0.94	0.94	0.94			
PHF Volume:	0	147	343				53	131	2				0	0	0				219	1	62			
Reduct Vol:	0	0	0				0	0	0				0	0	0				0	0	0			
FinalVolume:	0	147	343				53	131	2				0	0	0				219	1	62			
Critical Gap Module:																								
Critical Gp:	xxxxx	xxxx	xxxxx				4.2	xxxx	xxxxx				7.1	6.5	6.2				6.4	6.5	6.2			
FollowUpTim:	xxxxx	xxxx	xxxxx				2.3	xxxx	xxxxx				3.5	4.0	3.3				3.5	4.0	3.3			
Capacity Module:																								
Cnflict Vol:	xxxx	xxxx	xxxxx				489	xxxx	xxxxx				588	728	132				556	557	318			
Potent Cap.:	xxxx	xxxx	xxxxx				1043	xxxx	xxxxx				424	353	923				490	437	720			
Move Cap.:	xxxx	xxxx	xxxxx				1043	xxxx	xxxxx				372	335	923				471	415	720			
Volume/Cap:	xxxx	xxxx	xxxx				0.05	xxxx	xxxx				0.00	0.00	0.00				0.47	0.00	0.09			
Level Of Service Module:																								
2Way95thQ:	xxxx	xxxx	xxxxx				0.2	xxxx	xxxxx				xxxx	xxxx	xxxxx				xxxx	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx				8.6	xxxx	xxxxx				xxxxx	xxxx	xxxxx				xxxxx	xxxx	xxxxx			
LOS by Move:	*	*	*				A	*	*				*	*	*				*	*	*			
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx	xxxxx				xxxx	xxxx	xxxxx				xxxx	0	xxxxx				xxxx	822	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx				xxxxx	xxxx	xxxxx				xxxxx	xxxx	xxxxx				xxxxx	1.5	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx				xxxxx	xxxx	xxxxx				xxxxx	xxxx	xxxxx				xxxxx	11.7	xxxxx			
Shared LOS:	*	*	*				*	*	*				*	*	*				*	B	*			
ApproachDel:	xxxxxx						xxxxxx						xxxxxx						11.7					
ApproachLOS:	*						*						*						B					

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

2015 Saturday with Project

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

Intersection #1 SR128/Tubbs Ln

Average Delay (sec/veh): 4.1 Worst Case Level Of Service: B[11.4]

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Uncontrolled						Uncontrolled						Stop Sign						Stop Sign					
Rights:	Include						Include						Include						Include					
Lanes:	0	0	0	1	0		1	0	0	1	0		0	0	1!	0	0		0	0	1!	0	0	
Volume Module:																								
Base Vol:	0	115		235			57	116		0			0	0		0			200	0		30		
Growth Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
Initial Bse:	0	115		235			57	116		0			0	0		0			200	0		30		
User Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
PHF Adj:	0.92	0.92		0.92			0.92	0.92		0.92			0.92	0.92		0.92			0.92	0.92		0.92		
PHF Volume:	0	125		255			62	126		0			0	0		0			217	0		33		
Reduct Vol:	0	0		0			0	0		0			0	0		0			0	0		0		
FinalVolume:	0	125		255			62	126		0			0	0		0			217	0		33		
Critical Gap Module:																								
Critical Gp:	xxxxx	xxxx		xxxxx			4.2	xxxx		xxxxx			7.1	6.5		6.2			6.4	6.5		6.2		
FollowUpTim:	xxxxx	xxxx		xxxxx			2.3	xxxx		xxxxx			3.5	4.0		3.3			3.5	4.0		3.3		
Capacity Module:																								
Cnflict Vol:	xxxx	xxxx		xxxxx			380	xxxx		xxxxx			519	630		126			503	503		253		
Potent Cap.:	xxxx	xxxx		xxxxx			1156	xxxx		xxxxx			471	401		930			528	471		786		
Move Cap.:	xxxx	xxxx		xxxxx			1156	xxxx		xxxxx			433	380		930			507	446		786		
Volume/Cap:	xxxx	xxxx		xxxx			0.05	xxxx		xxxx			0.00	0.00		0.00			0.43	0.00		0.04		
Level Of Service Module:																								
2Way95thQ:	xxxx	xxxx		xxxxx			0.2	xxxx		xxxxx			xxxx	xxxx		xxxxx			xxxx	xxxx		xxxxx		
Control Del:	xxxxx	xxxx		xxxxx			8.3	xxxx		xxxxx			xxxxx	xxxx		xxxxx			xxxxx	xxxx		xxxxx		
LOS by Move:	*	*		*			A	*		*			*	*		*			*	*		*		
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx		xxxxx			xxxx	xxxx		xxxxx			xxxx	0		xxxxx			xxxx	813		xxxxx		
SharedQueue:	xxxxx	xxxx		xxxxx			xxxxx	xxxx		xxxxx			xxxxx	xxxx		xxxxx			xxxxx	1.3		xxxxx		
Shrd ConDel:	xxxxx	xxxx		xxxxx			xxxxx	xxxx		xxxxx			xxxxx	xxxx		xxxxx			xxxxx	11.4		xxxxx		
Shared LOS:	*	*		*			*	*		*			*	*		*			*	B		*		
ApproachDel:	xxxxxx						xxxxxx						xxxxxx						11.4					
ApproachLOS:	*						*						*						B					

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

2015 Saturday w-o Project

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

Intersection #1 SR128/Tubbs Ln

Average Delay (sec/veh): 4.1 Worst Case Level Of Service: B[11.4]

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Uncontrolled						Uncontrolled						Stop Sign						Stop Sign					
Rights:	Include						Include						Include						Include					
Lanes:	0	0	0	1	0		1	0	0	1	0		0	0	1!	0	0		0	0	1!	0	0	
Volume Module:																								
Base Vol:	0	115		235			57	116		0			0	0		0			199	0		30		
Growth Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
Initial Bse:	0	115		235			57	116		0			0	0		0			199	0		30		
User Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
PHF Adj:	0.92	0.92		0.92			0.92	0.92		0.92			0.92	0.92		0.92			0.92	0.92		0.92		
PHF Volume:	0	125		255			62	126		0			0	0		0			216	0		33		
Reduct Vol:	0	0		0			0	0		0			0	0		0			0	0		0		
FinalVolume:	0	125		255			62	126		0			0	0		0			216	0		33		
Critical Gap Module:																								
Critical Gp:	xxxxx	xxxx		xxxxx			4.2	xxxx		xxxxx			7.1	6.5		6.2			6.4	6.5		6.2		
FollowUpTim:	xxxxx	xxxx		xxxxx			2.3	xxxx		xxxxx			3.5	4.0		3.3			3.5	4.0		3.3		
Capacity Module:																								
Cnflict Vol:	xxxx	xxxx		xxxxx			380	xxxx		xxxxx			519	630		126			503	503		253		
Potent Cap.:	xxxx	xxxx		xxxxx			1156	xxxx		xxxxx			471	401		930			528	471		786		
Move Cap.:	xxxx	xxxx		xxxxx			1156	xxxx		xxxxx			433	380		930			507	446		786		
Volume/Cap:	xxxx	xxxx		xxxx			0.05	xxxx		xxxx			0.00	0.00		0.00			0.43	0.00		0.04		
Level Of Service Module:																								
2Way95thQ:	xxxx	xxxx		xxxxx			0.2	xxxx		xxxxx			xxxx	xxxx		xxxxx			xxxx	xxxx		xxxxx		
Control Del:	xxxxx	xxxx		xxxxx			8.3	xxxx		xxxxx			xxxxx	xxxx		xxxxx			xxxxx	xxxx		xxxxx		
LOS by Move:	*	*		*			A	*		*			*	*		*			*	*		*		
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx		xxxxx			xxxx	xxxx		xxxxx			xxxx	0		xxxxx			xxxx	814		xxxxx		
SharedQueue:	xxxxx	xxxx		xxxxx			xxxxx	xxxx		xxxxx			xxxxx	xxxx		xxxxx			xxxxx	1.3		xxxxx		
Shrd ConDel:	xxxxx	xxxx		xxxxx			xxxxx	xxxx		xxxxx			xxxxx	xxxx		xxxxx			xxxxx	11.4		xxxxx		
Shared LOS:	*	*		*			*	*		*			*	*		*			*	B		*		
ApproachDel:	xxxxxx						xxxxxx						xxxxxx						11.4					
ApproachLOS:	*						*						*						B					

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

2015 Friday with Project

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

Intersection #2 Tubbs Ln/SR29

Average Delay (sec/veh): 6.8 Worst Case Level Of Service: B[14.9]

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Uncontrolled						Uncontrolled						Stop Sign						Stop Sign					
Rights:	Include						Include						Include						Include					
Lanes:	0	1	0	0	0		0	0	0	1	0		0	0	1!	0	0		0	0	0	0	0	
Volume Module:																								
Base Vol:	39	221	0				0	76	162				336	0	38				0	0	0			
Growth Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
Initial Bse:	39	221	0				0	76	162				336	0	38				0	0	0			
User Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
PHF Adj:	0.96	0.96	0.96				0.96	0.96	0.96				0.96	0.96	0.96				0.96	0.96	0.96			
PHF Volume:	41	230	0				0	79	169				350	0	40				0	0	0			
Reduct Vol:	0	0	0				0	0	0				0	0	0				0	0	0			
FinalVolume:	41	230	0				0	79	169				350	0	40				0	0	0			
Critical Gap Module:																								
Critical Gp:	4.1	xxxx	xxxxx				xxxxx	xxxx	xxxxx				6.4	6.5	6.2				xxxxx	xxxx	xxxxx			
FollowUpTim:	2.2	xxxx	xxxxx				xxxxx	xxxx	xxxxx				3.5	4.0	3.3				xxxxx	xxxx	xxxxx			
Capacity Module:																								
Cnflict Vol:	248	xxxx	xxxxx				xxxx	xxxx	xxxxx				475	475	164				xxxx	xxxx	xxxxx			
Potent Cap.:	1318	xxxx	xxxxx				xxxx	xxxx	xxxxx				550	490	884				xxxx	xxxx	xxxxx			
Move Cap.:	1318	xxxx	xxxxx				xxxx	xxxx	xxxxx				537	474	884				xxxx	xxxx	xxxxx			
Volume/Cap:	0.03	xxxx	xxxx				xxxx	xxxx	xxxx				0.65	0.00	0.04				xxxx	xxxx	xxxx			
Level Of Service Module:																								
2Way95thQ:	0.1	xxxx	xxxxx				xxxx	xxxx	xxxxx				xxxx	xxxx	xxxxx				xxxx	xxxx	xxxxx			
Control Del:	7.8	xxxx	xxxxx				xxxxx	xxxx	xxxxx				xxxxx	xxxx	xxxxx				xxxxx	xxxx	xxxxx			
LOS by Move:	A	*	*				*	*	*				*	*	*				*	*	*			
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx	xxxxx				xxxx	xxxx	xxxxx				xxxx	748	xxxxx				xxxx	xxxx	xxxxx			
SharedQueue:	0.1	xxxx	xxxxx				xxxxx	xxxx	xxxxx				xxxxx	3.1	xxxxx				xxxxx	xxxx	xxxxx			
Shrd ConDel:	7.8	xxxx	xxxxx				xxxxx	xxxx	xxxxx				xxxxx	14.9	xxxxx				xxxxx	xxxx	xxxxx			
Shared LOS:	A	*	*				*	*	*				*	B	*				*	*	*			
ApproachDel:	xxxxxx						xxxxxx						14.9						xxxxxx					
ApproachLOS:	*						*						B						*					

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

2015 Friday w-o Project

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

Intersection #2 Tubbs Ln/SR29

Average Delay (sec/veh): 6.8 Worst Case Level Of Service: B[14.9]

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Uncontrolled						Uncontrolled						Stop Sign						Stop Sign					
Rights:	Include						Include						Include						Include					
Lanes:	0	1	0	0	0		0	0	0	1	0		0	0	1!	0	0		0	0	0	0	0	
Volume Module:																								
Base Vol:	39	221	0		0		76	162		336	0		38		0	0	0							
Growth Adj:	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00		1.00		1.00	1.00	1.00							
Initial Bse:	39	221	0		0		76	162		336	0		38		0	0	0							
User Adj:	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00		1.00		1.00	1.00	1.00							
PHF Adj:	0.96	0.96	0.96		0.96		0.96	0.96		0.96	0.96		0.96		0.96	0.96	0.96							
PHF Volume:	41	230	0		0		79	169		350	0		40		0	0	0							
Reduct Vol:	0	0	0		0		0	0		0	0		0		0	0	0							
FinalVolume:	41	230	0		0		79	169		350	0		40		0	0	0							
Critical Gap Module:																								
Critical Gp:	4.1	xxxx	xxxxx		xxxxx		xxxx	xxxxx		6.4	6.5		6.2		xxxxx	xxxx	xxxxx							
FollowUpTim:	2.2	xxxx	xxxxx		xxxxx		xxxx	xxxxx		3.5	4.0		3.3		xxxxx	xxxx	xxxxx							
Capacity Module:																								
Cnflict Vol:	248	xxxx	xxxxx		xxxx		xxxx	xxxxx		475	475		164		xxxx	xxxx	xxxxx							
Potent Cap.:	1318	xxxx	xxxxx		xxxx		xxxx	xxxxx		550	490		884		xxxx	xxxx	xxxxx							
Move Cap.:	1318	xxxx	xxxxx		xxxx		xxxx	xxxxx		537	474		884		xxxx	xxxx	xxxxx							
Volume/Cap:	0.03	xxxx	xxxx		xxxx		xxxx	xxxx		0.65	0.00		0.04		xxxx	xxxx	xxxx							
Level Of Service Module:																								
2Way95thQ:	0.1	xxxx	xxxxx		xxxx		xxxx	xxxxx		xxxx	xxxx		xxxxx		xxxx	xxxx	xxxxx							
Control Del:	7.8	xxxx	xxxxx		xxxxx		xxxx	xxxxx		xxxxx	xxxx		xxxxx		xxxxx	xxxx	xxxxx							
LOS by Move:	A	*		*		*	*		*		*		*		*	*	*							
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx	xxxxx		xxxx		xxxx	xxxxx		xxxx	748		xxxxx		xxxx	xxxx	xxxxx							
SharedQueue:	0.1	xxxx	xxxxx		xxxxx		xxxx	xxxxx		xxxxx	3.1		xxxxx		xxxxx	xxxx	xxxxx							
Shrd ConDel:	7.8	xxxx	xxxxx		xxxxx		xxxx	xxxxx		xxxxx	14.9		xxxxx		xxxxx	xxxx	xxxxx							
Shared LOS:	A	*		*		*	*		*		B		*		*	*	*							
ApproachDel:	xxxxxx			xxxxxx				14.9					xxxxxx											
ApproachLOS:	*			*				B					*											

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

2015 Saturday with Project

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

Intersection #2 Tubbs Ln/SR29

Average Delay (sec/veh): 4.4 Worst Case Level Of Service: B[10.1]

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Uncontrolled						Uncontrolled						Stop Sign						Stop Sign					
Rights:	Include						Include						Include						Include					
Lanes:	0	1	0	0	0		0	0	0	1	0		0	0	1!	0	0		0	0	0	0	0	
Volume Module:																								
Base Vol:	48	117		0		0	92		150			208		0	46			0	0			0		
Growth Adj:	1.00	1.00		1.00		1.00	1.00		1.00			1.00		1.00	1.00			1.00	1.00			1.00		
Initial Bse:	48	117		0		0	92		150			208		0	46			0	0			0		
User Adj:	1.00	1.00		1.00		1.00	1.00		1.00			1.00		1.00	1.00			1.00	1.00			1.00		
PHF Adj:	0.93	0.93		0.93		0.93	0.93		0.93			0.93		0.93	0.93			0.93	0.93			0.93		
PHF Volume:	52	126		0		0	99		161			224		0	49			0	0			0		
Reduct Vol:	0	0		0		0	0		0			0		0	0			0	0			0		
FinalVolume:	52	126		0		0	99		161			224		0	49			0	0			0		
Critical Gap Module:																								
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx						6.4		6.5	6.2	xxxxx	xxxx	xxxxx						
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx						3.5		4.0	3.3	xxxxx	xxxx	xxxxx						
Capacity Module:																								
Cnflict Vol:	260	xxxx	xxxxx	xxxx	xxxx	xxxxx						409		409	180	xxxx	xxxx	xxxxx						
Potent Cap.:	1304	xxxx	xxxxx	xxxx	xxxx	xxxxx						603		535	868	xxxx	xxxx	xxxxx						
Move Cap.:	1304	xxxx	xxxxx	xxxx	xxxx	xxxxx						584		514	868	xxxx	xxxx	xxxxx						
Volume/Cap:	0.04	xxxx	xxxx	xxxx	xxxx	xxxx						0.38		0.00	0.06	xxxx	xxxx	xxxx						
Level Of Service Module:																								
2Way95thQ:	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx												
Control Del:	7.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx												
LOS by Move:	A	*		*		*	*		*	*		*												
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	981	xxxxx	xxxx	xxxx	xxxxx												
SharedQueue:	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	1.1	xxxxx	xxxxx	xxxx	xxxxx												
Shrd ConDel:	7.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	10.1	xxxxx	xxxxx	xxxx	xxxxx												
Shared LOS:	A	*		*		*	*	B		*	*													
ApproachDel:	xxxxxx			xxxxxx			10.1			xxxxxx														
ApproachLOS:	*			*			B			*														

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

2015 Saturday w-o Project

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

Intersection #2 Tubbs Ln/SR29

Average Delay (sec/veh): 4.4 Worst Case Level Of Service: B[10.1]

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Uncontrolled						Uncontrolled						Stop Sign						Stop Sign					
Rights:	Include						Include						Include						Include					
Lanes:	0	1	0	0	0		0	0	0	1	0		0	0	1!	0	0		0	0	0	0	0	
Volume Module:																								
Base Vol:	48	117		0		0		92		150		208		0		46		0		0		0		
Growth Adj:	1.00	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		
Initial Bse:	48	117		0		0		92		150		208		0		46		0		0		0		
User Adj:	1.00	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		
PHF Adj:	0.93	0.93		0.93		0.93		0.93		0.93		0.93		0.93		0.93		0.93		0.93		0.93		
PHF Volume:	52	126		0		0		99		161		224		0		49		0		0		0		
Reduct Vol:	0	0		0		0		0		0		0		0		0		0		0		0		
FinalVolume:	52	126		0		0		99		161		224		0		49		0		0		0		
Critical Gap Module:																								
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx		6.4	6.5		6.2	xxxxx	xxxx	xxxxx										
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx		3.5	4.0		3.3	xxxxx	xxxx	xxxxx										
Capacity Module:																								
Cnflict Vol:	260	xxxx	xxxxx	xxxx	xxxx	xxxxx		409	409		180	xxxx	xxxx	xxxxx										
Potent Cap.:	1304	xxxx	xxxxx	xxxx	xxxx	xxxxx		603	535		868	xxxx	xxxx	xxxxx										
Move Cap.:	1304	xxxx	xxxxx	xxxx	xxxx	xxxxx		584	514		868	xxxx	xxxx	xxxxx										
Volume/Cap:	0.04	xxxx	xxxx	xxxx	xxxx	xxxx		0.38	0.00		0.06	xxxx	xxxx	xxxx										
Level Of Service Module:																								
2Way95thQ:	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx												
Control Del:	7.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx												
LOS by Move:	A	*		*		*	*	*		*		*												
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	981	xxxxx	xxxx	xxxx	xxxxx												
SharedQueue:	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	1.1	xxxxx	xxxxx	xxxx	xxxxx												
Shrd ConDel:	7.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	10.1	xxxxx	xxxxx	xxxx	xxxxx												
Shared LOS:	A	*		*		*	*	B		*		*												
ApproachDel:	xxxxxx			xxxxxx			10.1			xxxxxx														
ApproachLOS:	*			*			B			*														

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

Year 2030
Intersection Level of Service

2030 Friday with Project

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

Intersection #1 SR128/Tubbs Ln

Average Delay (sec/veh): 56.9 Worst Case Level Of Service: F[253.0]

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Uncontrolled						Uncontrolled						Stop Sign						Stop Sign					
Rights:	Include						Include						Include						Include					
Lanes:	0	0	0	1	0		1	0	0	1	0		0	0	1!	0	0		0	0	1!	0	0	
Volume Module:																								
Base Vol:	0	205		415			205	250		2			0	0		0			231		1		70	
Growth Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00		1.00		1.00	
Initial Bse:	0	205		415			205	250		2			0	0		0			231		1		70	
User Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00		1.00		1.00	
PHF Adj:	0.94	0.94		0.94			0.94	0.94		0.94			0.94	0.94		0.94			0.94		0.94		0.94	
PHF Volume:	0	218		441			218	266		2			0	0		0			246		1		74	
Reduct Vol:	0	0		0			0	0		0			0	0		0			0		0		0	
FinalVolume:	0	218		441			218	266		2			0	0		0			246		1		74	
Critical Gap Module:																								
Critical Gp:	xxxxx	xxxx		xxxxx			4.2	xxxx		xxxxx			7.1	6.5		6.2			6.4		6.5		6.2	
FollowUpTim:	xxxxx	xxxx		xxxxx			2.3	xxxx		xxxxx			3.5	4.0		3.3			3.5		4.0		3.3	
Capacity Module:																								
Cnflict Vol:	xxxx	xxxx		xxxxx			660	xxxx		xxxxx			1180	1363		267			1142		1143		439	
Potent Cap.:	xxxx	xxxx		xxxxx			901	xxxx		xxxxx			169	149		776			221		199		616	
Move Cap.:	xxxx	xxxx		xxxxx			901	xxxx		xxxxx			120	113		776			179		151		616	
Volume/Cap:	xxxx	xxxx		xxxx			0.24	xxxx		xxxx			0.00	0.00		0.00			1.37		0.01		0.12	
Level Of Service Module:																								
2Way95thQ:	xxxx	xxxx		xxxxx			0.9	xxxx		xxxxx			xxxx	xxxx		xxxxx			xxxx		xxxx		xxxxx	
Control Del:	xxxxx	xxxx		xxxxx			10.3	xxxx		xxxxx			xxxxx	xxxx		xxxxx			xxxxx		xxxx		xxxxx	
LOS by Move:	*	*		*			B	*		*			*	*		*			*		*		*	
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx		xxxxx			xxxx	xxxx		xxxxx			xxxx	0		xxxxx			xxxx		226		xxxxx	
SharedQueue:	xxxxx	xxxx		xxxxx			xxxxx	xxxx		xxxxx			xxxxx	xxxx		xxxxx			xxxxx		18.4		xxxxx	
Shrd ConDel:	xxxxx	xxxx		xxxxx			xxxxx	xxxx		xxxxx			xxxxx	xxxx		xxxxx			xxxxx		253		xxxxx	
Shared LOS:	*	*		*			*	*		*			*	*		*			*		F		*	
ApproachDel:	xxxxxx						xxxxxx						xxxxxx						253.0					
ApproachLOS:	*						*						*						F					

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

2030 Friday without Project

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

Intersection #1 SR128/Tubbs Ln

Average Delay (sec/veh): 56.3 Worst Case Level Of Service: F[250.7]

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Uncontrolled						Uncontrolled						Stop Sign						Stop Sign					
Rights:	Include						Include						Include						Include					
Lanes:	0	0	0	1	0		1	0	0	1	0		0	0	1!	0	0		0	0	1!	0	0	
Volume Module:																								
Base Vol:	0	205		415			205	250		2			0	0		0			230	1		70		
Growth Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
Initial Bse:	0	205		415			205	250		2			0	0		0			230	1		70		
User Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
PHF Adj:	0.94	0.94		0.94			0.94	0.94		0.94			0.94	0.94		0.94			0.94	0.94		0.94		
PHF Volume:	0	218		441			218	266		2			0	0		0			245	1		74		
Reduct Vol:	0	0		0			0	0		0			0	0		0			0	0		0		
FinalVolume:	0	218		441			218	266		2			0	0		0			245	1		74		
Critical Gap Module:																								
Critical Gp:	xxxxx	xxxx		xxxxx			4.2	xxxx		xxxxx			7.1	6.5		6.2			6.4	6.5		6.2		
FollowUpTim:	xxxxx	xxxx		xxxxx			2.3	xxxx		xxxxx			3.5	4.0		3.3			3.5	4.0		3.3		
Capacity Module:																								
Cnflict Vol:	xxxx	xxxx		xxxxx			660	xxxx		xxxxx			1180	1363		267			1142	1143		439		
Potent Cap.:	xxxx	xxxx		xxxxx			901	xxxx		xxxxx			169	149		776			221	199		616		
Move Cap.:	xxxx	xxxx		xxxxx			901	xxxx		xxxxx			120	113		776			179	151		616		
Volume/Cap:	xxxx	xxxx		xxxx			0.24	xxxx		xxxx			0.00	0.00		0.00			1.36	0.01		0.12		
Level Of Service Module:																								
2Way95thQ:	xxxx	xxxx		xxxxx			0.9	xxxx		xxxxx			xxxx	xxxx		xxxxx			xxxx	xxxx		xxxxx		
Control Del:	xxxxx	xxxx		xxxxx			10.3	xxxx		xxxxx			xxxxx	xxxx		xxxxx			xxxxx	xxxx		xxxxx		
LOS by Move:	*	*		*			B	*		*			*	*		*			*	*		*		
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx		xxxxx			xxxx	xxxx		xxxxx			xxxx	0		xxxxx			xxxx	227		xxxxx		
SharedQueue:	xxxxx	xxxx		xxxxx			xxxxx	xxxx		xxxxx			xxxxx	xxxx		xxxxx			xxxxx	18.3		xxxxx		
Shrd ConDel:	xxxxx	xxxx		xxxxx			xxxxx	xxxx		xxxxx			xxxxx	xxxx		xxxxx			xxxxx	251		xxxxx		
Shared LOS:	*	*		*			*	*		*			*	*		*			*	F		*		
ApproachDel:	xxxxxx						xxxxxx						xxxxxx						250.7					
ApproachLOS:	*						*						*						F					

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

2030 Saturday with Project

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

Intersection #1 SR128/Tubbs Ln

Average Delay (sec/veh): 21.1 Worst Case Level Of Service: F[72.6]

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Uncontrolled						Uncontrolled						Stop Sign						Stop Sign					
Rights:	Include						Include						Include						Include					
Lanes:	0	0	0	1	0		1	0	0	1	0		0	0	1!	0	0		0	0	1!	0	0	
Volume Module:																								
Base Vol:	0	200		295			135	210		0			0	0		0			246	0		75		
Growth Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
Initial Bse:	0	200		295			135	210		0			0	0		0			246	0		75		
User Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
PHF Adj:	0.92	0.92		0.92			0.92	0.92		0.92			0.92	0.92		0.92			0.92	0.92		0.92		
PHF Volume:	0	217		321			147	228		0			0	0		0			267	0		82		
Reduct Vol:	0	0		0			0	0		0			0	0		0			0	0		0		
FinalVolume:	0	217		321			147	228		0			0	0		0			267	0		82		
Critical Gap Module:																								
Critical Gp:	xxxxx	xxxx		xxxxx			4.2	xxxx		xxxxx			7.1	6.5		6.2			6.4	6.5		6.2		
FollowUpTim:	xxxxx	xxxx		xxxxx			2.3	xxxx		xxxxx			3.5	4.0		3.3			3.5	4.0		3.3		
Capacity Module:																								
Cnflict Vol:	xxxx	xxxx		xxxxx			538	xxxx		xxxxx			940	1060		228			899	899		378		
Potent Cap.:	xxxx	xxxx		xxxxx			1010	xxxx		xxxxx			246	226		816			309	278		669		
Move Cap.:	xxxx	xxxx		xxxxx			1010	xxxx		xxxxx			192	193		816			275	238		669		
Volume/Cap:	xxxx	xxxx		xxxx			0.15	xxxx		xxxx			0.00	0.00		0.00			0.97	0.00		0.12		
Level Of Service Module:																								
2Way95thQ:	xxxx	xxxx		xxxxx			0.5	xxxx		xxxxx			xxxx	xxxx		xxxxx			xxxx	xxxx		xxxxx		
Control Del:	xxxxx	xxxx		xxxxx			9.2	xxxx		xxxxx			xxxxx	xxxx		xxxxx			xxxxx	xxxx		xxxxx		
LOS by Move:	*	*		*			A	*		*			*	*		*			*	*		*		
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx		xxxxx			xxxx	xxxx		xxxxx			xxxx	0		xxxxx			xxxx	362		xxxxx		
SharedQueue:	xxxxx	xxxx		xxxxx			xxxxx	xxxx		xxxxx			xxxxx	xxxx		xxxxx			xxxxx	10.6		xxxxx		
Shrd ConDel:	xxxxx	xxxx		xxxxx			xxxxx	xxxx		xxxxx			xxxxx	xxxx		xxxxx			xxxxx	72.6		xxxxx		
Shared LOS:	*	*		*			*	*		*			*	*		*			*	F		*		
ApproachDel:	xxxxxx						xxxxxx						xxxxxx						72.6					
ApproachLOS:	*						*						*						F					

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

2030 Saturday without Project

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

Intersection #1 SR128/Tubbs Ln

Average Delay (sec/veh): 19.7 Worst Case Level Of Service: F[67.5]

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Uncontrolled						Uncontrolled						Stop Sign						Stop Sign					
Rights:	Include						Include						Include						Include					
Lanes:	0	0	0	1	0		1	0	0	1	0		0	0	1!	0	0		0	0	1!	0	0	
Volume Module:																								
Base Vol:	0	200		295			135	210		0			0	0		0			245	0		75		
Growth Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
Initial Bse:	0	200		295			135	210		0			0	0		0			245	0		75		
User Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
PHF Adj:	0.92	0.92		0.92			0.92	0.92		0.92			0.92	0.92		0.92			0.92	0.92		0.92		
PHF Volume:	0	217		321			147	228		0			0	0		0			266	0		82		
Reduct Vol:	0	0		0			0	0		0			0	0		0			0	0		0		
FinalVolume:	0	217		321			147	228		0			0	0		0			266	0		82		
Critical Gap Module:																								
Critical Gp:	xxxxx	xxxx		xxxxx			4.2	xxxx		xxxxx			7.1	6.5		6.2			6.4	6.5		6.2		
FollowUpTim:	xxxxx	xxxx		xxxxx			2.3	xxxx		xxxxx			3.5	4.0		3.3			3.5	4.0		3.3		
Capacity Module:																								
Cnflict Vol:	xxxx	xxxx		xxxxx			538	xxxx		xxxxx			940	1060		228			899	899		378		
Potent Cap.:	xxxx	xxxx		xxxxx			1010	xxxx		xxxxx			246	226		816			309	278		669		
Move Cap.:	xxxx	xxxx		xxxxx			1010	xxxx		xxxxx			192	193		816			275	238		669		
Volume/Cap:	xxxx	xxxx		xxxx			0.15	xxxx		xxxx			0.00	0.00		0.00			0.97	0.00		0.12		
Level Of Service Module:																								
2Way95thQ:	xxxx	xxxx		xxxxx			0.5	xxxx		xxxxx			xxxx	xxxx		xxxxx			xxxx	xxxx		xxxxx		
Control Del:	xxxxx	xxxx		xxxxx			9.2	xxxx		xxxxx			xxxxx	xxxx		xxxxx			xxxxx	xxxx		xxxxx		
LOS by Move:	*	*		*			A	*		*			*	*		*			*	*		*		
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx		xxxxx			xxxx	xxxx		xxxxx			xxxx	0		xxxxx			xxxx	369		xxxxx		
SharedQueue:	xxxxx	xxxx		xxxxx			xxxxx	xxxx		xxxxx			xxxxx	xxxx		xxxxx			xxxxx	10.2		xxxxx		
Shrd ConDel:	xxxxx	xxxx		xxxxx			xxxxx	xxxx		xxxxx			xxxxx	xxxx		xxxxx			xxxxx	67.5		xxxxx		
Shared LOS:	*	*		*			*	*		*			*	*		*			*	F		*		
ApproachDel:	xxxxxx						xxxxxx						xxxxxx						67.5					
ApproachLOS:	*						*						*						F					

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

2030 Friday with Project

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

Intersection #2 Tubbs Ln/SR29

Average Delay (sec/veh): 27.5 Worst Case Level Of Service: F[53.4]

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Uncontrolled						Uncontrolled						Stop Sign						Stop Sign					
Rights:	Include						Include						Include						Include					
Lanes:	0	1	0	0	0		0	0	0	1	0		0	0	1!	0	0		0	0	0	0	0	
Volume Module:																								
Base Vol:	50	245		0		0	80		185			445		0	135			0	0			0		
Growth Adj:	1.00	1.00		1.00		1.00	1.00		1.00			1.00		1.00	1.00			1.00	1.00			1.00		
Initial Bse:	50	245		0		0	80		185			445		0	135			0	0			0		
User Adj:	1.00	1.00		1.00		1.00	1.00		1.00			1.00		1.00	1.00			1.00	1.00			1.00		
PHF Adj:	0.96	0.96		0.96		0.96	0.96		0.96			0.96		0.96	0.96			0.96	0.96			0.96		
PHF Volume:	52	255		0		0	83		193			464		0	141			0	0			0		
Reduct Vol:	0	0		0		0	0		0			0		0	0			0	0			0		
FinalVolume:	52	255		0		0	83		193			464		0	141			0	0			0		
Critical Gap Module:																								
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx						6.4		6.5	6.2	xxxxx	xxxx	xxxxx						
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx						3.5		4.0	3.3	xxxxx	xxxx	xxxxx						
Capacity Module:																								
Cnflict Vol:	276	xxxx	xxxxx	xxxx	xxxx	xxxxx						539		539	180	xxxx	xxxx	xxxxx						
Potent Cap.:	1287	xxxx	xxxxx	xxxx	xxxx	xxxxx						505		451	866	xxxx	xxxx	xxxxx						
Move Cap.:	1287	xxxx	xxxxx	xxxx	xxxx	xxxxx						489		432	866	xxxx	xxxx	xxxxx						
Volume/Cap:	0.04	xxxx	xxxx	xxxx	xxxx	xxxx						0.95	0.00		0.16	xxxx	xxxx	xxxx						
Level Of Service Module:																								
2Way95thQ:	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx												
Control Del:	7.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx												
LOS by Move:	A	*		*		*	*		*	*		*												
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	626	xxxxx	xxxx	xxxx	xxxxx												
SharedQueue:	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	13.7	xxxxx	xxxxx	xxxx	xxxxx												
Shrd ConDel:	7.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	53.4	xxxxx	xxxxx	xxxx	xxxxx												
Shared LOS:	A	*		*		*	*		F	*		*												
ApproachDel:	xxxxxx			xxxxxx			53.4			xxxxxx														
ApproachLOS:	*			*			F			*														

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

2030 Friday without Project

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

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Intersection #2 Tubbs Ln/SR29

****

Average Delay (sec/veh): 27.5 Worst Case Level Of Service: F[53.4]

****

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Uncontrolled						Uncontrolled						Stop Sign						Stop Sign					
Rights:	Include						Include						Include						Include					
Lanes:	0	1	0	0	0		0	0	0	1	0		0	0	1!	0	0		0	0	0	0	0	
Volume Module:																								
Base Vol:	50	245		0		0	80		185		445		0		135		0		0		0		0	
Growth Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
Initial Bse:	50	245		0		0	80		185		445		0		135		0		0		0		0	
User Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Adj:	0.96	0.96		0.96		0.96	0.96		0.96		0.96		0.96		0.96		0.96		0.96		0.96		0.96	
PHF Volume:	52	255		0		0	83		193		464		0		141		0		0		0		0	
Reduct Vol:	0	0		0		0	0		0		0		0		0		0		0		0		0	
FinalVolume:	52	255		0		0	83		193		464		0		141		0		0		0		0	
Critical Gap Module:																								
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx					6.4	6.5		6.2	xxxxx	xxxx	xxxxx							
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx					3.5	4.0		3.3	xxxxx	xxxx	xxxxx							
Capacity Module:																								
Cnflict Vol:	276	xxxx	xxxxx	xxxx	xxxx	xxxxx					539	539		180	xxxx	xxxx	xxxxx							
Potent Cap.:	1287	xxxx	xxxxx	xxxx	xxxx	xxxxx					505	451		866	xxxx	xxxx	xxxxx							
Move Cap.:	1287	xxxx	xxxxx	xxxx	xxxx	xxxxx					489	432		866	xxxx	xxxx	xxxxx							
Volume/Cap:	0.04	xxxx	xxxx	xxxx	xxxx	xxxx					0.95	0.00		0.16	xxxx	xxxx	xxxx							
Level Of Service Module:																								
2Way95thQ:	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx												
Control Del:	7.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx												
LOS by Move:	A	*		*		*	*		*		*													
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	626	xxxxx	xxxx	xxxx	xxxxx												
SharedQueue:	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	13.7	xxxxx	xxxxx	xxxx	xxxxx												
Shrd ConDel:	7.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	53.4	xxxxx	xxxxx	xxxx	xxxxx												
Shared LOS:	A	*		*		*	*		F		*		*		*		*							
ApproachDel:	xxxxxx			xxxxxx			53.4			xxxxxx														
ApproachLOS:	*			*			F			*														

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

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2030 Saturday with Project

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

Intersection #2 Tubbs Ln/SR29

Average Delay (sec/veh): 6.8 Worst Case Level Of Service: B[14.9]

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Uncontrolled						Uncontrolled						Stop Sign						Stop Sign					
Rights:	Include						Include						Include						Include					
Lanes:	0	1	0	0	0		0	0	0	1	0		0	0	1!	0	0		0	0	0	0	0	
Volume Module:																								
Base Vol:	95	135		0		0	110		185				255		0		95		0		0		0	
Growth Adj:	1.00	1.00		1.00		1.00	1.00		1.00				1.00		1.00		1.00		1.00		1.00		1.00	
Initial Bse:	95	135		0		0	110		185				255		0		95		0		0		0	
User Adj:	1.00	1.00		1.00		1.00	1.00		1.00				1.00		1.00		1.00		1.00		1.00		1.00	
PHF Adj:	0.93	0.93		0.93		0.93	0.93		0.93				0.93		0.93		0.93		0.93		0.93		0.93	
PHF Volume:	102	145		0		0	118		199				274		0		102		0		0		0	
Reduct Vol:	0	0		0		0	0		0				0		0		0		0		0		0	
FinalVolume:	102	145		0		0	118		199				274		0		102		0		0		0	
Critical Gap Module:																								
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5		6.2	xxxxx	xxxx	xxxxx											
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0		3.3	xxxxx	xxxx	xxxxx											
Capacity Module:																								
Cnflict Vol:	317	xxxx	xxxxx	xxxx	xxxx	xxxxx	567	567		218	xxxx	xxxx	xxxxx											
Potent Cap.:	1243	xxxx	xxxxx	xxxx	xxxx	xxxxx	488	436		827	xxxx	xxxx	xxxxx											
Move Cap.:	1243	xxxx	xxxxx	xxxx	xxxx	xxxxx	456	398		827	xxxx	xxxx	xxxxx											
Volume/Cap:	0.08	xxxx	xxxx	xxxx	xxxx	xxxx	0.60	0.00		0.12	xxxx	xxxx	xxxx											
Level Of Service Module:																								
2Way95thQ:	0.3	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx												
Control Del:	8.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx												
LOS by Move:	A	*		*		*	*		*		*	*												
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	736	xxxxx	xxxx	xxxx	xxxxx												
SharedQueue:	0.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	2.9	xxxxx	xxxxx	xxxx	xxxxx												
Shrd ConDel:	8.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	14.9	xxxxx	xxxxx	xxxx	xxxxx												
Shared LOS:	A	*		*		*	*		B		*	*												
ApproachDel:	xxxxxx			xxxxxx			14.9			xxxxxx														
ApproachLOS:	*			*			B			*														

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

2030 Saturday without Project

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

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Intersection #2 Tubbs Ln/SR29

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Average Delay (sec/veh): 6.8 Worst Case Level Of Service: B[14.9]

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Approach:	North Bound					South Bound					East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Lanes:	0	1	0	0	0	0	0	0	1	0	0	0	1!	0	0	0	0	0	0	0
Volume Module:																				
Base Vol:	95	135	0			0	110	185			255	0	95			0	0	0		
Growth Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
Initial Bse:	95	135	0			0	110	185			255	0	95			0	0	0		
User Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
PHF Adj:	0.93	0.93	0.93			0.93	0.93	0.93			0.93	0.93	0.93			0.93	0.93	0.93		
PHF Volume:	102	145	0			0	118	199			274	0	102			0	0	0		
Reduct Vol:	0	0	0			0	0	0			0	0	0			0	0	0		
FinalVolume:	102	145	0			0	118	199			274	0	102			0	0	0		
Critical Gap Module:																				
Critical Gp:	4.1	xxxx	xxxxx			xxxxx	xxxx	xxxxx			6.4	6.5	6.2			xxxxx	xxxx	xxxxx		
FollowUpTim:	2.2	xxxx	xxxxx			xxxxx	xxxx	xxxxx			3.5	4.0	3.3			xxxxx	xxxx	xxxxx		
Capacity Module:																				
Cnflict Vol:	317	xxxx	xxxxx			xxxx	xxxx	xxxxx			567	567	218			xxxx	xxxx	xxxxx		
Potent Cap.:	1243	xxxx	xxxxx			xxxx	xxxx	xxxxx			488	436	827			xxxx	xxxx	xxxxx		
Move Cap.:	1243	xxxx	xxxxx			xxxx	xxxx	xxxxx			456	398	827			xxxx	xxxx	xxxxx		
Volume/Cap:	0.08	xxxx	xxxx			xxxx	xxxx	xxxx			0.60	0.00	0.12			xxxx	xxxx	xxxx		
Level Of Service Module:																				
2Way95thQ:	0.3	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
Control Del:	8.2	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
LOS by Move:	A	*		*		*		*			*		*			*		*		
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	736	xxxxx			xxxx	xxxx	xxxxx		
SharedQueue:	0.3	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	2.9	xxxxx			xxxxx	xxxx	xxxxx		
Shrd ConDel:	8.2	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	14.9	xxxxx			xxxxx	xxxx	xxxxx		
Shared LOS:	A	*		*		*		*			*	B		*			*		*	
ApproachDel:	xxxxxx			xxxxxx					14.9				xxxxxx							
ApproachLOS:	*			*					B				*							

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

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