

APPENDIX O

Traffic Impact Studies

Revised Draft Traffic Impact Study

**GRATON RANCHERIA
CASINO AND HOTEL -
ALTERNATIVES A, B, C, D, & E
SONOMA COUNTY, CA**

February 2007

Prepared for:

Graton Rancheria California

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EXECUTIVE SUMMARY

Kimley-Horn and Associates, Inc. (KHA) was retained by Graton Rancheria California, also known as The Federated Indians of Graton Rancheria and The Indians of the Graton Rancheria of California, to prepare a traffic impact study for a casino and hotel proposed to be located west of Rohnert Park, California. There were six alternatives evaluated at this location – No Action Alternative, Wilfred Avenue Alternative, Northwest Stony Point Alternative, Northeast Stony Point Alternative, Reduced Intensity Alternative, and Business Park Alternative.

When completed, it is proposed that the casino will be 450,000 square feet with a 300 room hotel at the Wilfred Avenue, Northwest Stony Point, and Northeast Stony Point sites. This new development will generate roughly 18,261 daily trips. During the peak hours of the weekday, approximately 1,384 AM peak hour trips and 2,287 PM peak hour trips will enter or exit the casino/hotel and affect nearby intersections and roadway segments.

The Reduced Intensity Alternative casino will be 315,100 square feet with a 100 room hotel. This new development will generate roughly 12,696 daily trips. During the peak hours of the weekday, approximately 949 AM peak hour trips and 1,580 PM peak hour trips will enter or exit the casino/hotel and affect nearby intersections and roadway segments.

The Business Park Alternative will have 400,000 square feet of light industrial and 100,000 square feet of commercial space. This new development will generate roughly 7,082 daily trips. During the peak hours of the weekday, approximately 471 AM peak hour trips and 621 PM peak hour trips will enter or exit the business park and affect nearby intersections and roadway segments.

There are extensive mitigations for all scenarios as a result of the proposed alternatives.

INTRODUCTION

Kimley-Horn and Associates, Inc was retained by Graton Rancheria California, also know as The Federated Indians of Graton Rancheria and The Indians of the Graton Rancheria of California, to prepare a traffic impact study for a casino and hotel proposed to be located west of Rohnert Park, California. The site is immediately west of the city's sphere of influence in land identified as community separator in the Rohnert Park General Plan. It is proposed that the casino and hotel be completed by late 2007/early 2008.

The purpose of this study is to address the traffic and transportation effects of the proposed casino and hotel development and to assist the Tribe's environmental consultant in the preparation of an Environmental Impact Statement for the project. This traffic study was prepared based on discussions with, and criteria set forth by, the City of Rohnert Park, County of Sonoma, and the California Department of Transportation (Caltrans).

Study Methodology

This traffic study was based on planning conditions assumed in the Rohnert Park General Plan (adopted July 2000), the Sonoma County General Plan (adopted 1989), as well as information provided by Caltrans and Sonoma County Regional Transportation Authority. Because none of the agencies' planning and project programming documents anticipated a casino and hotel development or its potential impacts, this study evaluated the addition of a casino and hotel near the intersection of Stony Point Road and Wilfred Avenue.

Development Conditions

The traffic study was based on the following study scenarios:

- Existing Conditions – evaluates current traffic counts, existing roadway geometry, and existing development conditions.
- 2008 Conditions – evaluates existing traffic volumes with the addition of planned projects anticipated to be completed by 2008 assuming an average 2% per year increase in the background traffic.
- 2008 Conditions Plus Project – evaluates effects of traffic from each Development Alternative on 2008 traffic operations.
- 2020 Cumulative Conditions – analysis of build-out conditions in the area projected for 2020 using the forecast from the Sonoma County travel forecasting model.

- 2020 Cumulative Plus Project Conditions – evaluates effects of traffic from each Development Alternative on 2020 Cumulative traffic operations.

Development Alternatives

Six development alternatives are analyzed in this report. A seventh development alternative, which was proposed along Lakeville Highway near the intersection of SR-39, is analyzed in a separate report.

- No Action Alternative – assumes no action would be taken; evaluates conditions that would occur without the proposed project.
- Alternative A – Wilfred Site – assumes casino/hotel resort approximately 762,300 total square feet with access from Business Park Drive and Wilfred Avenue.
- Alternative B – Northwest Stony Point Site – assumes casino/hotel resort approximately 762,300 total square feet with access from Wilfred Avenue and Stony Point Road.
- Alternative C – Northeast Stony Point Site – assumes casino/hotel resort approximately total 762,300 square feet with access from Wilfred Avenue.
- Alternative D – Northwest Stony Point Reduced Intensity Site – assumes Reduced Intensity casino/hotel resort approximately 413,400 total square feet with access from Wilfred Avenue and Stony Point Road.
- Alternative E – Northwest Stony Point Business Park Site – assumes Business Park approximately 500,000 total square feet of space with access from Wilfred Avenue and Stony Point Road.

Operating Conditions and Criteria

Operating conditions experienced by drivers are described in terms of Level of Service (LOS), which is a qualitative measure of factors such as delay, speed, travel time, freedom to maneuver, and driving comfort and convenience. Levels of service are represented by a letter scale from LOS A to LOS F, with LOS A representing the best performance and LOS F representing the poorest performance.

Table 1 relates the operational characteristics associated with each level of service category for both signalized and unsignalized intersections. **Table 2** summarizes the local level of service standards. LOS F (with delay reported as OVRFL) indicates that the intersection is in a state of overflow such that the analysis software is unable to calculate an average delay.

Table 1 – Intersection Level of Service Definitions

Level of Service	Description	Signalized (Avg. control delay per vehicle sec/veh)	Unsignalized (Avg. control delay per vehicle sec/veh)
A	Free flow with no delays. Users are virtually unaffected by others in the traffic stream	[10	[10
B	Stable traffic. Traffic flows smoothly with few delays.	∃ 10 – 20	∃ 10 – 15
C	Stable flow but the operation of individual users becomes affected by other vehicles. Modest delays.	∃ 20 – 35	∃ 15 – 25
D	Approaching unstable flow. Operation of individual users becomes significantly affected by other vehicles. Delays may be more than one cycle during peak hours.	∃ 35 – 55	∃ 25 – 35
E	Unstable flow with operating conditions at or near the capacity level. Long delays and vehicle queuing.	∃ 55 – 80	∃ 35 – 50
F	Forced or breakdown flow that causes reduced capacity. Stop and go traffic conditions. Excessive long delays and vehicle queuing.	∃ 80	∃ 50

Source: Transportation Research Board, *Highway Capacity Manual 2000*, National Research Council, 2000.

Table 2 – Local Level Of Service Criteria

Jurisdiction	Satisfactory Criteria	Significance Criteria
Sonoma County	D	Project causes LOS to fall below D or adds > 5 seconds to intersection already operating at LOS D or worse
Rohnert Park	C	<p>Project causes LOS to fall below C.</p> <p>Lower LOS is permitted if otherwise below or if no feasible improvement is available and project does not cause further decrease in LOS.</p> <p>The following study area study intersections are permitted to operate at LOS D:</p> <p>Wilfred Avenue / Redwood Drive</p> <p>Golf Course Drive Commerce Blvd</p>
Caltrans	<p>D - signalized intersections and highways</p> <p>E – freeway segments and ramps</p>	<p>Project causes LOS to fall below D at intersections and highways</p> <p>Project causes LOS to fall below E for freeway segments</p> <p>Project causes vehicle queues to extend outside of available storage or onto the freeway</p> <p>Project causes freeway ramp merge/diverge LOS to be worse than freeway LOS</p> <p>If LOS already below criteria, the existing LOS and related measure of effectiveness (MOE) are to be maintained.</p>

The change to the LOS standard was contained in a Caltrans response¹ during the scoping period of the project. Normally the standard would be LOS C or better for intersections (per Caltrans' Guide for the Preparation of Traffic Impact Studies) but in the letter, Caltrans indicated at the Rohnert Park site, a lower level of service was acceptable before mitigation would be required.

¹ Timothy Sable (Caltrans) letter to Christine Nagle (NIGC), 1 April 2004.

Traffic analysis was completed using TRAFFIX software at signalized intersections and Highway Capacity Software (HCS) at intersections, ramps, and freeway segments. Both software platforms are based on the methodology of the *Highway Capacity Manual*.

Intersections Included in Analysis

The proposed project will generate new vehicular trips that will increase traffic volumes on the nearby street network. To assess changes in traffic conditions associated with the project, the following intersections, illustrated in **Figure 1**, were evaluated in this traffic study:

1. Stony Point Rd and Wilfred Ave
2. Primrose Ave and Wilfred Ave
3. Whistler Ave and Wilfred Ave
4. Langner Ave and Wilfred Ave
5. Labath Ave and Wilfred Ave
6. Dowdell Ave and Wilfred Ave
7. Redwood Dr and Wilfred Ave
8. Redwood Dr and Commerce Blvd (evaluated as existing and near-term only – changes as part of the Caltrans interchange project and not evaluated in the cumulative scenario)
9. Wilfred Avenue and US 101 SB Ramps (future intersection)
10. Golf Course Dr and Commerce Blvd
11. Golf Course Dr and Roberts Lake Rd
12. Commerce Blvd and US 101 NB Ramps
13. Project Driveway and Stony Point Rd
14. Business Park Dr and Labath Ave
15. Business Park Dr and Redwood Dr
16. Rohnert Park Expressway and Stony Point Rd
17. Rohnert Park Expressway and Labath Ave
18. Rohnert Park Expressway and Redwood Dr
19. Rohnert Park Expressway and US 101 SB Ramps
20. Rohnert Park Expressway and US 101 NB Ramps
21. Rohnert Park Expressway and Commerce Blvd
22. Gravenstein Hwy (SR-116) and Stony Point Rd
23. Gravenstein Hwy (SR-116) and Redwood Dr
24. Gravenstein Hwy (SR-116) and SB US 101 Ramps
25. Gravenstein Hwy (SR-116) and NB US 101 Off-Ramp
26. Millbrae Ave and Stony Point Rd
27. Millbrae Ave and Primrose Ave
28. Millbrae Ave and Whistler Ave
29. Millbrae Ave and Langner Ave
30. Millbrae Ave and Labath Ave
31. Millbrae Ave and Dowdell Ave

Freeway Segments and Ramps Included in Analysis

The following freeway segments and ramps were evaluated in this traffic study.

Segments

- Northbound US-101 south of Gravenstein Highway (SR-116)
- Northbound US-101 between Gravenstein Highway (SR-116) and Rohnert Park Expressway
- Northbound US-101 between Rohnert Park Expressway and Wilfred Avenue
- Northbound US-101 between Wilfred Avenue and Santa Rosa Avenue
- Northbound US-101 north of Santa Rosa Avenue
- Southbound US-101 north of Santa Rosa Avenue
- Southbound US-101 between Santa Rosa Avenue and Wilfred Avenue
- Southbound US-101 between Wilfred Avenue and Rohnert Park Expressway
- Southbound US-101 between Rohnert Park Expressway and Gravenstein Highway (SR-116)
- Southbound US-101 south of Gravenstein Highway (SR-116)

Ramps

- Northbound Gravenstein Highway (SR-116) on-ramp
- Northbound Rohnert Park Expressway loop on-ramp
- Northbound Rohnert Park Expressway on-ramp
- Northbound Wilfred Avenue on-ramp
- Southbound Santa Rosa Avenue on-ramp
- Southbound Wilfred Avenue on-ramp
- Southbound Rohnert Park Expressway loop on-ramp
- Southbound Rohnert Park Expressway on-ramp
- Southbound Gravenstein Highway (SR-116) on-ramp
- Northbound Gravenstein Highway (SR-116) off-ramp
- Northbound Rohnert Park Expressway off-ramp
- Northbound Wilfred Avenue off-ramp
- Northbound Santa Rosa Avenue off-ramp
- Southbound Wilfred Avenue off-ramp
- Southbound Rohnert Park Expressway off-ramp
- Southbound Gravenstein Highway (SR-116) off-ramp

EXISTING CONDITIONS

Existing Site Uses

Both the Wilfred Avenue and Stony Point casino and hotel sites are generally level and currently used for agricultural purposes. Most of the Stony Point site is vacant; however, a large barn and related building are located in the northwest portion of the project site. The project area is divided by the Bellevue-Wilfred Flood Control Channel that passes diagonally through the site. Most of the Wilfred Avenue site is vacant as well with less than five single family dwellings on the site.

Existing Uses in Vicinity of Sites

Land areas north, south and west of the Stony Point site are currently used for rural agricultural purposes and are not expected to change in the next 20 years. Land uses east of the Stony Point site consist of County Community Separator or are within the City of Rohnert Park and are designated for medium and high density residential, industrial, business park, and commercial uses. Much of the area in Rohnert Park is still vacant and is expected to develop as identified in the Rohnert Park General Plan, the Northwest Specific Plan, and the Wilfred-Dowdell Specific Plan.

Land areas north and west of the Wilfred Avenue site are currently used for agricultural purposes and are not expected to change in the next 20 years. Land areas south and east of the Wilfred Avenue site are currently being developed or are developed as identified in the Rohnert Park General Plan, the Northwest Specific Plan, and the Wilfred-Dowdell Specific Plan.

Existing Roadways, Freeway Segments, and Ramps

Below is a description of the roadway facilities, freeway segments, and ramps included in the traffic impact study.

Roadway Facilities

Business Park Drive – is a two lane roadway with curbs and gutters and no parking. The road is classified in the Rohnert Park General Plan as a Minor Collector.

Dowdell Avenue – is a narrow two lane roadway with open roadside ditches and no shoulders from south of Wilfred to 385 feet north of Wilfred Avenue where the roadway widens slightly and curbs and gutters are present. The road is classified in the Rohnert Park General Plan as a Minor Collector in the future.

Commerce Boulevard – is an urban roadway with curbs and gutters and is classified as a Major Arterial in the Rohnert Park General Plan. The road width varies from two lanes to five lanes wide with left (and sometimes right) turn lanes at major intersections.

Golf Course Drive – is an urban roadway with curbs and gutters and is classified as a Major Arterial in the Rohnert Park General Plan. The road is five lanes wide with left turn lanes at major intersections.

Gravenstein Highway (SR-116) – is an urban roadway with curbs and gutters and is classified in the Rohnert Park General Plan as a Minor Arterial west of Redwood Drive and as a Major Arterial east of Redwood Drive. The road is four lanes wide with left turn lanes at major intersections.

Labath Avenue – is classified as a Minor Collector in the Rohnert Park General Plan (between Rohnert Park Expressway and Wilfred Avenue). Other segments of Labath Avenue are classified as Local Roads. The road is two lanes wide with on-street parking, curbs and gutters south of Business Park Drive. Between Business Park Drive and Wilfred Avenue, the street is one to two lanes wide and unimproved. North of Wilfred Avenue the street is a narrow two lane roadway with open roadside ditches and no shoulders. Currently there is a missing segment north of Business Park Drive but the Rohnert Park General Plan shows the completion of the segment as lands are developed in the vicinity.

Langner Avenue – is a two lane roadway with open roadside ditches and no shoulders. The roadway is not currently classified in the Rohnert Park General Plan.

Millbrae Avenue – is a narrow two lane roadway with open roadside ditches and no shoulders. The road is classified as a Rural Minor Collector in the Draft 2020 Sonoma County General Plan.

Primrose Avenue – is a narrow two lane roadway with open roadside ditches and no shoulders. The road is not classified in the Rohnert Park General Plan.

Redwood Drive – is an urban roadway with curbs and gutters and is classified as a Major Arterial in the Rohnert Park General Plan. The road is five lanes wide with left (and sometimes right) turn lanes at major intersections.

Rohnert Park Expressway – is an urban roadway with curbs and gutters and is classified as a Major Arterial in the Rohnert Park General Plan. The road is six lanes wide (with turn lanes) near the US-101 freeway but narrows to only two lanes at the city limit. Rohnert Park Expressway between the city limit and Stony Point Road is a two lane facility with wide paved shoulders and is classified as a Minor Arterial in the Rohnert Park General Plan.

Stony Point Road – is a two lane rural roadway with open roadside ditches, wide shoulders, and left turn bays at major intersections. The road is classified as a Minor Arterial and is shown in the Rohnert Park General Plan.

Whistler Avenue – is a narrow two lane roadway with open roadside ditches and no shoulders. The road is not classified in the Rohnert Park General Plan.

Wilfred Avenue – is a rural two lane roadway with open roadside ditches and no shoulders. Designated as Major Arterial in the Rohnert Park General Plan the road is planned to be expanded in the future to 4 lanes within the city limits.

Segments

Northbound/Southbound US-101 south of Gravenstein Highway (SR-116) – is two lanes in each direction with paved shoulders and narrow grassy median and guard rail.

Northbound/Southbound US-101 between Gravenstein Highway (SR-116) and Rohnert Park Expressway – is two lanes in each direction with paved shoulders and narrow grassy median and guard rail.

Northbound/Southbound US-101 between Rohnert Park Expressway and Wilfred Avenue – is two lanes in each direction with paved shoulders and narrow grassy median and guard rail.

Northbound/Southbound US-101 between Wilfred Avenue and Santa Rosa Avenue – is three lanes in each direction with paved shoulders and K-rail in the median. One of the lanes in each direction is for high occupancy vehicles.

Northbound/Southbound US-101 north of Santa Rosa Avenue – is three lanes in each direction with paved shoulders and K-rail in the median. One of the lanes in each direction is for high occupancy vehicles.

Ramps

Northbound Gravenstein Highway (SR-116) on-ramp – consists of a single lane on-ramp.

Northbound Rohnert Park Expressway loop on-ramp – consists of a single lane on-ramp.

Northbound Rohnert Park Expressway on-ramp – consists of a single lane on-ramp.

Northbound Wilfred Avenue on-ramp – consists of a single lane on-ramp.

Southbound Santa Rosa Avenue on-ramp – consists of a single lane on-ramp.

Southbound Wilfred Avenue on-ramp – consists of a single lane on-ramp.

Southbound Rohnert Park Expressway loop on-ramp – consists of a single lane on-ramp.

Southbound Rohnert Park Expressway on-ramp – consists of a single lane on-ramp.

Southbound Gravenstein Highway (SR-116) on-ramp – consists of a single lane on-ramp.

Northbound Gravenstein Highway (SR-116) off-ramp – consists of a single lane off-ramp that widens to two lanes at the intersection with Gravenstein Highway (SR-116).

Northbound Rohnert Park Expressway off-ramp – consists of a single lane off-ramp that widens to two lanes at the intersection with Rohnert Park Expressway.

Northbound Wilfred Avenue off-ramp – consists of a single lane off-ramp that widens to three lanes at the intersection with Commerce Boulevard.

Northbound Santa Rosa Avenue off-ramp – consists of a single lane off-ramp that widens to three lanes at the intersection with Santa Rosa Avenue.

Southbound Wilfred Avenue off-ramp – consists of a single lane off-ramp that widens to three lanes at the intersection with Redwood Drive.

Southbound Rohnert Park Expressway off-ramp – consists of a single lane off-ramp that widens to three lanes at the intersection with Rohnert Park Expressway.

Southbound Gravenstein Highway (SR-116) off-ramp – consists of a single lane off-ramp that widens to three lanes at the intersection with Gravenstein Highway (SR-116).

Existing Lane Configurations and Traffic Control

Existing intersection lane configurations and traffic control at study intersections are illustrated in **Figure 2**. Traffic signals are located at most study intersections near the freeway; whereas, study intersections near the project site are generally unsignalized. The figure also shows the length of the right and left turn bays when present.

Existing Traffic Turning Movement Volumes

Weekday intersection turning movement volumes were manually collected in July and August 2005 at most project study area intersections as well as in November 2006 along Millbrae Avenue and are shown in **Figure 3**. Volumes were collected during the AM and PM peak periods of the day in the middle of the week. It should be noted that a segment of Wilfred Avenue from Stony Point Road to Langner Avenue was closed for construction when the 2005 counts were being conducted. Traffic was diverted around the closure; therefore, 2004 volumes were used at these locations.

School traffic typically affects AM and mid-afternoon traffic conditions but has little effect on PM peak traffic levels which is the time period evaluated in the TIS. In addition, when schools are in session there would not be a significant increase in traffic due to a high volume of linked trips. Linked trips result from parents dropping off children at school on the way to work or other destinations. Therefore, traffic counts are believed to accurately portray the existing condition during the PM peak period.

Twenty-four hour freeway volumes were collected in May and June 2004. Volumes were collected in each direction for US-101 segments north of the Wilfred interchange, south of the Rohnert Park Expressway interchange, and between the two interchanges. Freeway segment volume north of Santa Rosa Avenue and south of Gravenstein Highway (SR-116) was obtained from the 2004 Traffic Volumes on the California State Highway System available on the Caltrans website.

Traffic volume data sheets are available in the **Appendix**.

Existing Pedestrian and Bicycle Facilities

There are currently Class II bikeways (i.e. bicycle lanes) through project study intersections on Stony Point Road and Rohnert Park Expressway west of Labath Avenue and east of Commerce Boulevard. Furthermore, there are a Class I bikeways (i.e. multi-use paths) alongside Commerce Boulevard between Golf Course Drive and Redwood Drive as well as between Copeland Creek and East Cotati Avenue. There is another Class I bikeway along Golf Course Drive from Roberts Lake Road extending to the east.

According to the Rohnert Park General Plan, Class II bicycle lanes are planned for Redwood Drive, on Wilfred Avenue (within the city limits) when the road is improved in the future, Langner Avenue south of Wilfred Avenue, Gravenstein Highway (SR-116) east of Stony Point Road, and on Old Redwood Highway to Commerce Boulevard. A Class I bikeway is also planned along Commerce Boulevard between Golf Course Drive and Rohnert Park Expressway. Business Park Drive is a Class III bikeway (i.e. bike route) as well as Labath Avenue south of Business Park Drive.

Existing Transit Service

Sonoma County Transit operates several intra-city routes that pass through a transfer station near the intersection of Commerce Drive and Rohnert Park Expressway (immediately east of the US-101/Rohnert Park Expressway interchange). Intra-city routes include #10, #11, #12, and #14. Buses pass through the transfer station approximately every 30-40 minutes on weekdays and approximately every hour on weekends.

Sonoma County Transit also provides several inter-city routes that serve Sebastopol and Santa Rosa. Inter-city routes include #26, #44, and #48 and connect to a separate

transfer station near the intra-city station. Bus frequencies are similar to intra-city service.

Golden Gate Transit operates routes along US-101 that pass through Rohnert Park and connect with cities including San Francisco, San Rafael, Petaluma, and Santa Rosa. During the weekday, routes #72, #74, #75, and #76 operate in the AM and PM peak travel directions and stop at the Rohnert Park inter-city transfer station. Route #80, which offers service all day long, also stops at the Rohnert Park station.

Currently Sonoma County Transit and Golden Gate Transit do not provide service near the site and have no plans to provide service. Serving the casino and hotel site would require a large route deviation and would impact the transit agencies ability to timely manage their current service area. Furthermore, the density in the vicinity of the project site is considered too low for cost-effective service.

A future opportunity for a connection to transit service is with Sonoma-Marín Area Rail Transit (SMART). The proposed rail service would connect San Francisco Bay ferry service terminals to Cloverdale (north of Santa Rosa). If implemented, the proposed rail corridor will pass through Rohnert Park with a stop at a station adjacent to the Wilfred Avenue interchange. The SMART project is planned to add a second track near the Wilfred interchange station. Trains could serve up to 13 other stations, 8 in Sonoma County and 5 in Marin, running every 30 minutes during peak periods, with up to 12-16 trains per day. A bicycle corridor is also proposed on the SMART right-of-way, which parallels US-101 for most of the distance. An Environmental Impact Report (EIR) is currently being prepared to evaluate the impacts of the commuter rail service. If funding is secured, service could begin as early as 2007; however, voters rejected the proposed project in November of 2006 so the actual service start is uncertain.

Existing Collision History

Caltrans provided Kimley-Horn with a computer generated report summarizing accidents that occurred between 2002 and 2004 at the study intersections as well as on US-101 between Sierra Avenue and Todd Road. The reports provided information about each accident, including the direction of travel and the time of day. The data is helpful in determining any trends that may exist in the traffic accidents that have occurred over the three-year study period. The identification of such trends is crucial for an initial analysis of potential improvements to an intersection.

The summary data provided does have limitations when recommending improvements to the study intersections, to that end, the recommendations below are reflective of the analysis of the data provided to Kimley-Horn and our field observations at each study intersection and freeway segment.

Study Intersections

Stony Point Road/Wilfred Avenue.

<u>Accident Type</u>	<u>Number of Accidents</u>
Pedestrian/Vehicle	0
Bicycle/Vehicle	0
Vehicle/Vehicle	<u>6</u>
	6

The prevailing accident trends at this intersection are broadside and rear-end mainly caused by traveling at unsafe speeds and improper turning.

Labath Avenue/Wilfred Avenue.

<u>Accident Type</u>	<u>Number of Accidents</u>
Pedestrian/Vehicle	0
Bicycle/Vehicle	0
Vehicle/Vehicle	<u>2</u>
	2

The accident trends at this intersection are sideswipe and head-on accidents caused by right of way violation.

Redwood Drive/Wilfred Avenue.

<u>Accident Type</u>	<u>Number of Accidents</u>
Pedestrian/Vehicle	0
Bicycle/Vehicle	0
Vehicle/Vehicle	<u>3</u>
	3

There was a sideswipe, a broadside, and a rear-end accident at this intersection caused by traveling at unsafe speeds or unsafe lane changes.

Redwood Drive/Commerce Boulevard.

<u>Accident Type</u>	<u>Number of Accidents</u>
Pedestrian/Vehicle	0
Bicycle/Vehicle	1
Vehicle/Vehicle	<u>25</u>
	25

The prevailing accident trends are rear-end and broadside accidents at this intersection caused by traveling at unsafe speeds, improper turning, or right of way violations.

Golf Course Drive/Commerce Boulevard.

<u>Accident Type</u>	<u>Number of Accidents</u>
Pedestrian/Vehicle	0
Bicycle/Vehicle	0
Vehicle/Vehicle	<u>35</u>
	35

The prevailing accident trend is broadside accidents at this intersection caused by automobile right of way violation.

Golf Course Drive/Roberts Lake Road.

<u>Accident Type</u>	<u>Number of Accidents</u>
Pedestrian/Vehicle	0
Bicycle/Vehicle	0
Vehicle/Vehicle	<u>7</u>
	7

The prevailing accident trend is sideswipe accidents at this intersection caused by traveling at unsafe speeds and improper turning.

Commerce Boulevard/US 101 NB Ramps.

<u>Accident Type</u>	<u>Number of Accidents</u>
Pedestrian/Vehicle	0
Bicycle/Vehicle	0
Vehicle/Vehicle	<u>4</u>
	4

There was a sideswipe, a head-on, and a rear-end accident at this intersection caused by traveling at unsafe speeds or improper turning.

Redwood Drive/Business Park Drive.

<u>Accident Type</u>	<u>Number of Accidents</u>
Pedestrian/Vehicle	0
Bicycle/Vehicle	0
Vehicle/Vehicle	<u>3</u>

There were two rear-end accidents caused by traveling at unsafe speeds and improper starting/backing as well as one broadside accident at this intersection caused by automobile right of way violation.

Rohnert Park Expressway/Stony Point Road.

<u>Accident Type</u>	<u>Number of Accidents</u>
Pedestrian/Vehicle	0
Bicycle/Vehicle	0
Vehicle/Vehicle	<u>5</u>
	5

There were an equal number of broadside and sideswipe accidents caused by traveling at unsafe speeds or automobile right of way violation.

Rohnert Park Expressway/Labath Avenue.

<u>Accident Type</u>	<u>Number of Accidents</u>
Pedestrian/Vehicle	0
Bicycle/Vehicle	0
Vehicle/Vehicle	<u>4</u>
	4

The prevailing accident trend at this intersection is broadside accidents caused by traveling at unsafe speeds and automobile right of way violation.

Rohnert Park Expressway/Redwood Drive.

<u>Accident Type</u>	<u>Number of Accidents</u>
Pedestrian/Vehicle	0
Bicycle/Vehicle	1
Vehicle/Vehicle	<u>49</u>
	49

There are fairly equal number of broadside and rear-end accidents caused by traveling at unsafe speeds, right of way violation, and improper turning.

Rohnert Park Expressway/US 101 SB Ramps.

<u>Accident Type</u>	<u>Number of Accidents</u>
Pedestrian/Vehicle	0
Bicycle/Vehicle	0
Vehicle/Vehicle	<u>31</u>
	31

The prevailing accident trend is rear-end collisions resulting from failure to comply with traffic signals and signs or unsafe speed.

Rohnert Park Expressway/US 101 NB Ramps.

<u>Accident Type</u>	<u>Number of Accidents</u>
Pedestrian/Vehicle	0
Bicycle/Vehicle	0
Vehicle/Vehicle	<u>70</u>
	70

The prevailing accident trends are broadside and rear-end collisions resulting from failure to comply with traffic signals and signs, traveling at unsafe speeds, and improper turning.

Rohnert Park Expressway/Commerce Boulevard.

<u>Accident Type</u>	<u>Number of Accidents</u>
Pedestrian/Vehicle	2
Bicycle/Vehicle	4
Vehicle/Vehicle	<u>55</u>
	61

The prevailing accident trends are broadside and rear-end accidents that were caused by improper turning, traveling at unsafe speeds, and automobile right of way violation.

Gravenstein Highway (SR-116)/Stony Point Road.

<u>Accident Type</u>	<u>Number of Accidents</u>
Pedestrian/Vehicle	0
Bicycle/Vehicle	0
Vehicle/Vehicle	<u>39</u>
	39

There are fairly equal amounts of rear-end, broadside, and sideswipe accidents at this intersection caused by traveling at unsafe speeds, improper turning, improper starting/backing, and automobile right of way violation.

Gravenstein Highway (SR-116)/Redwood Drive.

<u>Accident Type</u>	<u>Number of Accidents</u>
Pedestrian/Vehicle	0
Bicycle/Vehicle	0
Vehicle/Vehicle	<u>18</u>
	18

The prevailing accident trends are rear-end and broadside accidents at this intersection caused by traveling at unsafe speeds and from failure to comply with traffic signals and signs.

Gravenstein Highway (SR-116)/ US 101 NB Off-Ramp.

<u>Accident Type</u>	<u>Number of Accidents</u>
Pedestrian/Vehicle	0
Bicycle/Vehicle	1
Vehicle/Vehicle	<u>9</u>
	10

The prevailing accident trend is rear-end accidents at this intersection caused by traveling at unsafe speeds and improper starting/backing.

Millbrae Avenue/Stony Point Road.

<u>Accident Type</u>	<u>Number of Accidents</u>
Pedestrian/Vehicle	0
Bicycle/Vehicle	0
Vehicle/Vehicle	<u>8</u>
	8

The prevailing accident trend is rear-end accidents at this intersection caused by traveling at unsafe speeds and improper starting/backing.

Millbrae Avenue/Primrose Avenue.

<u>Accident Type</u>	<u>Number of Accidents</u>
Pedestrian/Vehicle	0
Bicycle/Vehicle	0
Vehicle/Vehicle	<u>4</u>
	4

The prevailing accident trend is broadside accidents at this intersection caused by automobile right of way violation.

Millbrae Avenue/Whistler Avenue.

<u>Accident Type</u>	<u>Number of Accidents</u>
Pedestrian/Vehicle	0
Bicycle/Vehicle	0
Vehicle/Vehicle	<u>2</u>
	2

There was a sideswipe and an overturned vehicle accident at this intersection caused by improper passing or improper turning.

Millbrae Avenue/Langner Avenue.

<u>Accident Type</u>	<u>Number of Accidents</u>
Pedestrian/Vehicle	0
Bicycle/Vehicle	0
Vehicle/Vehicle	<u>5</u>
	5

The prevailing accident trend is broadside accidents at this intersection caused by automobile right of way violation.

Millbrae Avenue/Labath Avenue.

<u>Accident Type</u>	<u>Number of Accidents</u>
Pedestrian/Vehicle	0
Bicycle/Vehicle	0
Vehicle/Vehicle	<u>1</u>
	1

There was a broadside accident at this intersection caused by improper starting/backing.

Millbrae Avenue/Dowdell Avenue.

<u>Accident Type</u>	<u>Number of Accidents</u>
Pedestrian/Vehicle	0
Bicycle/Vehicle	0
Vehicle/Vehicle	<u>1</u>
	1

There was a rear-end accident at this intersection caused by traveling at unsafe speeds.

There were no accidents at the following intersections during the three years studied:

- Primrose Avenue/Wilfred Avenue
- Whistler Avenue/Wilfred Avenue
- Langner Avenue/Wilfred Avenue
- Dowdell Avenue/Wilfred Avenue.
- Gravenstein Highway (SR-116)/US 101 SB Ramps

Highway Segments

US-101 from Sierra Avenue to SR-116.

<u>Accident Type</u>	<u>Number of Accidents (Northbound)</u>	<u>Number of Accidents (Southbound)</u>
Broadside	0	0
Rear-End	14	11
Sideswipe	3	0
Other	<u>5</u>	<u>7</u>
	22	18

The prevailing accident trend is rear-end accidents throughout this freeway segment caused by traveling at unsafe speeds, following too closely, and improper turning.

US-101 from SR-116 to Rohnert Park Expressway.

<u>Accident Type</u>	<u>Number of Accidents (Northbound)</u>	<u>Number of Accidents (Southbound)</u>
Broadside	41	1
Rear-End	63	46
Sideswipe	9	5
Other	<u>26</u>	<u>7</u>
	139	59

The prevailing accident trend is rear-end accidents throughout this freeway segment caused by traveling at unsafe speeds, following too closely, and improper turning.

US-101 from Rohnert Park Expressway to Wilfred Avenue.

<u>Accident Type</u>	<u>Number of Accidents (Northbound)</u>	<u>Number of Accidents (Southbound)</u>
Broadside	6	5
Rear-End	45	36
Sideswipe	9	12
Other	<u>13</u>	<u>11</u>
	73	64

The prevailing accident trend is rear-end accidents throughout this freeway segment caused by traveling at unsafe speeds and improper turning.

US-101 from Wilfred Avenue to Santa Rosa Avenue.

<u>Accident Type</u>	<u>Number of Accidents (Northbound)</u>	<u>Number of Accidents (Southbound)</u>
Broadside	0	1
Rear-End	33	53
Sideswipe	10	18
Other	<u>4</u>	<u>23</u>
	47	95

The prevailing accident trend is rear-end accidents throughout this freeway segment caused by traveling at unsafe speeds, following too closely and improper lane changes.

US-101 from Santa Rosa Avenue to Todd Road.

<u>Accident Type</u>	<u>Number of Accidents (Northbound)</u>	<u>Number of Accidents (Southbound)</u>
Broadside	6	1
Rear-End	43	32
Sideswipe	6	12
Other	<u>23</u>	<u>10</u>
	78	55

The prevailing accident trend is rear- accidents throughout this freeway segment caused by traveling at unsafe speeds, following too closely and improper lane changes.

Existing Levels of Service at Study Intersections

Traffic operations were evaluated under existing traffic conditions. As noted previously LOS C or better is established as the criteria for satisfactory operation at intersections

within the City of Rohnert Park, with the exception of the following study area intersections that are permitted to operate at LOS D.

- Wilfred Avenue / Redwood Drive
- Wilfred Avenue / US-101 SB Ramps
- Golf Course Drive / Commerce Boulevard
- US-101 NB Ramps / Commerce Boulevard

Intersections that are already operating at LOS D or lower are permitted if no feasible improvements exist to improve the LOS and provided that LOS is not permitted to deteriorate further due to the proposed development project.

LOS D or better is established as the criteria for satisfactory operation at intersections within Sonoma County. Project intersections currently operating below the county standard are considered to be significantly impacted if the average delay per vehicle increases by 5 seconds or more.

LOS D or better is established as the criteria for satisfactory operation at intersections at freeway ramp terminals, freeway segments and ramps (unless specifically noted otherwise above). Intersections currently operating less than the established LOS are expected to maintain the existing measure of effectiveness (i.e. delay per vehicle at intersections and density for ramps and freeway segments).

Results of the analysis are presented in **Table 3**, along with the jurisdictional standard for acceptable level of service (as previously described on p. 2 in Operating Conditions and Criteria). The signal control is listed as TS for a signalized intersection and TWSC for a two-way stop-controlled intersection. Two-way stop-controlled (TWSC) intersections maybe operate acceptably overall but only the worst approach is reported in the table. The overall level of service is reported for signalized intersections. The worst approach is reported because as stated in the *Highway Capacity Manual*, "the LOS criteria for two-way stop-controlled (TWSC) intersections are different from the criteria for signalized intersections primarily because different transportation facilities create different driver perceptions. The expectation is that a signalized intersection is designed to carry higher traffic volumes and experience greater delay than an unsignalized intersection. LOS for a TWSC intersection is determined by the computed or measured control delay and is defined for each minor movement. LOS is not defined for the intersection as a whole. At TWSC intersections the critical movement may control the overall performance of the intersection." Additional detail of the analysis is provided in the **Appendix**. Results of the analysis indicate some existing study area intersections currently operate at unacceptable levels of service based on established significance criteria. (Results shown as bold in the table do not meet operational standards.)

Table 3 – Existing Levels of Service

	Intersection	Criteria	Signal Control	2005	
				LOS	Delay
1	Stony Point Rd/ Wilfred Ave	D	TWSC	F	109.1
2	Primrose Ave/ Wilfred Ave	D	TWSC	A	9.4
3	Whistler Ave/ Wilfred Ave	D	TWSC	A	9.4
4	Langer Ave/Wilfred Ave	D	TWSC	A	9.4
5	Labath Ave/Wilfred Ave	D	TWSC	A	9.1
6	Dowdell Ave/Wilfred Ave	D	TWSC	A	9.1
7	Redwood Dr/Wilfred Ave	D	TS	C	28.1
8	Redwood Dr/ Commerce Blvd	C	TS	D	46.5
9	Wilfred Ave/ US-101 SB Ramps	D	-	-	-
10	Golf Course Dr/ Commerce Blvd	D	TS	E	61.7
11	Golf Course Dr/ Roberts Lake Rd	C	TS	B	18.4
12	Commerce Blvd/ US-101 NB Ramps	D	TS	C	28.7
13	Project Driveway/ Stony Point Rd	D	TWSC	A	0.0
14	Business Park Dr/ Labath Ave	D	-	-	-
15	Business Park Dr/ Redwood Dr	D	TWSC	C	23.4
16	Rohnert Park Expwy/ Stony Point Rd	D	TS	C	25.2
17	Rohnert Park Expwy/ Labath Ave	C	TS	C	27.5
18	Rohnert Park Expwy/ Redwood Dr	C	TS	C	33.4
19	Rohnert Park Expwy/ US-101 SB Ramps	D	TS	C	23.2
20	Rohnert Park Expwy/ US-101 NB Ramps	D	TS	B	14.9
21	Rohnert Park Expwy/ Commerce Blvd	C	TS	C	31.5
22	Gravenstein Hwy/ Stony Point Rd	D	TS	C	34.7
23	Gravenstein Hwy/ Redwood Dr	D	TS	C	29.5
24	Gravenstein Hwy/ US-101 SB Ramps	D	TS	C	21.0
25	Gravenstein Hwy/ US-101 NB Off-Ramp	D	TS	B	16.2
26	Millbrae Ave/ Stony Point Rd	D	TWSC	E	38.3
27	Millbrae Ave/ Primrose Ave	D	TWSC	B	11.1
28	Millbrae Ave/ Whistler Ave	D	TWSC	B	11.3
29	Millbrae Ave/ Langner Ave	D	TWSC	A	9.6
30	Millbrae Ave/ Labath Ave	D	TWSC	B	10.8
31	Millbrae Ave/ Dowdell Ave	D	TWSC	B	11.2

Intersections and approaches not meeting standards include the following:

- Stony Point Road/Wilfred Avenue
- Redwood Drive/Commerce Boulevard
- Golf Course Drive/Commerce Boulevard
- Millbrae Avenue/Stony Point Road

Existing Conditions Traffic Signal Warrant Analysis

Traffic signals may be justified when traffic operations fall below acceptable thresholds and when one or more signal warrants are satisfied.

Existing traffic volumes at the unsignalized study intersections were compared against the peak hour warrant in the *2003 Manual on Uniform Traffic Control Devices (MUTCD)* and the *California Supplement*. Traffic Signal Warrant #3 – Peak Hour Volume Warrant (formerly know as Warrant #11) is satisfied when traffic volumes on the major and minor approaches exceed thresholds for one hour of the day. As specified in the *MUTCD* and *California Supplement*, predetermined minimum thresholds for intersections include volume on the minor street of 100 vehicles per hour for one moving lane of traffic and 150 vehicles per hour for two moving lanes of traffic as well as the total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches and 800 vehicles per hour for intersections with four or more approaches.

This warrant is generally the first warrant to be satisfied. The warrant applies to traffic conditions during a one hour peak that are sufficiently high such that minor street traffic experiences excessive delay in entering and crossing the street due to the high traffic volumes on the main street.

Results of the analysis showed that the following intersections currently satisfy Warrant #3:

- Stony Point Road/Wilfred Avenue
- Stony Point Road/Millbrae Avenue

Other warrants such as for minimum vehicle volumes, interruption of continuous traffic, and traffic progression were not evaluated because they generally require higher traffic volumes to be satisfied. Accident history and school areas were also not evaluated based on the results of field observations, which noted that neither of these warrant thresholds was likely to be met. A copy of the analysis summary for Warrant #3 is included in the **Appendix**.

Existing Levels of Service at Freeway Segments and Ramps

Existing traffic volumes on US-101 near the project site were collected using digital wave radar technology to measure vehicle volume and speed per lane. For less critical traffic information at locations farther from the project site, the information was obtained from the Caltrans website.

Traffic analyses were completed to evaluate the existing weekday operation of the study segments and ramps. Results of the analyses are presented in **Table 4**. (Results shown as bold in the table do not meet operational standards.)

Table 4 – Existing US-101 Levels of Service

Existing

US-101 Section/Ramp	Criteria		Existing
	LOS	LOS	Density (pc/mi/ln)
Northbound			
US-101 South of Gravenstein Highway (NB)	E	C	22.2
Gravenstein Highway NB Off-Ramp	E	D	30.8
Gravenstein Highway NB On-Ramp	E	D	34.5
US-101 Between Gravenstein Highway and Rohnert Park Expressway (NB)	E	D	28.1
Rohnert Park Expressway NB Off-Ramp	E	D	33.6
Rohnert Park Expressway NB On-Ramp (Loop Ramp)	E	D	32.1
Rohnert Park Expressway NB On-Ramp	E	D	32.5
US-101 Between Rohnert Park Expressway and Wilfred Avenue (NB)	E	D	28.9
Wilfred Avenue NB Off-Ramp	E	E	35.4
Wilfred Avenue NB On-Ramp	E	F	42.0
US-101 Between Wilfred Avenue and Santa Rosa Avenue (NB)	E	D	26.7
Santa Rosa Avenue NB Off-Ramp	E	E	37.2
US-101 North of Santa Rosa Avenue (NB)	E	C	20.3
Southbound			
US-101 North of Santa Rosa Avenue (SB)	E	C	22.9
Santa Rosa Avenue SB On-Ramp	E	D	31.2
US-101 Between Santa Rosa Avenue and Wilfred Avenue (SB)	E	D	31.5
Wilfred Avenue SB Off-Ramp	E	E	38.0
Wilfred Avenue SB On-Ramp	E	D	33.7
US-101 Between Rohnert Park Expressway and Wilfred Avenue (SB)	E	E	35.2
Rohnert Park Expressway SB Off-Ramp	E	E	38.0
Rohnert Park Expressway SB On-Ramp (Loop Ramp)	E	E	36.0
Rohnert Park Expressway SB On-Ramp	E	E	35.1
US-101 Between Rohnert Park Expressway and Gravenstein Highway (SB)	E	D	27.1
Gravenstein Highway SB Off-Ramp	E	D	33.9
Gravenstein Highway SB On-Ramp	E	D	33.7
US-101 South of Gravenstein Highway (SB)	E	C	24.7

Results of the analysis indicate that the northbound on-ramp at Wilfred Avenue currently operates at unacceptable levels of service based on established significance criteria.

NO ACTION ALTERNATIVE

The No Action Alternative represents the evaluation of traffic conditions without the construction of the proposed casino and hotel. Traffic conditions were evaluated for the near-term (2008) and the long-term (2020). 2008 analysis corresponds with the proposed opening year of the casino and hotel. 2020 analysis represents cumulative traffic conditions for the area based upon available traffic forecasts from the Sonoma County travel forecast model provided by the Sonoma County Regional Transportation Authority (SCTA). SCTA made refinements in Rohnert Park to the roadways and TAZs from the most recent information from the Sonoma County General Plan, the Rohnert Park General Plan, and the adopted specific plan assumptions.

The No Action Alternative serves as a baseline for comparison to each of the project alternatives, including the Wilfred Avenue site (Alternative A). It is assumed that if the site is not developed as a casino, it will be built out as it was planned in the Rohnert Park General Plan, the Northwest Specific Plan, and the Wilfred-Dowdell Specific Plan.

Proposed Roadway Projects in Vicinity of Site

Several major projects are planned in the future that may affect traffic conditions near the project site. These projects are planned to be completed regardless of the proposed casino and hotel.

Caltrans plans to reconstruct the US-101/Wilfred Avenue interchange. The change will connect Golf Course Drive directly with Wilfred Avenue and raise the freeway over the new street connection. Commerce Drive under the freeway (between Golf Course Drive and Redwood Drive) will be removed in the long-term but will remain in the near-term. The project will also include other widening and intersection improvements.

With the reconstruction of the US-101/Wilfred Avenue interchange, the southbound on-ramp at Santa Rosa Avenue will join with the southbound off-ramp traffic at Wilfred Avenue to a distributor/collector road and will enter the freeway with the southbound on-ramp traffic at Wilfred Avenue.

Also with the reconstruction of the US-101/Wilfred Avenue interchange, auxiliary lanes will be constructed from the Rohnert Park Expressway Overcrossing to the Wilfred Avenue interchange and northbound from Wilfred Avenue to Santa Rosa Avenue Overcrossing. The existing northbound and southbound on-ramps at Wilfred Avenue will be widened for ramp metering which will be installed with the completion of the interchange.

According to Caltrans, the interchange will remain open during construction, including the freeway ramps. The project will be constructed in three general phases:

1. Build collector-distributor road from Santa Rosa interchange and southbound on-ramp.
2. Demolish and build northbound structures.
3. Demolish and build southbound structures.

Environmental studies for the proposed interchange project are completed and design is currently in progress with reconstruction planned to begin in 2008 and be completed by 2011. Because the interchange is expected to be completed at approximately the same time as the casino, it was assumed that the US-101/Wilfred Avenue interchange was completed in the 2008 analysis scenarios.

The analysis in this report is based off of the most current information received from Caltrans (at the time the report was prepared). However, it should be noted that the final configuration of the interchange is still being developed and may result in a configuration slightly different from what is analyzed in this report.

Caltrans also plans to add high occupancy vehicle lanes (HOV) to the US-101 freeway from SR-37 through Santa Rosa. HOV lane projects near the site are as follows:

- HOV lanes on US-101 from Old Redwood Highway (in Petaluma) to Rohnert Park Expressway. Construction would start approximately 2009 or 2010. Environmental studies are currently underway but actual construction may be delayed due to funding limitations.
- HOV lanes on US-101 from Rohnert Park Expressway to Wilfred Avenue. This project is to be completed at the same time as the Wilfred Avenue interchange. Environmental studies are currently underway but actual construction may be delayed due to funding limitations.
- HOV lanes on US-101 from Wilfred Avenue to SR-12 (Santa Rosa). This project was completed in 2003.

Other intersection projects are identified in the Rohnert Park General Plan. Some of the projects are intended to increase intersection capacities near the US-101 interchanges. Wilfred Avenue will be widened to four lanes plus left turn lanes from the 1999 City Limits to the Urban Growth Boundary (at Langner Avenue). The left turn lanes on Wilfred Avenue were assumed to be 150 feet long. In addition, the city plans to construct an overpass across US-101 that connects Business Park Drive to the west with State Farm Drive to the east. Exact configuration of the overpass has not been determined by the city; therefore, lane geometry in this evaluation was assumed based on engineering judgment.

The overpass is expected to be used by few casino and hotel visitors but would help to relieve congestion from the Wilfred Avenue and Rohnert Park Expressway

interchanges, which, in turn, would make available additional capacity at the interchanges for the casino/hotel and other traffic growth.

Proposed Development Projects in Vicinity of Sites

No specific development projects were identified as being constructed by the year 2008; however, near-term traffic growth in the study area was prorated based on long-term traffic forecast information provided by Sonoma County Transportation Authority (SCTA). The assumed traffic growth included the Green Music Center and Northwest Specific Plan area east of the proposed casino for future high-density residential, industrial, business park, and regional commercial development as well as other developments. It was assumed in this study that the designated areas would be developed per the Rohnert Park General Plan, the Northwest Specific Plan, and the Wilfred-Dowdell Specific Plan.

Near-Term Lane Configurations and Traffic Control

As discussed above, roadway improvements are planned for the study intersections, particularly at or near the US-101 interchanges. Some improvements are anticipated to be in place before or at approximately the same time as the proposed opening year of the casino and hotel. **Figure 4** illustrates the roadway geometry and traffic control expected to be in place in 2008 regardless of the casino and hotel. Some projects, including the planned reconstruction of the Wilfred Avenue interchange, are expected to occur before or at the same time as the proposed opening of the casino and hotel.

Near-Term Traffic Volumes (No Project)

To reflect the traffic levels anticipated to occur in the year 2008, Kimley-Horn obtained from SCTA base year and cumulative forecast year data for roadways in the study area. The prorated incremental increase in traffic volumes that reflects growth from 2005 to 2008 (from the forecast model) was added to existing traffic volumes to determine near-term cumulative volumes by intersection approach. Approach volumes were then converted to turning movement volumes using a Furness process. Lastly, some turn movements were manually adjusted to balance traffic between intersections or correct for forecast model inconsistencies. The rate of increase per year differs widely based on the roadway segment and the proximity to anticipated development. On average, the increase in traffic volume is roughly 2 percent per year. **Figure 5** shows the assumed increase in background traffic at the study intersections. These volumes represent anticipated traffic levels in the year 2008, regardless of the proposed casino and hotel.

Long-Term Lane Configurations and Traffic Control

Additional roadway improvements are expected within the project study area by the year 2020 including the completion of the HOV lanes on US-101, the overpass across US-101 that connects Business Park Drive to the west with State Farm Drive to the

east, and the widening of Wilfred Avenue to four lanes with turn lanes from the 1999 City Limits to the Urban Growth Boundary (Langner Avenue). **Figure 6** illustrates the intersection geometry and traffic control assumed in the long-term analysis.

Long-Term Cumulative Forecast (No Project)

Additional development projects in the vicinity of the site are expected to be completed by the year 2020 and will contribute to a cumulative increase in background traffic regardless of the casino and hotel. These projects include growth in residential, industrial, business park, and commercial land uses located within the city's Urban Growth Boundary, east of the project site. This land use growth, along with other development in the City of Rohnert Park and Sonoma County comprise the long-term cumulative traffic forecast. The cumulative forecast for this study is based on the year 2020 modeling which is consistent with the land use assumptions contained in the Sonoma County General Plan, Rohnert Park General Plan, and other applicable specific plans. Kimley-Horn worked with SCTA to obtain base year and cumulative forecast year data for roadways in the study area. The incremental increases in traffic volumes (from the forecast model) were added to existing traffic volumes to determine long-term cumulative volumes by intersection approach. Approach volumes were then converted to turning movement volumes using a Furness process. Lastly, some turn movements were manually adjusted to balance traffic between intersections or correct for forecast model inconsistencies. **Figure 7** shows the long-term cumulative traffic volumes.

LOS Conditions and Impacts

Traffic operations were evaluated under the following development conditions:

- Near-term conditions without project (year 2008)
- Long-term Cumulative conditions without project (year 2020)

Results of the analysis are presented in **Table 5..** The signal control is listed as TS for a signalized intersection and TWSC for a two-way stop-controlled intersection. Two-way stop-controlled (TWSC) intersections maybe operate acceptably overall but only the worst approach is reported in the table. The overall level of service is reported for signalized intersections. Additional detail is provided in the **Appendix**. As seen in the results, the following intersections and approaches will fail to meet acceptable level of service thresholds based on established significance criteria, regardless of the casino and hotel project. (Results shown as bold in the table do not meet operational standards.)

At the intersection of Rohnert Park Expressway/US 101 SB Ramps, between near-term and long-term, the level of service slightly improves as a result of the installation of the overpass across US-101 connecting Business Park Drive with State Farm Drive. The overpass helps relieve traffic volumes away from the interchanges. On the other hand, there is a large increase in delay between the near-term and the long-term at the

intersection of Wilfred Avenue/Redwood Drive due to the different lane geometry currently proposed for the new Wilfred Avenue interchange. Similar changes occur in Alternatives A through E.

2008 Results

- Wilfred Avenue/Stony Point Road
- Labath Avenue/Wilfred Avenue
- Dowdell Avenue/Wilfred Avenue
- Rohnert Park Expressway/Redwood Drive
- Millbrae Avenue/Stony Point Road

2020 Results

- Stony Point Road/Wilfred Avenue
- Labath Avenue/Wilfred Avenue
- Dowdell Avenue/Wilfred Avenue
- Redwood Drive/Wilfred Avenue
- Golf Course Drive/Commerce Boulevard
- Commerce Boulevard/US-101 NB Ramps
- Rohnert Park Expressway/Redwood Drive
- Millbrae Avenue/Stony Point Road

As noted in the table, significant delays are expected, particularly at the Wilfred Avenue/Stony Point Road intersection and on Wilfred Avenue from Labath Avenue to Redwood Drive, regardless of the proposed casino and hotel project.

Traffic Signal Warrant Analysis

Near-term and long-term traffic volumes (without the project) at unsignalized study intersections were compared against the peak hour warrant in the *2003 Manual on Uniform Traffic Control Devices (MUTCD)* and the *California Supplement*.

Results of the analysis showed that the following intersection will satisfy traffic signal Warrant #3 by the year 2008 and 2020, regardless of the proposed project.

- Stony Point Road/Wilfred Avenue (2008 and 2020)
- Labath Avenue/Wilfred Avenue (2020)
- Dowdell Avenue/Wilfred Avenue (2008 and 2020)
- Millbrae Avenue/Stony Point Road (2008 and 2020)

Other warrants such as minimum vehicle volumes, interruption of continuous traffic, and traffic progression were not evaluated because they generally require higher traffic volumes to be satisfied. Accident history and school areas were also not evaluated based on the results of field observations, which noted that neither of these warrant

thresholds was likely to be met. A copy of the analysis summary for Warrant #3 is included in the **Appendix**.



Table 5 – No Action Levels of Service

	Intersection	Criteria	Signal Control	2005		2008		2020	
				Existing		Base (w/o Proj.)		Base (w/o Proj.)	
				LOS	Delay	LOS	Delay	LOS	Delay
1	Stony Point Rd/ Wilfred Ave	D	TWSC	F	109.1	F	238.0	F	401.6
2	Primrose Ave/ Wilfred Ave	D	TWSC	A	9.4	B	11.3	B	12.4
3	Whistler Ave/ Wilfred Ave	D	TWSC	A	9.4	B	11.3	B	12.4
4	Langer Ave/Wilfred Ave	D	TWSC	A	9.4	B	11.3	B	12.4
5	Labath Ave/Wilfred Ave	D	TWSC	A	9.1	E	48.3	F	491.5
6	Dowdell Ave/Wilfred Ave	D	TWSC	A	9.1	F	333.5	F	OVRFL
7	Redwood Dr/Wilfred Ave	D	TS	C	28.1	D	37.1	F	87.9
8	Redwood Dr/ Commerce Blvd	C	TS	D	46.5	C	26.6	-	-
9	Wilfred Ave/ US-101 SB Ramps	D	TS	-	-	C	22.5	C	33.2
10	Golf Course Dr/ Commerce Blvd	D	TS	E	61.7	D	44.0	F	96.5
11	Golf Course Dr/ Roberts Lake Rd	C	TS	B	18.4	B	17.0	B	10.9
12	Commerce Blvd/ US-101 NB Ramps	D	TS	C	28.7	C	34.9	E	69.8
13	Project Driveway/ Stony Point Rd	D	TWSC	A	0.0	A	0.0	A	0.0
14	Business Park Dr/ Labath Ave	D	-	-	-	-	-	-	-
15	Business Park Dr/ Redwood Dr	D	TWSC	C	23.4	D	26.5	C	16.5
16	Rohnert Park Expwy/ Stony Point Rd	D	TS	C	25.2	C	24.0	C	22.1
17	Rohnert Park Expwy/ Labath Ave	C	TS	C	27.5	C	33.1	C	33.0
18	Rohnert Park Expwy/ Redwood Dr	C	TS	C	33.4	D	35.6	D	36.0
19	Rohnert Park Expwy/ US-101 SB Ramps	D	TS	C	23.2	C	23.2	C	24.5
20	Rohnert Park Expwy/ US-101 NB Ramps	D	TS	B	14.9	B	17.6	B	17.1
21	Rohnert Park Expwy/ Commerce Blvd	C	TS	C	31.5	C	33.9	C	34.9
22	Gravenstein Hwy/ Stony Point Rd	D	TS	C	34.7	C	31.5	D	39.9
23	Gravenstein Hwy/ Redwood Dr	D	TS	C	29.5	C	27.8	C	34.6
24	Gravenstein Hwy/ US-101 SB Ramps	D	TS	C	21.0	B	17.8	B	17.0
25	Gravenstein Hwy/ US-101 NB Off-Ramp	D	TS	B	16.2	B	13.5	B	18.7
26	Millbrae Ave/ Stony Point Rd	D	TWSC	E	38.3	E	38.2	F	70.6
27	Millbrae Ave/ Primrose Ave	D	TWSC	B	11.1	B	11.4	B	12.4
28	Millbrae Ave/ Whistler Ave	D	TWSC	B	11.3	B	11.5	B	12.4
29	Millbrae Ave/ Langner Ave	D	TWSC	A	9.6	A	9.9	B	11.2
30	Millbrae Ave/ Labath Ave	D	TWSC	B	10.8	B	11.2	B	13.5
31	Millbrae Ave/ Dowdell Ave	D	TWSC	B	11.2	B	11.3	B	11.6

LOS Conditions and Impacts on Freeway and Ramps

Year 2010 and year 2030 freeway forecast information was provided by Caltrans within the study area. The year 2010 forecasts reported volumes for freeway travel lanes operating as mixed-use lanes; whereas, the 2030 forecast separated the data for mixed-use and HOV lanes, to reflect the completion of the US-101 HOV lane project.

Because this study is using different analysis years, growth rates were determined from the Caltrans data and then applied to the freeway traffic counts to generate a 2008 and 2020 freeway forecast. On-ramp volumes were obtained from the Sonoma County travel forecast model.

Traffic analyses were completed to evaluate the operation of the study freeway segments and ramps in the year 2008 and 2020. Freeway segment analyses were limited to the mix-use travel lanes, which are expected to have significantly more congestion than the future HOV lanes.

Results of the analyses are presented in **Table 6**. As shown in the table, all of the freeway segments and on/off ramps are expected to operate at acceptable levels of service based on established significance criteria in the near-term. In the cumulative condition there are some segments and ramps that operate at unacceptable levels of service in the southbound direction. These levels of service are anticipated to occur even with the completion of the HOV lane project through Rohnert Park and the new auxiliary lanes. (Results shown as bold in the table do not meet operational standards.)



Table 6 – No Action Alternative Freeway Levels of Service

US-101 Section/Ramp	Criteria		Existing		2008		2020	
	LOS	LOS	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)
Northbound								
US-101 South of Gravenstein Highway (NB)	E	C	C	22.2	C	19.1	C	25.6
Gravenstein Highway NB Off-Ramp	E	D	C	30.8	C	27.4	D	34.1
Gravenstein Highway NB On-Ramp	E	D	D	34.5	D	29.5	E	36.1
US-101 Between Gravenstein Highway and Rohnert Park Expressway (NB)	E	D	C	28.1	C	23.5	D	32.3
Rohnert Park Expressway NB Off-Ramp	E	D	D	33.6	D	28.8	E	37.1
Rohnert Park Expressway NB On-Ramp (Loop Ramp)	E	D	C	32.1	C	21.8	C	23.2
Rohnert Park Expressway NB On-Ramp	E	D	C	32.5	C	22.1	D	29.0
US-101 Between Rohnert Park Expressway and Wilfred Avenue (NB)	E	D	C	28.9	C	22.1	D	29.0
Wilfred Avenue NB Off-Ramp	E	E	C	35.4	C	22.1	D	29.0
Wilfred Avenue NB On-Ramp	E	F	D	42.0	D	30.3	E	40.4
US-101 Between Wilfred Avenue and Santa Rosa Avenue (NB)	E	D	D	26.7	D	30.3	E	40.4
Santa Rosa Avenue NB Off-Ramp	E	E	D	37.2	D	30.3	E	40.4
US-101 North of Santa Rosa Avenue (NB)	E	C	C	20.3	C	22.0	D	29.7
Southbound								
US-101 North of Santa Rosa Avenue (SB)	E	C	C	22.9	C	24.1	D	28.5
Santa Rosa Avenue SB On-Ramp	E	D	D	31.2	D	32.7	F	-
US-101 Between Santa Rosa Avenue and Wilfred Avenue (SB)	E	D	D	31.5	D	32.7	F	-
Wilfred Avenue SB Off-Ramp	E	E	E	38.0	E	38.8	F	44.8
Wilfred Avenue SB On-Ramp	E	D	D	33.7	D	33.4	E	39.9
US-101 Between Rohnert Park Expressway and Wilfred Avenue (SB)	E	E	D	35.2	D	33.4	E	39.9
Rohnert Park Expressway SB Off-Ramp	E	E	D	38.0	D	33.4	E	39.9
Rohnert Park Expressway SB On-Ramp (Loop Ramp)	E	E	D	36.0	D	30.9	E	38.5
Rohnert Park Expressway SB On-Ramp	E	E	D	35.1	D	30.1	F	37.5
US-101 Between Rohnert Park Expressway and Gravenstein Highway (SB)	E	D	C	27.1	C	22.3	E	36.6
Gravenstein Highway SB Off-Ramp	E	D	D	33.9	D	29.2	F	40.3
Gravenstein Highway SB On-Ramp	E	D	D	33.7	D	32.1	F	42.3
US-101 South of Gravenstein Highway (SB)	E	C	C	24.7	C	21.8	D	32.0

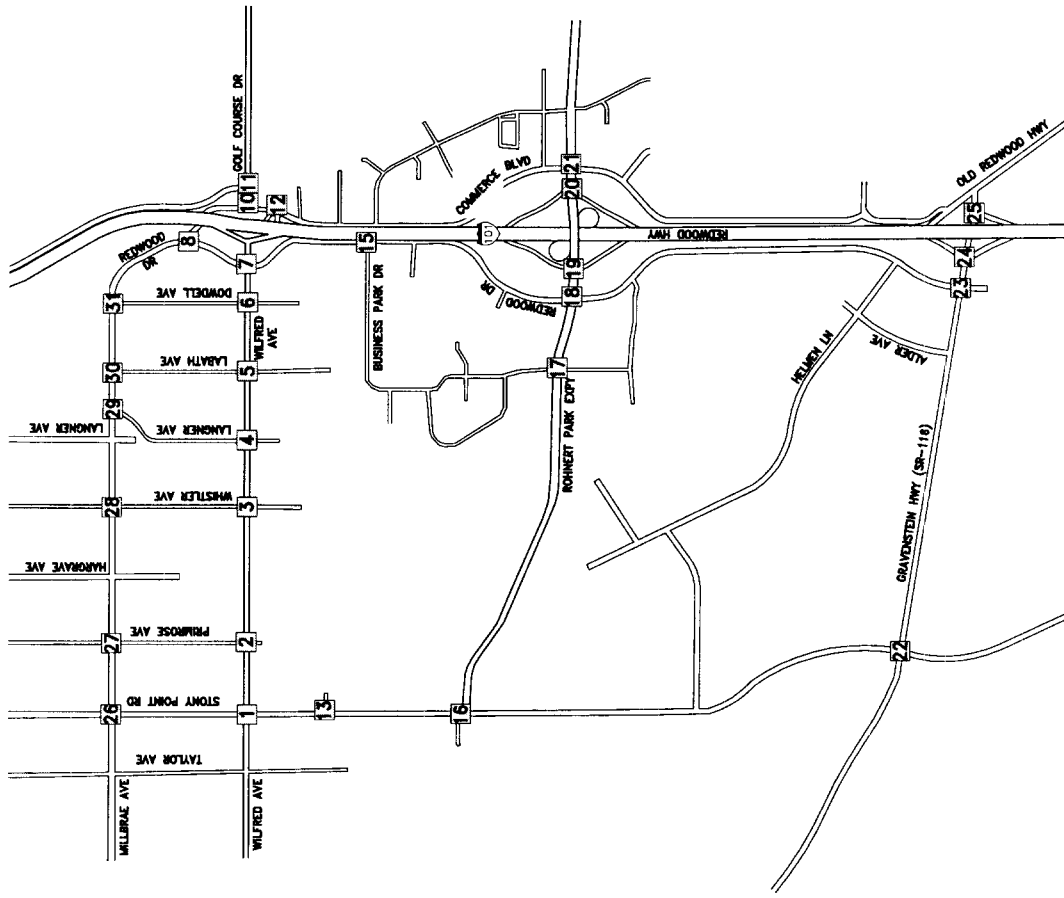


FIGURE 1

Graton, Ranchoeria No. Project - Rohnert Park, CA

PROJECT STUDY INTERSECTIONS



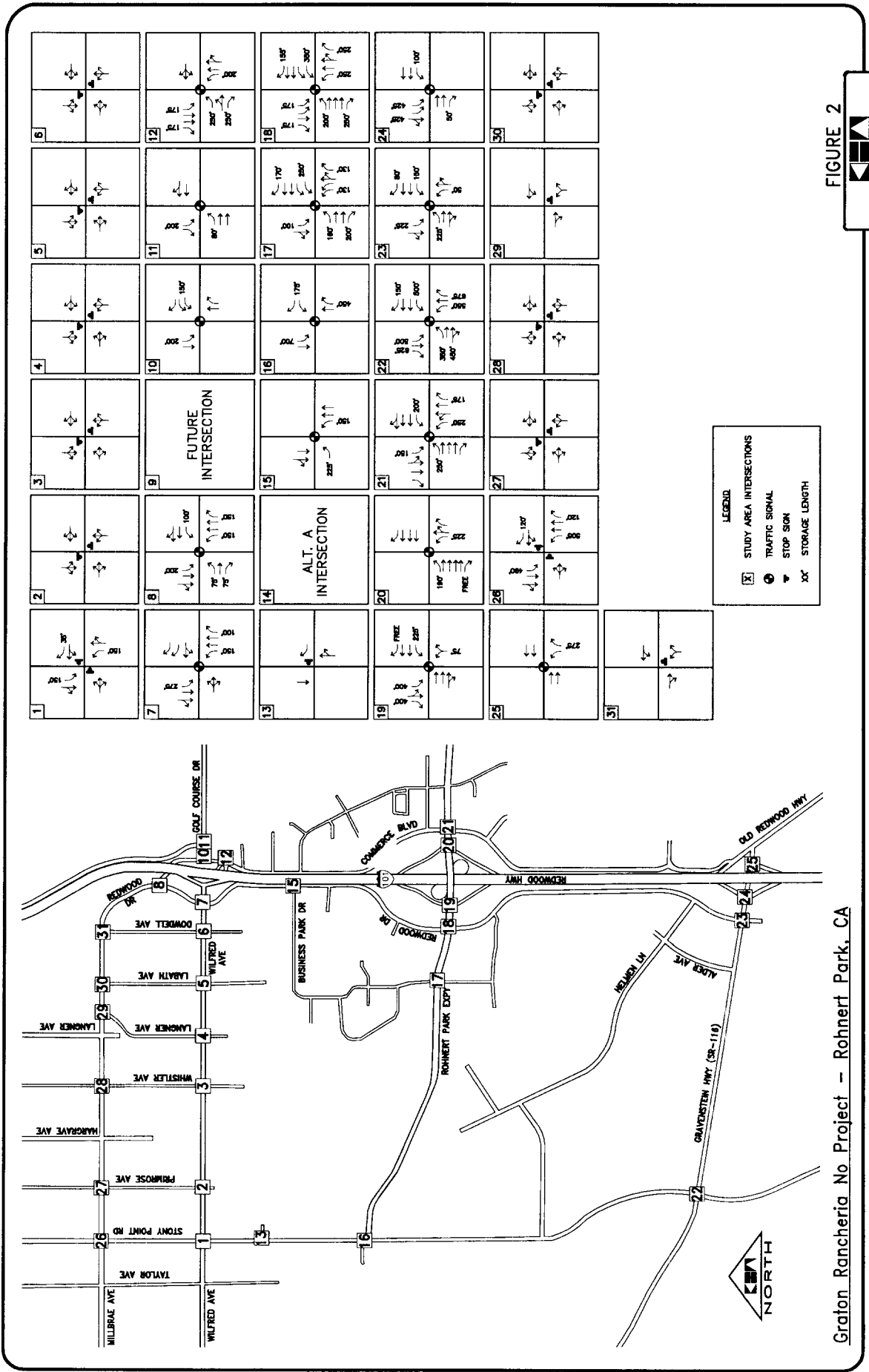


FIGURE 2

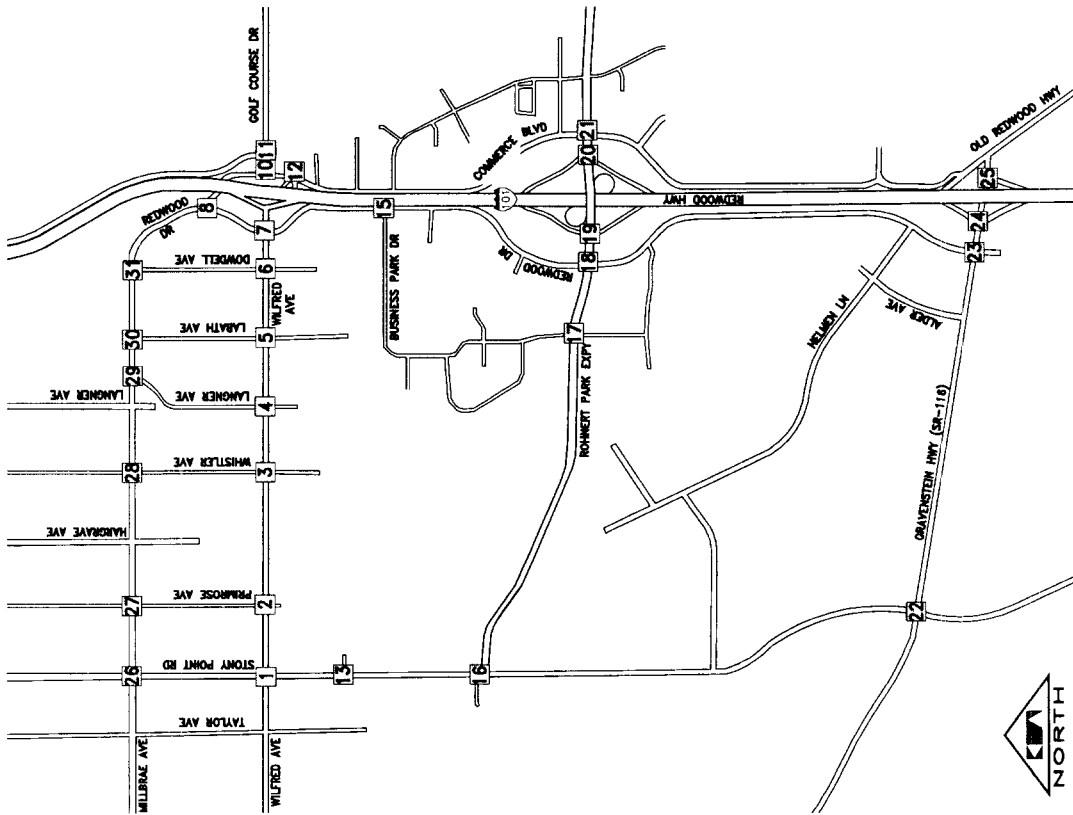
Kimley-Horn and Associates, Inc.

Grafton Rancheria No. Project - Rohnert Park, CA

EXISTING LANE GEOMETRY AND TRAFFIC CONTROL

LEGEND

- [X] STUDY AREA INTERSECTIONS
- ⊕ TRAFFIC SIGNAL
- ▼ STOP SIGN
- XX STORAGE LENGTH



1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31					

LEGEND

[X] STUDY AREA INTERSECTIONS

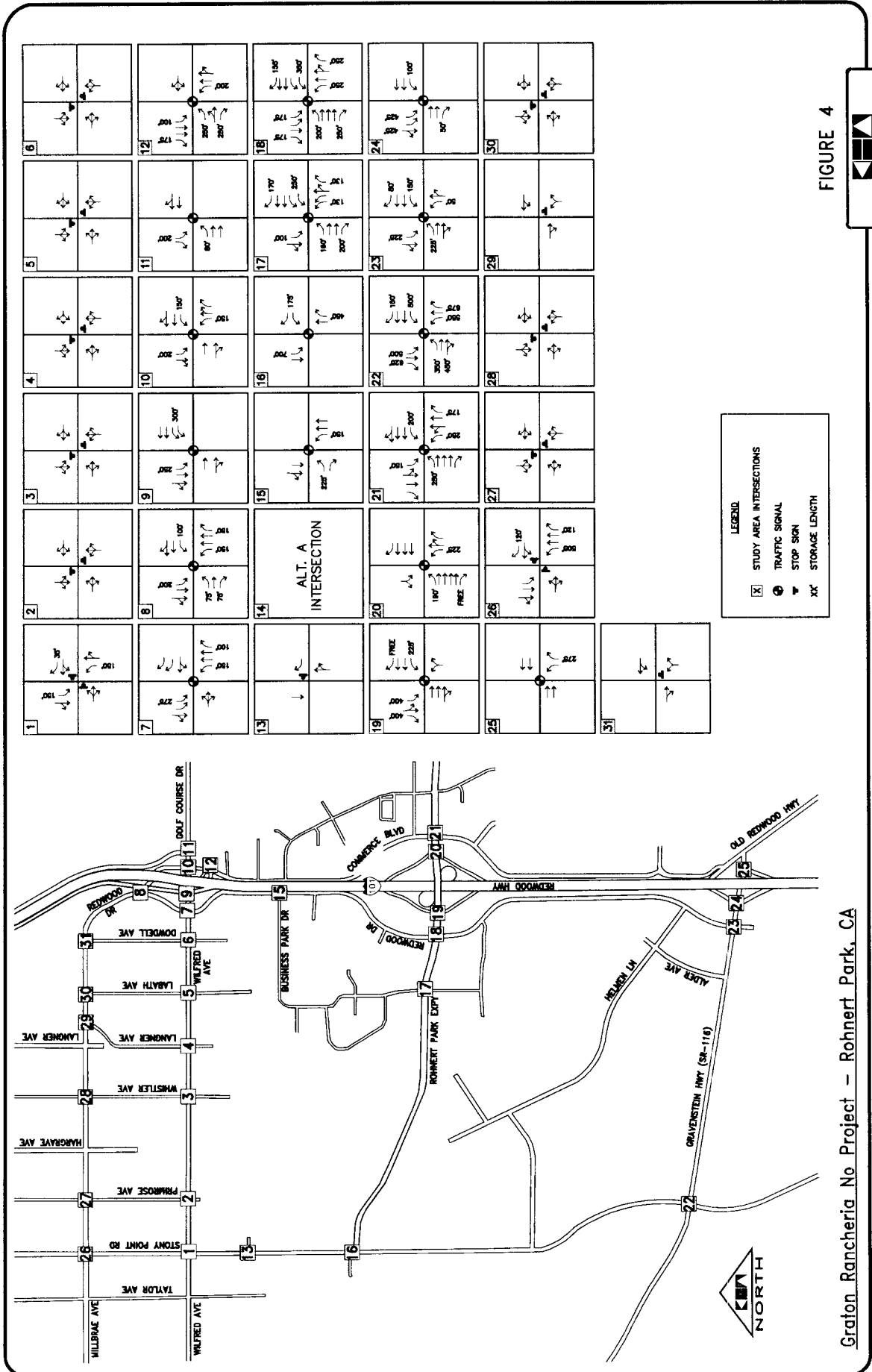
XX PM TRAFFIC VOLUMES

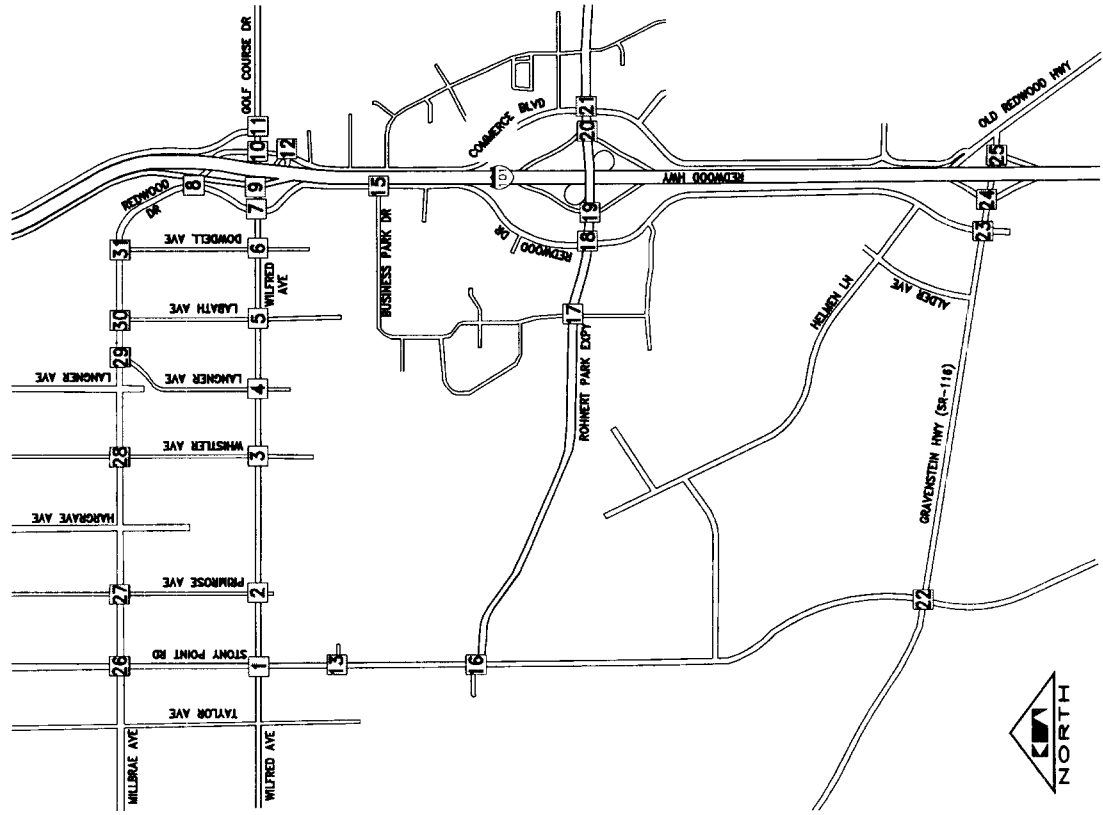
FIGURE 3



Graton Rancheria No Project - Rohnert Park, CA

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES





1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31					

LEGEND

[X] STUDY AREA INTERSECTIONS

XX PM TRAFFIC VOLUMES

FIGURE 5



Graeton Rancheria No Project - Rohnert Park, CA

NEAR-TERM PM TRAFFIC VOLUMES



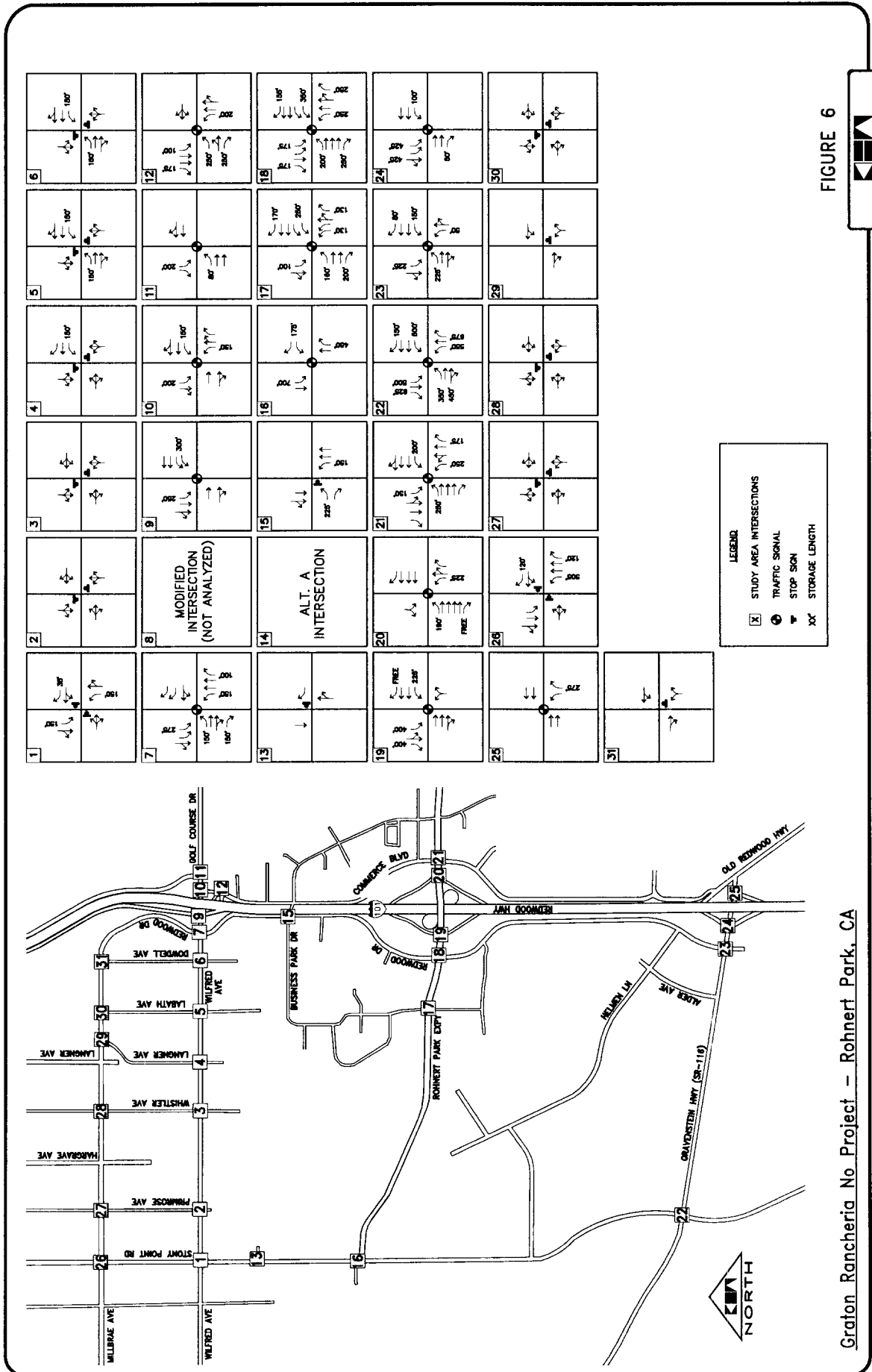
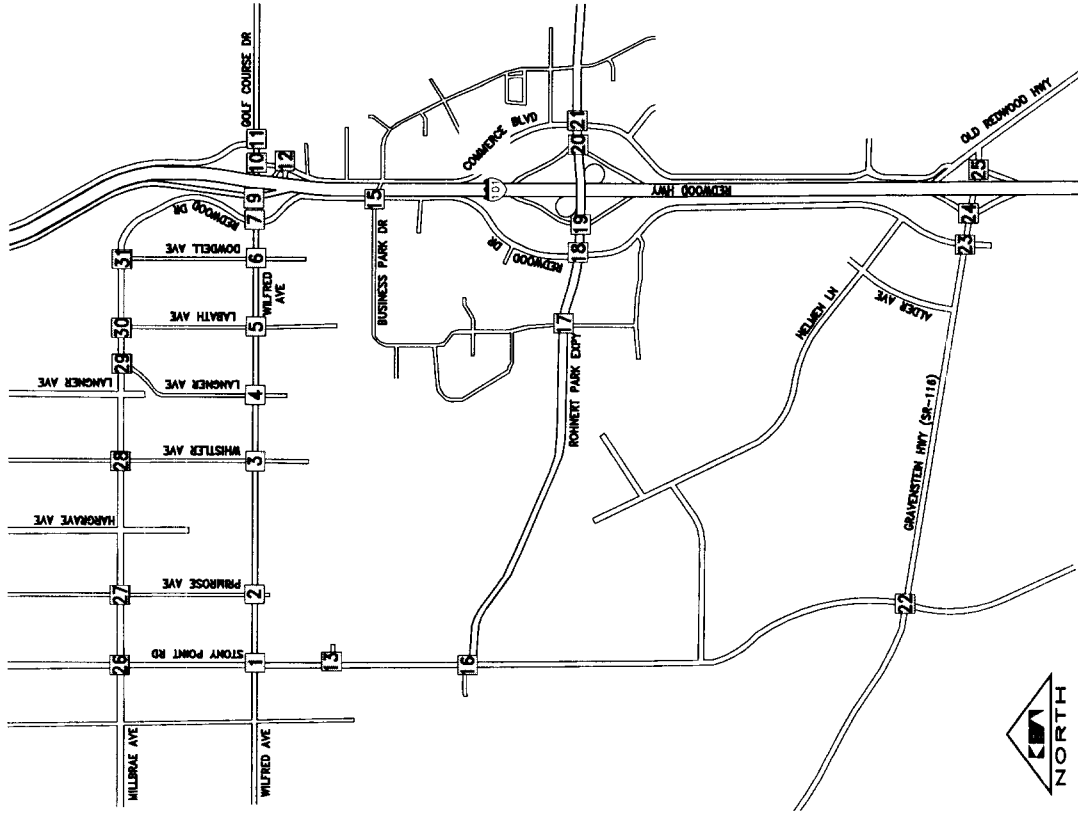


FIGURE 6

Kimley-Horn and Associates, Inc.

Graton Rancheria No. Project - Rohnert Park, CA

LONG TERM LANE GEOMETRY AND TRAFFIC CONTROL



1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31					

LEGEND
 [X] STUDY AREA INTERSECTIONS
 XX PM TRAFFIC VOLUMES

FIGURE 7



Graton Rancheria No Project - Rohnert Park, CA

LONG-TERM CUMULATIVE PM TRAFFIC VOLUMES

GENERAL PROJECT INFORMATION

This section presents a description of elements of the analyses that are common to multiple study alternatives included in this study. Traffic impacts were evaluated for the following scenarios:

- 2008 analyses correspond with the proposed opening year of the casino and hotel.
- 2020 analyses represents cumulative traffic conditions for the area based upon available traffic forecasts from the Sonoma County travel forecast model provided by Sonoma County Regional Transportation Authority (SCTA). SCTA made refinements in Rohnert Park to the roadways and TAZs from the most recent information from the Sonoma County General Plan, the Rohnert Park General Plan, and the adopted specific plan assumptions.

Project Trip Generation

Trip generation for Native American gaming facilities generally peaks on Saturday evenings; however, background traffic on adjacent streets is lower than during peak weekday periods, making the overall number of vehicles on the road lower as well. In addition, casino facilities are open 24/7 and typically do not generate extreme peaks like other uses. Instead, casino/hotel traffic follows a smoother curve that builds steadily from early morning until about 7:00 PM, after which traffic levels slowly decline. Based on existing traffic volume information and expected trip generation from the casino and hotel, it was determined that the weekday PM peak period represents the worst case period to evaluate.

Trip generation for development projects is typically based on rates contained in the Institute of Transportation Engineer's publication *Trip Generation, 7th Edition*. This manual is a standard reference used by jurisdictions throughout the country and is based on actual trip generation studies at numerous locations in areas of various populations. However, *Trip Generation* does not have a land use for casinos similar to the type proposed by Graton Rancheria.

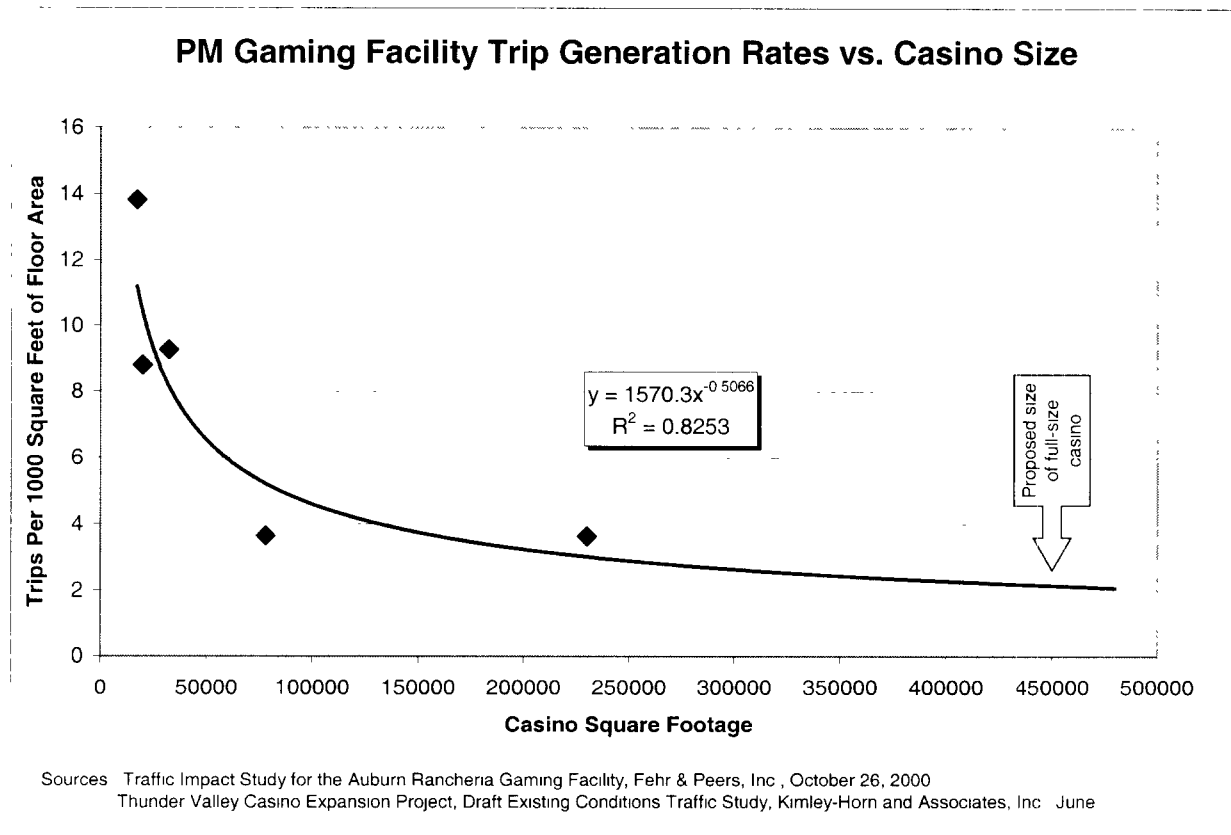
Research has been performed for hotel/casinos such as commonly found in Las Vegas and Reno, but the information is generally not applicable to this project. As a result this project relied on trip generation information obtained from other Native American casino and hotel facilities.

As part of a traffic impact study prepared for the Auburn Rancheria Gaming Facility (A.K.A. Thunder Valley Casino), trip generation was collected at four northern California gaming facilities. Data was reported for the weekday PM peak hour (i.e. the highest one-hour period between 4:00 and 6:00 PM) which is the time in which the greatest amount of combined traffic congestion commonly occurs.

Trip information from the four facilities showed that the smaller gaming facilities had higher trip rates than larger facilities, similar to the trip generation characteristics of shopping centers where small centers generate trips at a somewhat higher rate than larger centers.

Auburn Rancheria traffic study data was supplemented by more recent information collected at the completed Thunder Valley Casino by Kimley-Horn. Based on 2005 traffic data, the facility has a PM peak hour trip generation rate of 3.64 trips per 1,000 square feet of floor area. This rate occurs during the 5:00-6:00 PM period of the weekday and reinforces the principle that trip rates are lower at larger facilities.

Information from the Auburn Rancheria Traffic study and the more recent Thunder Valley Casino data was plotted and clearly shows that the highest trip generation rates based on square footage correspond to the smallest facility and the lowest rate occurs at the largest facility. The data also indicates that trip rates based on building square footages are not linear. A regression analysis showed a R^2 of 0.83 which indicates a strong fit to the data. In Update on Impacts of Tribal Economic Development Projects in San Diego County (April 2003), San Diego County concludes the same premise that trip rates are lower for larger gaming facilities because they include "several accessory uses to encourage customers to stay longer."



The development alternatives in this study are much larger than the facilities documented in the Auburn report and consequently, the Graton Casino and Hotel project is expected to have a lower rate trip rate. The Graton Casino is proposed to include 315,100 - 450,000 square feet for the casino and related functions, plus up to a 300 room hotel. Extrapolation of the fitted curve suggests that the PM trip rate for the much larger casino would be approximately two trips per 1000 square feet. Although the data suggest a PM peak trip rate of 2/1000 s.f. is reasonable, it was determined that a higher and more conservative rate should be considered.

Therefore, the Shingle Springs casino environmental impact report/environmental assessment was also reviewed. The Shingle Springs casino is proposed to include approximately 238,500 square feet and was determined to have the following trip rates.

- Weekday AM Peak Hour: 2.95 trips/1,000 square feet
- Weekday PM Peak Hour: 4.95 trips/1,000 square feet
- Weekday (Daily trips): 39.43 trips/1,000 square feet

Based on the information from the Shingle Springs reports and in comparison with the plotted Auburn Rancheria /Thunder Valley Casino data, it was determined that the trip rate used for Shingle Springs is a reasonable but more conservative assumption for this traffic study to eliminate the possibility of underestimating project trips. Therefore, trip generation also considered the Shingle Springs DEIR/EA which evaluated additional sources of trip generation including San Diego County which, for example, recommends calculation of daily casino trips at 100 trips per 1,000 square feet of gaming area. San Diego rates are based on empirical data from several casinos in southern California and if applied to the Graton project's gaming area, the daily trip generation would be approximately 11,860 trips which is thousands below the number assumed in the Shingle Springs DEIR/EA. Therefore, trip rates used in this analysis are the same as for Shingle Springs and which are listed above. Actual trip rates for the Graton casino are likely to be lower. The Graton PM rate represents a 36% increase over the Thunder Valley data and a 148% increase over data from the combined 5 northern California gaming facilities. Using a trip generation rate that is higher ensures a conservative approach to identifying project impacts and associated mitigations.

As noted earlier, trip generation was prepared in consideration of actual data from five northern California gaming facilities. The largest of the facilities was Thunder Valley Casino located along Highway 65 and which is less than 7 miles from I-80. Thunder Valley is considered by many gaming operators to be the most successful casino in California. It offers slot machines, table games, a wide variety of restaurants, bars, and professional entertainment similar to the proposed Graton Casino. Thunder Valley's location is within roughly 30 miles of 1.9 million people residing in 5 Sacramento area counties (2000 census). At a similar distance from the proposed Graton casino located near Santa Rosa there are four counties with a combined population of approximately

1.0 million (2000 census). Based on this information, comparisons between Thunder Valley and Graton casino are considered reasonable and valid.

Trip generation for the 300 room hotel was based on data contained in ITE *Trip Generation* but adjusted with the assumption that most guests at the hotel would also be guests of the casino. The casino is expected to implement a pricing structure for the rooms that favors casino guests. Therefore, the ITE hotel rate was reduced by 2/3 to account for internal capture to and from the casino. Reducing the rate is based on professional judgment and is consistent with the Shingle Springs report which researched this issue and ultimately assumed a 3/4 reduction for hotel rooms.

Sometimes developments also attract trips that are already on the road that stop as they pass by the site. These are not new vehicle trips but are considered to be pass-by trips. Although some trips to the site will be pass-by trips, no empirical data was readily available to determine a reasonable pass-by rate. Therefore, pass-by trips are conservatively not assumed in the analysis.

Furthermore, development projects also attract diverted link trips. These are also trips that are already on the road but change their route to access to the site. These trips originate from adjacent freeways, highways, or city streets. Although some trips to the casino site will be diverted link trips, no empirical data was readily available to determine a reasonable rate. Therefore, diverted link trips are conservatively not assumed in the analysis.

Although pass-by and diverted link reductions are not assumed in the analysis, it is reasonable to assume that 15 percent or more of the project trips are from these two trip types. Therefore, trips associated with the proposed casino (at 4.95/1000 s.f.) are conservatively overestimated by approximately 15 percent (due to pass-by and diverted link trips) already on the freeway and intersections away from the general vicinity of the project site.

It is recognized that some incidental trips may occur in relation to the casino such as wine tasting tours, costal activities, and other off-site attractions; however, because of the conservative nature of the casino trip generation rate assumptions, these incidental trips are accounted for in the PM trip generation calculations.

Project Trip Distribution and Assignment

In preparation of the traffic distribution, Kimley-Horn reviewed the project's use in proximity to the surrounding population centers. Because of the nature of the project, customers and employees are expected to travel from nearby locations and beyond. Much of the trips are expected to travel to/from US-101. The location of the San Francisco Bay Area population in relation to the project site, as well as peak hour turning movement volumes at the study intersections, the likely customer and employee

base for the site, major connections to highways, and potential access limitations, were evaluated in order to estimate the likely distribution of project traffic.

Trip generation and distribution for the casino/hotel includes a mixture of passenger cars, trucks, and RVs and was evaluated based on the assumption that two percent of the vehicles on roads accessing the site would be trucks or RVs.

Potential Conflicts with Special Event Traffic

The project sites are located more than 4 miles driving distance from the Spreckels Performing Arts Center and Sonoma State University (SSU) which is the home of the future Green Music Center as well as the Evert B. Person Theatre.

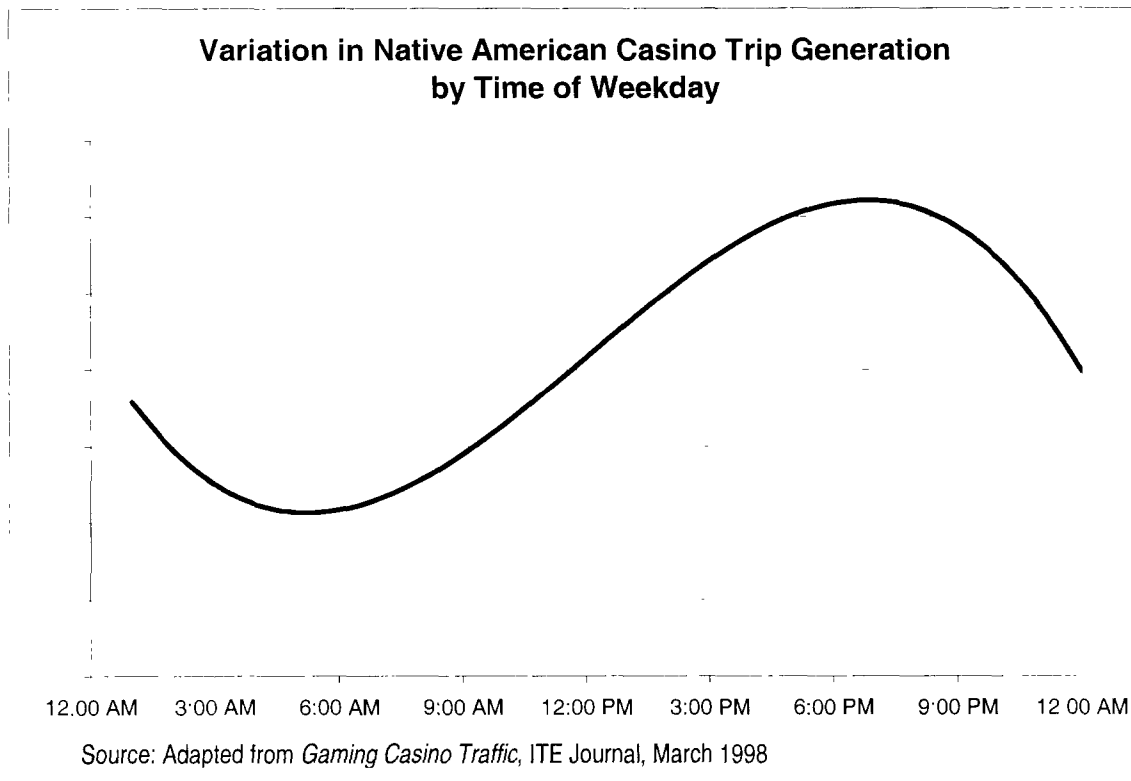
Spreckels Performing Arts Center houses two theatres – the Nellie W. Coddling Theatre which seats 550 patrons and the Bette Condiotti Experimental Theatre which seats up to 125 patrons. Most events occur on Saturday or Sunday with start times between 7:30 and 8:00 PM. Some weekday events also occur but they are frequently held in the middle of the day.

SSU houses many performance spaces – the Warren Auditorium seating up to 182 patrons, Ives 119 seating up to 200 patrons, PE 1 Studio Theatre seating up to 150 patrons, Ives 76 Studio Theatre seating 50 patrons, the Evert B Person Theatre seating up to 475 patrons. The future Green Music Center which is scheduled to open in spring of 2008 will include an inside concert hall seating up to 1,400 patrons with an outside venue for events up to 10,000 patrons. Events are scheduled on weekdays and weekends with start times between 7:30 and 8:00 PM. Occasionally, some weekday events are also scheduled in the middle of the day.

According to the Executive Director of the Green Music Center at SSU, the events with the greatest attendance are most likely to occur during the summer months between June and September and will attract between 3,000-10,000 people per event. Events of this magnitude are expected to occur about once per week (primarily on Saturdays). Other smaller events, with attendance up to 1,000 people, include concerts and other performances, and occur roughly ten times per month throughout the year. Concert times have not been determined but it is assumed that they will be similar to other SSU events.

Due to the proximity of the performing arts centers and concert start times, conflicts between casino/hotel traffic and the performing arts centers will be limited. The centers are located on the east side of the freeway and traffic generally travels through different intersections. However, on days when events are held at the performing arts centers, surges of traffic commonly occur, with a sharp peak immediately following the conclusion of the event.

As noted earlier, casino traffic follows a different arrival and departure pattern, with weekday traffic following a smoother curve that builds steadily from early morning until about 7:00 PM, after which traffic levels slowly decline. On weekends, the peak is generally delayed until around 9:00 PM or later.



Although peak traffic generated by the hotel and casino would not regularly coincide with peak traffic generated by the performing arts centers, there will be times when traffic events overlap and when the size of the events conflict. During summer months when large outdoor events are held, combined traffic congestion will potentially have an adverse effect on traffic operations. This conflict will most likely occur at the Rohnert Park Expressway interchange. Although the frequency of the occurrences is expected to be low, the casino/hotel project should provide funding for special event traffic monitoring at the Rohnert Park Expressway interchange to identify conflicts during outdoor events generate high traffic levels. If conflicts occur, the project should provide traffic management coordination between the casino/hotel project and Green Music Center in consultation with CHP and Caltrans to assist in traffic control

Potential Effects on Transit, Bicycle, and Pedestrian Mobility

As noted earlier, Sonoma County Transit and Golden Gate Transit do not provide service near the site and have no plans to provide service. Therefore, this traffic study conservatively assumed no reduction in peak hour vehicular traffic due to travel by public transit. Transit ridership could be increased if the project operated a shuttle

between the casino and Rohnert Park transit hubs. This would allow patrons to reach the site from many areas of the Bay using conventional transit routes. Shuttle service could circulate between the two destinations, thus helping reduce traffic generated by the project. The casino should also sponsor charter buses from farther away destinations such as Marin County and the south Bay. The buses could serve specific groups such as senior citizens or social clubs, while reducing the number of single occupancy vehicles to the site. Preferential carpool or vanpool spaces should also be provided at the project site to encourage ridesharing by patrons and employees.

According to the 2000 U.S. Census, 4.7% of Rohnert Park residents use transit to travel to work. This typically represents the highest level of transit ridership during the day. If it is conservatively assumed that 4.7% of employees or customers will use transit (assuming a shuttle connection is provided by the casino) during the peak hours of the day, it represents approximately 107 in the weekday PM peak periods.

Data was not readily available for peak hour ridership levels on the Sonoma County Transit or Golden Gate Transit systems but during the weekday periods, the routes operate every 30 minutes and observations indicate the sufficient capacity exists on the buses to accommodate the potential additional transit demand. Furthermore, dispersion of the project-generated riders to the bus routes would result in a minimal effect on transit capacity. Thus the project impact on transit service is determined to be less than significant.

The effect of the casino/hotel on the proposed Sonoma-Marín Area Rail Transit (SMART) was also evaluated. It was determined that because the SMART system will only operate during the AM and PM commute hours, there is little opportunity for casino employees or patrons to use service. Therefore the project impact on SMART service is determined to be less than significant.

Park and ride facilities at the Rohnert Park Expressway interchange are not expected to be affected development of either a casino or business park.

Due to the low volume of pedestrians and bicyclists in the vicinity of the sites, the lack of continuous sidewalks and bikeways, and the nature of the casino/hotel project, it is unlikely that significant numbers of project patrons will walk or bike to the site. Furthermore, the project is not expected to have a notable effect on current mobility for bicyclists and pedestrians.

Construction Traffic Impacts

The day-to-day construction operations for the proposed construction of the Graton Rancheria Casino and Hotel will include traffic impacts related to construction employees, fill, and construction material importation. The principal activities expected to generate traffic related to the construction are listed below:

- Employee trips are based on the number of employees estimated to be on site during different points throughout the project. Each employee is assumed to drive to and from the site alone each day and it is assumed that 20% of the workers leave and return to the site for various purposes during the day.
- Construction import is based on the number of trucks required to deliver construction materials to the site, including building materials such as wood, steel, and masonry as well as fill from a nearby borrow pit.
- Heavy equipment is based on the number of large construction vehicles expected during the project duration. The heavy equipment expected as part of this project was provided by Station Casinos.

Using the expected traffic information above, construction related traffic generation was estimated. Each construction activity listed above will generate different volumes of traffic at different points in the project. For example, the delivery and removal of heavy equipment to the project site will happen only a few times during the project duration. The construction related traffic is expected to remain relatively consistent throughout the project.

It is estimated that it will take 27 months to complete construction of the project including 3 months for the grading of the site.

Construction Material Import – It is estimated that 300,000 cubic yards of earthwork will be required to develop the site for Alternative A. It is expected that construction of the proposed project will involve the transfer of fill from a nearby borrow pit to obtain the approximate 275,000 cubic yards that the project grading plan calls for that are not available from on-site excavation. There are two near by quarries where the fill can be imported from. Based on a carrying capacity of 12 cubic yards per truck, it is estimated that it would take approximately 22,917 trucks to complete this task. Doubling to account for the inbound and outbound component of each round trip, this would result in approximately 45,834 trip ends. Conservatively assuming that these were spread out over a period of 5 months, with trucks operating at 6 days per week, 8 hours per day, this results in approximately 191 trucks making 382 trip ends on an average day, and 24 trucks making 48 trip ends on any given hour (including potentially the peak hour) for Alternative A.

Alternatives B, D, and E would require 150,000 cubic yards of earthwork to develop the site which would result in 87 trucks making 174 trip ends on an average day, and 11 trucks making 22 trip ends on any given hour (including potentially the peak hour). Alternative C would require 350,000 cubic yards of earthwork to develop the site which would result in 226 trucks making 452 trip ends on an average day, and 29 trucks making 58 trip ends on any given hour (including potentially the peak hour).

Once the site is graded, the project will also require the importation of construction material including, raw materials, the building pad, concrete, the parking lot base and asphalt paving. This results in a material importation of 3,000 to 4,000 truckloads of

material which will occur over approximately 23 months. The importation will require approximately 8 to 9 truck trips per day outside of the off-site fill delivery. Each truck will generate 1 inbound and 1 outbound trip, accounting for 2 trips. Therefore, during the peak construction period the project will generate about 18 truck trips ends per day.

Because the import truck traffic generates significantly less than the project's equivalent passenger car traffic generation and the vehicle path travels through generally uncongested intersection movements, it should not significantly impact the capacity of any study intersection. However, this level of truck traffic may have an impact on quality of life including increased noise, visual impact, perception of lower traffic safety, and the track of debris and mud onto roadways may create a perceptual impact as well as a physical impact. See Project Mitigations section for measures to address these impacts.

Employees – The weekday work will begin around 7:00 a.m. and end around 4:00 p.m. The construction worker arrival peak occurs between 6:30 a.m. and 7:30 a.m., and the departure peak occurs between 4:00 p.m. and 5:00 p.m. This is generally prior to the areawide commute peaks between 7:30 a.m. and 8:30 a.m. and between 4:30 p.m. and 5:30 p.m. with a period of overlap into the commute peak periods. There will be 600 to 800 employees on-site during construction and only half will be on the roadway during the peak hours.

Workers will generate peak parking demand equivalent to roughly 800 vehicles during the peak construction period. Additionally, deliveries, visits, and other activities may generate peak non-worker parking demand of up to another 50 trucks and autos. Therefore, an approximate demand of 850 vehicle parking spaces will be required during the peak construction period for the construction employees. It is anticipated that this demand will be able to be met on site at the casino construction site. As an alternative, the project could lease a remote lot and shuttle employees to the construction site.

The impacts of construction related employee traffic and parking are considered less than significant because the construction commute peak and the areawide commute peak will only have a brief period of overlap and the parking demand will be able to be met at the casino construction site.

Heavy Equipment – Approximately 30 pieces of heavy equipment will be used based on wide-load permits necessary throughout construction. Delivery and removal of heavy equipment will occur outside of the areawide commute peak and equipment will be moved in and out of the site on different days. The periodic delivery during off-peak hours constitutes a minimum disruption of traffic.

The impacts of the periodic delivery and removal of heavy equipment during off-peak hours constitutes a minimum disruption of traffic and thus is considered less than significant.

ALTERNATIVE A – WILFRED AVENUE SITE

The Alternative A casino and hotel is proposed to be located as shown in **Figure A1**, which is bordered by Wilfred Avenue in the north, Business Park Drive in the south, Langner Avenue in the west, and Dowdell Avenue in the east.

The site layout as shown in **Figure A2** includes a main building of approximately 450,000 square feet for a casino, restaurants, food court, event center, banquet facilities, lobby, pool, and other ancillary functions. In addition, the project is planned to include up to 300 hotel rooms, primarily for casino guests.

A breakdown of square footage as it relates to traffic impacts is shown below:

- Casino and Entertainment areas – 408,150 s.f.
- Lobby/Bar/Back of House/Sundries – 14,750 s.f.
- Pool and Spa – 27,100 s.f.
450,000 s.f.

- Hotel Rooms – 291,000 s.f.

The site plan also shows supporting uses such as parking lots, parking structure, and wastewater treatment facilities.

Site Access

The main access points to the project are located on Langner Avenue and Labath Avenue via Wilfred Avenue. These approaches are assumed to operate as full movement driveways with no turn limitations. The project will extend Labath Avenue to the south to intersect Business Park Drive. A third project access will be on Labath Avenue just north of Business Park Drive and is assumed to be a full movement driveway with no turn limitations.

Currently, none of the accesses are signalized.

Trip Generation – Alternatives A, B, and C

Trip generation was calculated based on the previous discussions and is reported in **Table A1**. Additional trip generation calculations are contained in the **Appendix**. Since Alternatives A, B and C are all casinos with the same amount of gaming space and hotel space, trip generation numbers are the same for all three Alternatives. As seen in the table Alternatives A, B and C are expected to generate 1,384 new trips in the AM and 2,287 new trips in the weekday PM peak hour. Although project trip generation was prepared for daily, AM, and PM periods, only the PM traffic conditions were evaluated in this report because it represents the time period where the project will contribute to the

greatest amount of congestion and potential mitigation. Other time periods that were considered included weekday AM, weekday late PM, and Saturday. On weekday late evenings and Saturday evenings the casino facility will generate more trips than during the 4-6 PM weekdays, but the background traffic is lower, making the overall number of vehicles on the road lower as well. Therefore, the PM peak represents the worst case period to evaluate.

Table A 1 – Alternatives A, B and C Project Trip Generation

LAND USE	Trips						
	Daily	AM Peak Hour			PM Peak Hour		
	Total	Entering	Exiting	Total	Entering	Exiting	Total
Casino 450,000 s.f.	17,744	930	398	1,328	1,181	1,047	2,228
Hotel 300 Room*	817	34	22	56	31	28	59
Net New Vehicle Trips	18,261	964	420	1,384	1,212	1,075	2,287

*Trip rate is ITE Land Use Code 310 – Hotel. Rate reduced by 2/3 to account for internal capture to/from casino.

Project Trip Distribution and Assignment

Based on the factors discussed in the General Project Information section above it was determined that approximately 30% of the project traffic would be distributed to destinations north of the site, with the remaining 70% distributed south of the site. To be conservative, only a small percentage of project traffic was assumed to be generated or attracted in the immediate vicinity of the project site. The project traffic distribution is shown in **Figure A3** and **Figure A4**. **Figure A5** illustrates project traffic assigned to the study intersections based on the assumed trip distribution. As seen in **Figure A5**, most of the project traffic is expected to come from the freeway therefore it was assumed that most of the traffic would use Labath Avenue because of its closer proximity to the freeway. As noted in the distribution, some traffic leaving the project site is expected to avoid congestion at Wilfred Avenue and Stony Point Road by using Millbrae Avenue.

Near-Term Plus Project Traffic Volumes

Near-term 2008 traffic volumes were combined with vehicle trips expected to be generated by the Alternative A casino and hotel project. **Figure A6** illustrates the combined near-term turning movement volumes at the study intersections.

Long-Term Plus Project Traffic Volumes

Long-term 2020 traffic volumes were combined with vehicle trips expected to be generated by the Alternative A casino and hotel project. **Figure A7** illustrates the combined long-term turning movement volumes at the study intersections.

Alternative A LOS Conditions and Impacts at Intersections

Traffic operations were evaluated under the following development conditions:

- Near-term conditions with Alternative A (year 2008)
- Long-term Cumulative conditions with Alternative A (year 2020)

In the near-term analysis for Alternative A, it was assumed that the Wilfred Avenue widening project will have taken place before the casino/hotel opens. The Memorandum of Understanding (MOU) between the City of Rohnert Park and the Federated Indians of the Graton Rancheria stated that the tribe would help financially to speed up the timeline of the widening project to occur before the casino/hotel opens in 2008. The MOU was negotiated before Alternative A existed, but it was assumed that the MOU will be renegotiated to apply to Alternative A as well.

Results of the analysis are presented in **Table A2**. (Results shown as bold in the table do not meet operational standards.) The signal control is listed as TS for a signalized intersection and TWSC for a two-way stop-controlled intersection. Two-way stop-controlled (TWSC) intersections maybe operate acceptably overall but only the worst approach is reported in the table. The overall level of service is reported for signalized intersections. Additional detail is provided in the **Appendix**. As shown in the results, the following intersections and approaches will fail to meet acceptable level of service thresholds based on established significance criteria and with the addition of project-related traffic.

2008 Results

- Stony Point Road/Wilfred Avenue
- Langner Avenue/Wilfred Avenue
- Labath Avenue/Wilfred Avenue
- Dowdell Avenue/Wilfred Avenue
- Redwood Drive/Wilfred Avenue
- Golf Course Drive/Commerce Boulevard
- Commerce Boulevard/US-101 NB Ramps
- Rohnert Park Expressway/Labath Avenue
- Rohnert Park Expressway/Redwood Drive
- Millbrae Avenue/Stony Point Road

Table A 2 – Alternative A Levels of Service

	Intersection	Criteria	Signal Control	2005		2008				2020			
				Existing		Base (w/o Proj.)		With Project		Base (w/o Proj.)		With Project	
				LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
1	Stony Point Rd/ Wilfred Ave	D	TWSC	F	109.1	F	238.0	F	718.6	F	401.6	F	OVRFL
2	Primrose Ave/ Wilfred Ave	D	TWSC	A	9.4	B	11.3	B	13.7	B	12.4	C	16.1
3	Whistler Ave/ Wilfred Ave	D	TWSC	A	9.4	B	11.3	B	13.7	B	12.4	C	15.7
4	Langer Ave/Wilfred Ave	D	TWSC	A	9.4	B	11.3	E	51.5	B	12.4	F	110.8
5	Labath Ave/Wilfred Ave	D	TWSC	A	9.1	E	48.3	F	OVRFL	F	491.5	F	OVRFL
6	Dowdell Ave/Wilfred Ave	D	TWSC	A	9.1	F	333.5	F	221.7	F	OVRFL	F	OVRFL
7	Redwood Dr/Wilfred Ave	D	TS	C	28.1	D	37.1	F	106.6	F	87.9	F	268.8
8	Redwood Dr/ Commerce Blvd	C	TS	D	46.5	C	26.6	C	26.9	-	-	-	-
9	Wilfred Ave/ US-101 SB Ramps	D	TS	-	-	C	22.5	D	37.8	C	33.2	F	84.0
10	Golf Course Dr/ Commerce Blvd	D	TS	E	61.7	D	44.0	F	91.3	F	96.5	F	118.8
11	Golf Course Dr/ Roberts Lake Rd	C	TS	B	18.4	B	17.0	B	15.1	B	10.9	B	13.1
12	Commerce Blvd/ US-101 NB Ramps	D	TS	C	28.7	C	34.9	F	92.3	E	69.8	F	103.0
13	Project Driveway/ Stony Point Rd	D	TWSC	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0
14	Business Park Dr/ Labath Ave	D	-	-	-	-	-	B	10.5	-	-	B	10.2
15	Business Park Dr/ Redwood Dr	D	TWSC	C	23.4	D	26.5	D	26.5	C	16.5	C	21.8
16	Rohnert Park Expwy/ Stony Point Rd	D	TS	C	25.2	C	24.0	C	24.0	C	22.1	C	27.1
17	Rohnert Park Expwy/ Labath Ave	C	TS	C	27.5	C	33.1	F	90.8	C	33.0	E	79.8
18	Rohnert Park Expwy/ Redwood Dr	C	TS	C	33.4	D	35.6	D	43.0	D	36.0	D	40.9
19	Rohnert Park Expwy/ US-101 SB Ramps	D	TS	C	23.2	C	23.2	C	22.4	C	24.5	C	24.9
20	Rohnert Park Expwy/ US-101 NB Ramps	D	TS	B	14.9	B	17.6	C	22.8	B	17.1	C	23.7
21	Rohnert Park Expwy/ Commerce Blvd	C	TS	C	31.5	C	33.9	C	33.9	C	34.9	D	39.6
22	Gravenstein Hwy/ Stony Point Rd	D	TS	C	34.7	C	31.5	D	38.1	D	39.9	E	63.5
23	Gravenstein Hwy/ Redwood Dr	D	TS	C	29.5	C	28.0	C	28.0	C	34.6	C	32.3
24	Gravenstein Hwy/ US-101 SB Ramps	D	TS	C	21.0	B	17.8	B	17.4	B	17.0	B	18.0
25	Gravenstein Hwy/ US-101 NB Off-Ramp	D	TS	B	16.2	B	13.5	B	19.2	B	18.7	C	20.9
26	Millbrae Ave/ Stony Point Rd	D	TWSC	E	38.3	E	38.2	F	59.0	F	70.6	F	113.3
27	Millbrae Ave/ Primrose Ave	D	TWSC	B	11.1	B	11.4	B	11.6	B	12.4	B	12.1
28	Millbrae Ave/ Whistler Ave	D	TWSC	B	11.3	B	11.5	B	11.7	B	12.4	B	12.3
29	Millbrae Ave/ Langner Ave	D	TWSC	A	9.6	A	9.9	B	10.9	B	11.2	B	11.3
30	Millbrae Ave/ Labath Ave	D	TWSC	B	10.8	B	11.2	B	11.4	B	13.5	B	12.5
31	Millbrae Ave/ Dowdell Ave	D	TWSC	B	11.2	B	11.3	B	11.3	B	11.6	B	11.3

2020 Results

- Stony Point Road/Wilfred Avenue
- Langner Avenue/Wilfred Avenue
- Labath Avenue/Wilfred Avenue
- Dowdell Avenue/Wilfred Avenue
- Redwood Drive/Wilfred Avenue
- Wilfred Avenue/US-101 SB Ramps
- Golf Course Drive/Commerce Boulevard
- Commerce Boulevard/US-101 NB Ramps
- Rohnert Park Expressway/Labath Avenue
- Rohnert Park Expressway/Redwood Drive
- Rohnert Park Expressway/Commerce Boulevard
- Gravenstein Highway (SR-116)/Stony Point Road
- Millbrae Avenue/Stony Point Road

Alternative A Traffic Signal Warrant Analysis

Alternative A, near-term and long-term, traffic volumes at unsignalized study intersections were compared against peak hour warrant in the *2003 Manual on Uniform Traffic Control Devices (MUTCD)* and the *California Supplement*.

Results of the analysis showed that the following intersections will satisfy traffic signal Warrant #3 by year 2008 and 2020.

- Stony Point Road/Wilfred Avenue (2008 and 2020)
- Langner Avenue/Wilfred Avenue (2020)
- Labath Avenue/Wilfred Avenue (2008 and 2020)
- Dowdell Avenue/Wilfred Avenue (2008 and 2020)
- Millbrae Avenue/Stony Point Road (2008 and 2020)

Other warrants such as for minimum vehicle volumes, interruption of continuous traffic, and traffic progression were not evaluated because they generally require higher traffic volumes to be satisfied. Accident history and school areas were also not evaluated based on the results of field observations, which noted that neither of these warrant thresholds was likely to be met. A copy of the analysis summary for Warrant #3 is included in the **Appendix**.



Alternative A LOS Conditions and Impacts on Freeway and Ramps

Project trips generated by the proposed casino and hotel were added to the year 2008 and 2020 forecast freeway volumes.

Traffic analyses were completed to evaluate the operation of the study freeway segments and ramps in the year 2008 and 2020, with the addition on the casino and hotel project. Freeway segment analyses were limited to the mix-use travel lanes which are expected to have significantly more congestion than the future HOV lanes.

Results of the analyses are presented in **Table A3**. (Results shown as bold in the table do not meet operational standards.) As shown in the table, project traffic will add to the background congestion of the freeway. Significant congestion is expected with the project.

Table A 3 – Alternative A Freeway Levels of Service

US-101 Section/Ramp	Criteria		Existing		2008		2008 + Alt A		2020		2020 + Alt A	
	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)
Northbound												
US-101 South of Gravenstein Highway (NB)	E	22.2	C	19.1	D	26.9	C	25.6	E	38.4	E	38.4
Gravenstein Highway NB Off-Ramp	E	30.8	C	27.4	E	35.2	D	34.1	F	41.8	F	41.8
Gravenstein Highway NB On-Ramp	E	34.5	D	29.5	E	36.5	E	36.1	F	43.1	F	43.1
US-101 Between Gravenstein Highway and Rohnert Park Expressway (NB)	E	28.1	C	23.5	D	31.7	D	32.3	F	-	F	-
Rohnert Park Expressway NB Off-Ramp	E	33.6	D	28.8	D	33.9	E	37.1	F	42.1	F	42.1
Rohnert Park Expressway NB On-Ramp (Loop Ramp)	E	32.1	C	21.8	C	24.5	C	23.2	C	25.9	C	25.9
Rohnert Park Expressway NB On-Ramp	E	32.5	C	22.1	D	31.2	D	29.0	E	39.1	E	39.1
US-101 Between Rohnert Park Expressway and Wilfred Avenue (NB)	E	28.9	C	22.1	D	31.2	D	29.0	E	39.1	E	39.1
Wilfred Avenue NB Off-Ramp	E	35.4	C	22.1	D	31.2	D	29.0	E	39.1	E	39.1
Wilfred Avenue NB On-Ramp	E	42.0	D	30.3	D	33.6	E	40.4	E	41.0	E	41.0
US-101 Between Wilfred Avenue and Santa Rosa Avenue (NB)	E	26.7	D	30.3	D	33.6	E	40.4	E	41.0	E	41.0
Santa Rosa Avenue NB Off-Ramp	E	37.2	D	30.3	D	33.6	E	40.4	E	41.0	E	41.0
US-101 North of Santa Rosa Avenue (NB)	E	20.3	C	22.0	C	23.8	D	29.7	D	32.6	D	32.6
Southbound												
US-101 North of Santa Rosa Avenue (SB)	E	22.9	C	24.1	D	26.1	D	28.5	D	31.2	D	31.2
Santa Rosa Avenue SB On-Ramp	E	31.2	D	32.7	E	36.2	F	-	F	-	F	-
US-101 Between Santa Rosa Avenue and Wilfred Avenue (SB)	E	31.5	D	32.7	E	36.2	F	-	F	-	F	-
Wilfred Avenue SB Off-Ramp	E	38.0	E	38.8	E	40.8	F	44.8	F	46.8	F	46.8
Wilfred Avenue SB On-Ramp	E	33.7	D	33.4	E	39.4	E	39.9	F	48.8	F	48.8
US-101 Between Rohnert Park Expressway and Wilfred Avenue (SB)	E	35.2	D	33.4	E	39.4	E	39.9	F	48.8	F	48.8
Rohnert Park Expressway SB Off-Ramp	E	38.0	D	33.4	E	39.4	E	39.9	F	48.8	F	48.8
Rohnert Park Expressway SB On-Ramp (Loop Ramp)	E	36.0	D	30.9	D	35.4	E	38.5	F	41.3	F	41.3
Rohnert Park Expressway SB On-Ramp	E	35.1	D	30.1	D	36.1	F	37.5	F	43.0	F	43.0
US-101 Between Rohnert Park Expressway and Gravenstein Highway (SB)	E	27.1	C	22.3	D	29.8	E	36.6	F	-	F	-
Gravenstein Highway SB Off-Ramp	E	33.9	D	29.2	E	36.1	F	40.3	F	47.2	F	47.2
Gravenstein Highway SB On-Ramp	E	33.7	D	32.1	E	38.3	F	42.3	F	48.5	F	48.5
US-101 South of Gravenstein Highway (SB)	E	24.7	C	21.8	D	29.0	D	32.0	F	-	F	-

Potential Effects on Intersection Safety

Traffic volumes generated by the project were reviewed in consideration of existing intersection collision history and the potential for increased accidents. According to collision data, accidents involving bicyclist and pedestrians are very low. Many intersections did not report any collisions of this type during the survey period. This suggests that bicycle and pedestrian volumes are relatively low and study intersections have minimal safety hazards for individuals biking or walking. Although the project will introduce increased traffic volumes at some intersections, bicyclists and pedestrians are expected to be able to travel through study intersections with similar levels of safety. Historically casinos do not attract a significant amount of bicycle and pedestrian traffic. . Therefore, the expected amount of pedestrian and bicycle traffic is nominal and a significant increase in bicycle and pedestrian accidents is unlikely.

The potential for increased collisions between motorized vehicles was also considered. Collision frequency and severity are a function of many complex factors that vary depending on the location and type of intersection or roadway segment. Factors include traffic control such as signals or stop signs, lane and shoulder widths, grades, driveway densities, roadside hazards or obstacles, presence of left and right turn lanes, sight distance, congestion, and others.

Because of the number and interrelationships of the variables, accurate crash prediction is difficult. However, the proposed casino and hotel project will increase roadway congestion, a factor which could result in an increase in traffic collisions if left unmitigated. Other factors are expected to remain unaffected.

As noted previously, the purpose of this study is to address the traffic and transportation effects of the proposed casino and hotel development. This includes mitigation improvements to restore traffic operations to levels within acceptable standards or to levels as good as or better than without the casino/hotel project. Any potential increases in accidents due to project-related traffic would be offset by the implementation of roadway improvements included as mitigation. Therefore, if mitigations are implemented as proposed in this report, no significant increase in daytime or nighttime collisions is expected.

Queuing Summary

As congestion increases it is common for traffic at signals and stop signs to form lines of stopped (or queued) vehicles. Queue lengths were determined for each lane and measure the distance that vehicles will backup in each direction approaching an intersection. The 95th percentile queue is calculated by using 95th percentile traffic to account for fluctuations in traffic and represents a condition where 95 percent of the time during the peak period, traffic volumes and related queuing will be at, or less, than determined by the analysis. Average queuing is generally less. Ninety-fifth percentile queuing was checked under the various future year development conditions and in consideration of the planned intersection and signal timing improvements. A typical vehicle length of 25 feet is used in the queuing analysis. A summary of the queuing results can be seen in **Table A4**. The results indicate dedicated turn lanes where queuing may exceed their storage limits. It should be noted that some variations in intersection queuing between scenarios is a result of planned intersection and signal timing improvements.

Most queuing impacts can be mitigated and are included in the mitigations section. There are some significant and unavoidable queuing impacts due to existing and/or proposed right-of-way at the following locations:

- Redwood Drive/Wilfred Avenue
- Roberts Lake Drive/Golf Course Drive
- Redwood Drive/Rohnert Park Expressway



Table A 4 – Alternative A Queuing Summary

Intersection	Turning Movement	Bay Length	Queue Length		Intersection	Turning Movement	Bay Length	Queue Length	
			2008	2020				2008	2020
1 Stony Point Road and Wilfred Avenue	EBL				16 Stony Point Road and Rohnert Park Expy	EBL			
	EBR					EBR			
	WBL					WBL			
	WBR	35	<25	60		WBR	175	300	300
	NBL	150	<25	<25		NBL			
	NBR					NBR	450	200	250
4 Langner Avenue and Wilfred Avenue	SBL	150	<25	35	SBL	700	250	275	
	SBR				SBR				
	EBL				EBL	180	50	75	
	EBR				EBR	200	50	50	
	WBL	150		<25	WBL	250	225	150	
	WBR				WBR				
5 Labath Avenue and Wilfred Avenue	NBL				NBL	130	75	100	
	NBR				NBR	130	200	150	
	SBL				SBL	100	700	675	
	SBR				SBR				
	EBL	150		<25	EBL	200	325	275	
	EBR				EBR	200	150	125	
6 Dowdell Avenue and Wilfred Avenue	WBL				WBL	450	450	525	
	WBR	150		95	WBR	160	325	400	
	NBL				NBL	250	175	150	
	NBR				NBR	250	600	550	
	SBL				SBL	250	450	550	
	SBR				SBR	175	275	250	
7 Redwood Drive and Wilfred Avenue	EBL	150	75		17 Labath Avenue and Rohnert Park Expy	EBL			
	EBR	150	100	250		EBR			
	WBL					WBL	200	50	75
	WBR					WBR	250	225	150
	NBL	150	400	250		NBL	130	75	100
	NBR	100	750	475		NBR	130	200	150
8 Redwood Drive and Commerce Boulevard	SBL	275	700	775	SBL	100	700	675	
	SBR				SBR				
	EBL	75	25		EBL	200	325	275	
	EBR	75	175		EBR	240	475	525	
	WBL	100	25		WBL	200	200	250	
	WBR				WBR				
9 Wilfred Avenue and SB US 101 Ramps	NBL	150	200		18 Redwood Drive and Rohnert Park Expy	NBL			
	NBR	150	<25			NBL	250	175	150
	SBL	200	50			NBR	250	600	550
	SBR					SBL	250	450	550
	EBL					SBR	175	275	250
	EBR					EBL			
10 Golf Course Drive and Commerce Blvd	EBR				19 SB US 101 Ramps and Rohnert Park Expy	EBR			
	WBL	100	1100	250		EBR	200	150	125
	WBR					WBL	450	450	525
	NBL	150	1800	875		WBR	160	325	400
	NBR					NBL	250	175	150
	SBL					NBR	250	600	550
11 Roberts Lake Drive and Golf Course Drive	SBR				SBL	250	450	550	
	EBL	80	225	200	SBR	175	275	250	
	EBR				EBL	250	175	200	
	WBL				EBR				
	WBR				WBL	500	175	150	
	NBL				WBR	150	125	100	
12 Commerce Blvd and NB US 101 Ramps	NBR				20 NB US 101 Ramps and Rohnert Park Expy	NBR			
	SBL	100	<25	25		NBL	225	400	375
	SBR	175	675	700		NBR			
	EBL	225	95	73		SBL			
	EBR					SBR			
	WBL					EBL	250	325	350
15 Business Park Drive and Redwood Drive	EBR				21 Commerce Blvd and Rohnert Park Expy	EBR	240	475	525
	WBL					WBL	200	200	250
	WBR					WBR			
	NBL	150	<25	<25		NBL	250	475	450
	NBR					NBR	175	275	375
	SBL					SBL	150	125	225
16 Stony Point Road and Wilfred Avenue	SBR				22 Stony Point Road and Gravenstein Hwy	SBR	150	225	225
	EBL					EBL	250	175	200
	EBR					EBR			
	WBL					WBL	500	175	150
	WBR					WBR	150	125	100
	NBL					NBL	550	375	400
17 Labath Avenue and Rohnert Park Expy	NBR				23 Redwood Road and Gravenstein Hwy	NBR	675	100	100
	SBL					SBL	500	125	300
	SBR					SBR	625	250	250
	EBL					EBL	225	100	150
	EBR					EBR			
	WBL					WBL	150	50	75
18 Redwood Drive and Rohnert Park Expy	WBR				24 Gravenstein Hwy and SB US 101 Ramps	WBR	80	275	325
	NBL					NBL	50	50	50
	NBR					NBR			
	SBL					SBL	225	375	525
	SBR					SBR			
	EBL					EBL			
19 SB US 101 Ramps and Rohnert Park Expy	EBR				25 Gravenstein Hwy and NB US 101 Ramps	EBR			
	WBL	225	100	100		EBR	50	250	<25
	WBR					WBL	100	100	150
	NBL					WBR			
	NBR					NBL			
	SBL					NBR			
20 NB US 101 Ramps and Rohnert Park Expy	SBR				26 Stony Point Road and Millbrae Avenue	SBR	425	600	650
	EBL	190	25	25		EBL			
	EBR					EBR			
	WBL					WBL	120	50	50
	WBR					WBR	120	50	50
	NBL					NBL	505	<25	<25
21 Commerce Blvd and Rohnert Park Expy	NBR				26 Stony Point Road and Millbrae Avenue	NBR	120	<25	<25
	SBL	400	700	700		SBL	490	<25	<25
	SBR	400	350	325		SBR			
	EBL	190	25	25		EBL			
	EBR					EBR			
	WBL					WBL			

Alternative A Mitigations

Intersections with levels of service below established thresholds were investigated to determine the role of the Alternative A traffic in the projected operating conditions at those intersections. The evaluation disclosed that the following improvements as shown on **Table A5** are needed in the near-term (2008) and long-term (2020) to mitigate project impacts.

Table A6 summarizes the expected levels of service with the proposed mitigation. As mentioned previously, the signal control is listed as TS for a signalized intersection and TWSC for a two-way stop-controlled intersection. Two-way stop-controlled (TWSC) intersections maybe operate acceptably overall but only the worst approach is reported in the table. The overall level of service is reported for signalized intersections.

Figures A8 and 9 illustrate the mitigated lane geometry and traffic control.



Table A 5 – Alternative A Summary of Mitigations

Period	#	Intersection	Mitigation	Requires ROW?	Reason
2008	1	Stony Point Rd/ Wilfred Ave	<ul style="list-style-type: none"> Signalize Extend WB right turn bay to 75 feet 	No Yes	Capacity Queue
	2	Primrose Ave/ Wilfred Ave	No mitigation necessary	-	-
	3	Whistler Ave/ Wilfred Ave	No mitigation necessary	-	-
	4	Langer Ave/ Wilfred Ave	<ul style="list-style-type: none"> Add NB left and change all shared to through-right 	Tribeland	Capacity
	5	Labath Ave/ Wilfred Ave	<ul style="list-style-type: none"> Signalize Add WB left and change WB all shared to through-right ¹ Add NB right and change NB all shared to left-through 	No Yes Yes	Capacity Capacity Tribeland
	6	Dowdell Ave/ Wilfred Ave	<ul style="list-style-type: none"> Signalize Add WB left and change WB all shared to through-right ¹ Add EB left and change EB all shared to through-right ¹ 	No Yes Yes	Capacity Capacity Capacity
	7	Redwood Dr/ Wilfred Ave	<ul style="list-style-type: none"> Change WB left-through to WB left and change one WB right to WB through Change phasing east-west to protected from split Add EB left and EB right and change EB all shared to through ¹ 	No No Yes	Capacity Capacity Capacity
	8	Redwood Dr/ Commerce Blvd	No mitigation necessary	-	-
	9	Wilfred Ave/ US-101 SB Ramps	<ul style="list-style-type: none"> Extend SB left turn bay to 575 feet 	Yes	Queue
	10	Golf Course Dr/ Commerce Blvd	No mitigation necessary	-	-
	11	Golf Course Dr/ Roberts Lake Rd	No mitigation necessary	-	-
	12	Commerce Blvd/ US-101 NB Ramps	<ul style="list-style-type: none"> Change SB through to through-right Will require a two lane on-ramp with one lane as an auxiliary lane between the Wilfred Avenue and Santa Rosa Avenue interchanges May require additional bridge structure widening over Wilfred Avenue as well as over the Northwest Pacific Railroad tracks Add NB loop off-ramp that drops traffic onto WB Wilfred Ave Will require a short tunnel section to go under the NB on-ramp and Golf Course Road as well as demolition of the existing Chevron gas station Will require removal of a section of Commerce Blvd between Golf Course Dr and Redwood Dr to allow for the construction of the loop off-ramp May require a pump station May obstruct access to the proposed SMART station from Commerce Blvd via Golf Course Dr - access will be provided from Commerce Blvd via Redwood Dr 	Yes Yes	Capacity Capacity
	13	Project Driveway/ Stony Point Rd	No mitigation necessary	-	-
	14	Business Park Dr/ Labath Ave	No mitigation necessary	-	-
	15	Business Park Dr/ Redwood Dr	No mitigation necessary	-	-
	16	Rohnert Park Expwy/ Stony Point Rd	No mitigation necessary	-	-
	17	Rohnert Park Expwy/ Labath Ave	<ul style="list-style-type: none"> Change SB through-right to all-shared Change NB/SB phasing from protected to split phasing Extend SB left turn bay to 350 feet 	Yes No Yes	Capacity Capacity Queue
	18	Rohnert Park Expwy/ Redwood Dr	<ul style="list-style-type: none"> Optimize signal timing Extend EB left turn bay to 325 feet 	No No	Capacity Queue
	19	Rohnert Park Expwy/ US-101 SB Ramps	<ul style="list-style-type: none"> Extend SB left turn bay to 700 feet 	Yes	Queue
	20	Rohnert Park Expwy/ US-101 NB Ramps	<ul style="list-style-type: none"> Extend NB left turn bay to 400 feet 	Yes	Queue
	21	Rohnert Park Expwy/ Commerce Blvd	No mitigation necessary	-	-
	22	Gravenstein Hwy/ Stony Point Rd	No mitigation necessary	-	-
	23	Gravenstein Hwy/ Redwood Dr	No mitigation necessary	-	-
	24	Gravenstein Hwy/ US-101 SB Ramps	No mitigation necessary	-	-
	25	Gravenstein Hwy/ US-101 NB Off-Ramp	No mitigation necessary	-	-
	26	Millbrae Ave/ Stony Point Rd	<ul style="list-style-type: none"> Signalize 	No	Capacity
	27	Millbrae Ave/ Primrose Ave	No mitigation necessary	-	-
	28	Millbrae Ave/ Whistler Ave	No mitigation necessary	-	-
	29	Millbrae Ave/ Langner Ave	No mitigation necessary	-	-
	30	Millbrae Ave/ Labath Ave	No mitigation necessary	-	-
	31	Millbrae Ave/ Dowdell Ave	No mitigation necessary	-	-

¹ In summary, widen Wilfred Ave to three lanes from Labath Ave to Redwood Dr



Period	#	Intersection	Mitigation	Requires ROW?	Reason
2020	1	Stony Point Rd/ Wilfred Ave	<ul style="list-style-type: none"> Signalize Extend WB right turn bay to 75 feet 	No Yes	Capacity Queue
	2	Primrose Ave/ Wilfred Ave	No mitigation necessary	-	-
	3	Whistler Ave/ Wilfred Ave	No mitigation necessary	-	-
	4	Langer Ave/ Wilfred Ave	<ul style="list-style-type: none"> Add NB left and change all shared to through-right Signalize 	Tribe land No	Capacity Capacity
	5	Labath Ave/ Wilfred Ave	<ul style="list-style-type: none"> Signalize Add 2 NB rights and change NB all shared to through-left 	No Tribe land	Capacity Capacity
	6	Dowdell Ave/ Wilfred Ave	<ul style="list-style-type: none"> Signalize 	No	Capacity
	7	Redwood Dr/ Wilfred Ave	<ul style="list-style-type: none"> Add WB through Add WB left and change WB left-through to through Change phasing east-west to protected from split 	Yes Yes No	Capacity Capacity Capacity
	8	Redwood Dr/ Commerce Blvd	Modified Intersection (not analyzed)	-	-
	9	Wilfred Ave/ US-101 SB Ramps	<ul style="list-style-type: none"> Add EB right and change EB through-right to through Extend SB left turn bay to 575 feet 	Yes Yes	Capacity Queue
	10	Golf Course Dr/ Commerce Blvd	No mitigation necessary	-	-
	11	Golf Course Dr/ Roberts Lake Rd	No mitigation necessary	-	-
	12	Commerce Blvd/ US-101 NB Ramps	<ul style="list-style-type: none"> Add NB loop off-ramp that drops traffic onto WB Wilfred Ave. Will require a short tunnel section to go under the NB on-ramp and Golf Course Road as well as demolition of the existing Chevron gas station. May require a pump station. May obstruct access to the proposed SMART station from Commerce Blvd via Golf Course Dr - access will be provided from Commerce Blvd via Redwood Dr Change SB through to through-right. Will require a two lane on-ramp with one lane as an auxiliary lane between the Wilfred Avenue and Santa Rosa Avenue interchanges. May require additional bridge structure widening over Wilfred Avenue as well as over the Northwest Pacific Railroad tracks 	Yes Yes	Capacity Capacity
	13	Project Driveway/ Stony Point Rd	No mitigation necessary	-	-
	14	Business Park Dr/ Labath Ave	No mitigation necessary	-	-
	15	Business Park Dr/ Redwood Dr	No mitigation necessary	-	-
	16	Rohnert Park Expwy/ Stony Point Rd	No mitigation necessary	-	-
	17	Rohnert Park Expwy/ Labath Ave	<ul style="list-style-type: none"> Optimize signal timing Change SB through-right to all-shared Change NB/SB phasing from protected to split phasing Extend SB left turn bay to 350 feet 	No Yes No Yes	Capacity Capacity Capacity Queue
	18	Rohnert Park Expwy/ Redwood Dr	<ul style="list-style-type: none"> Add second WB right 	Yes	Capacity
	19	Rohnert Park Expwy/ US-101 SB Ramps	<ul style="list-style-type: none"> Extend SB left turn bay to 700 feet 	Yes	Queue
	20	Rohnert Park Expwy/ US-101 NB Ramps	<ul style="list-style-type: none"> Extend NB left turn bay to 400 feet 	Yes	Queue
	21	Rohnert Park Expwy/ Commerce Blvd	<ul style="list-style-type: none"> Optimize signal timing 	No	Capacity
	22	Gravenstein Hwy/ Stony Point Rd	<ul style="list-style-type: none"> Add a second SB left turn bay Add a EB right turn bay for 100 feet 	Yes Yes	Capacity Capacity
	23	Gravenstein Hwy/ Redwood Dr	No mitigation necessary	-	-
	24	Gravenstein Hwy/ US-101 SB Ramps	No mitigation necessary	-	-
	25	Gravenstein Hwy/ US-101 NB Off-Ramp	No mitigation necessary	-	-
	26	Millbrae Ave/ Stony Point Rd	<ul style="list-style-type: none"> Signalize 	No	Capacity
	27	Millbrae Ave/ Primrose Ave	No mitigation necessary	-	-
	28	Millbrae Ave/ Whistler Ave	No mitigation necessary	-	-
	29	Millbrae Ave/ Langner Ave	No mitigation necessary	-	-
	30	Millbrae Ave/ Labath Ave	No mitigation necessary	-	-
	31	Millbrae Ave/ Dowdell Ave	No mitigation necessary	-	-

Table A 6 – Alternative A Mitigated Intersection Levels of Service

	Intersection	Criteria	Signal Control	2005		2008				2020							
				Existing		Base (w/o Proj)		With Project		Mitigated		Base (w/o Proj)		With Project		Mitigated	
				LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
1	Stony Point Rd/ Wilfred Ave	D	TWSC	F	109.1	F	238.0	F	718.6	C	25.0	F	401.6	F	OVRFL	C	31.0
2	Primrose Ave/ Wilfred Ave	D	TWSC	A	9.4	B	11.3	B	13.7	B	13.7	B	12.4	C	16.1	C	16.1
3	Whistler Ave/ Wilfred Ave	D	TWSC	A	9.4	B	11.3	B	13.7	B	13.7	B	12.4	C	15.7	C	15.7
4	Langer Ave/Wilfred Ave	D	TWSC	A	9.4	B	11.3	E	51.5	C	23.5	B	12.4	F	110.8	C	30.7
5	Labath Ave/Wilfred Ave	D	TWSC	A	9.1	E	48.3	F	OVRFL	D	52.8	F	491.5	F	OVRFL	C	33.1
6	Dowdell Ave/Wilfred Ave	D	TWSC	A	9.1	F	333.5	F	221.7	B	12.4	F	OVRFL	F	OVRFL	D	46.4
7	Redwood Dr/Wilfred Ave	D	TS	C	28.1	D	37.1	F	106.6	D	43.1	F	87.9	F	268.8	D	47.2
8	Redwood Dr/ Commerce Blvd	C	TS	D	46.5	C	26.6	C	26.9	C	26.8	-	-	-	-	-	-
9	Wilfred Ave/ US-101 SB Ramps	D	TS	-	-	C	22.5	D	37.8	D	37.8	C	33.2	F	64.0	D	48.5
10	Golf Course Dr/ Commerce Blvd	D	TS	E	61.7	D	44.0	F	91.3	D	44.1	F	96.5	F	118.8	C	36.5
11	Golf Course Dr/ Roberts Lake Rd	C	TS	B	18.4	B	17.0	B	15.1	B	18.3	B	10.9	B	13.1	B	13.1
12	Commerce Blvd/ US-101 NB Ramps	D	TS	C	28.7	C	34.9	F	92.3	C	27.4	E	69.8	F	103.0	C	29.7
13	Project Driveway/ Stony Point Rd	D	TWSC	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0
14	Business Park Dr/ Labath Ave	D	-	-	-	-	-	B	10.5	B	10.5	-	-	B	10.2	B	10.2
15	Business Park Dr/ Redwood Dr	D	TWSC	C	23.4	D	26.5	D	26.5	D	26.5	C	16.5	C	21.8	C	21.8
16	Rohnert Park Expwy/ Stony Point Rd	D	TS	C	25.2	C	24.0	C	24.0	C	24.0	C	22.1	C	27.1	C	27.1
17	Rohnert Park Expwy/ Labath Ave	C	TS	C	27.5	C	33.1	F	90.8	C	31.8	C	33.0	E	79.8	C	29.7
18	Rohnert Park Expwy/ Redwood Dr	C	TS	C	33.4	D	35.6	D	43.0	C	35.5	D	36.0	D	40.9	C	35.3
19	Rohnert Park Expwy/ US-101 SB Ramps	D	TS	C	23.2	C	23.2	C	22.4	C	25.4	C	24.5	C	24.9	C	24.9
20	Rohnert Park Expwy/ US-101 NB Ramps	D	TS	B	14.9	B	17.6	C	22.8	C	22.8	B	17.1	C	23.7	C	23.7
21	Rohnert Park Expwy/ Commerce Blvd	C	TS	C	31.5	C	33.9	C	33.9	C	33.9	C	34.9	D	39.6	C	35.1
22	Gravenstein Hwy/ Stony Point Rd	D	TS	C	34.7	C	31.5	D	38.1	D	38.1	D	39.9	E	63.5	D	42.0
23	Gravenstein Hwy/ Redwood Dr	D	TS	C	29.5	C	27.8	C	28.5	C	28.5	C	34.6	C	32.3	C	32.3
24	Gravenstein Hwy/ US-101 SB Ramps	D	TS	C	21.0	B	17.8	B	17.9	B	17.6	B	17.0	B	18.0	B	18.0
25	Gravenstein Hwy/ US-101 NB Off-Ramp	D	TS	B	16.2	B	13.5	B	19.2	B	19.2	B	18.7	C	20.9	C	20.9
26	Milbrae Ave/ Stony Point Rd	D	TWSC	E	38.3	E	38.2	F	59.0	C	21.2	F	70.6	F	113.3	C	21.3
27	Milbrae Ave/ Primrose Ave	D	TWSC	B	11.1	B	11.4	B	11.6	B	11.6	B	12.4	B	12.1	B	12.1
28	Milbrae Ave/ Whistler Ave	D	TWSC	B	11.3	B	11.5	B	11.7	B	11.7	B	12.4	B	12.3	B	12.3
29	Milbrae Ave/ Langner Ave	D	TWSC	A	9.6	A	9.9	B	10.9	B	10.9	B	11.2	B	11.3	B	11.3
30	Milbrae Ave/ Labath Ave	D	TWSC	B	10.8	B	11.2	B	11.4	B	11.4	B	13.5	B	12.5	B	12.5
31	Milbrae Ave/ Dowdell Ave	D	TWSC	B	11.2	B	11.3	B	11.3	B	11.3	B	11.6	B	11.3	B	11.3

Results indicate that the freeway will not meet standards with the project, even with the future construction of HOV lanes, ramp metering, and auxiliary lanes associated with the Wilfred interchange project. As mitigation the project should do the following which will result in the mitigated levels of service shown in **Table A7**:

- Adjust the ramp metering to account for the additional project traffic at the Wilfred Avenue interchange in the long-term (2020). Most metering adjustments can be minor and are not expected to have queuing effects on the local street network. However, the southbound on-ramp will require heavy metering to obtain an acceptable level of service for the freeway ramp merge area which may create a long queue backed up on the ramp.
- The project should contribute to the construction of auxiliary lanes between Rohnert Park Expressway and Gravenstein Highway (SR-116) in the long-term (2020).
- The project should contribute to the construction of the Wilfred Avenue interchange project, including HOV lanes, ramp metering, and auxiliary lanes in the near-term (2008).
- The project should contribute to the construction of an additional traffic lane in the southbound direction from Santa Rosa Avenue to south of Gravenstein Highway (SR-116) as well as an additional traffic lane in the northbound direction from south of Gravenstein Highway (SR-116) to Gravenstein Highway (SR-116) in the long-term (2020).

Aside from roadway improvements to mitigate protect impacts, the casino and hotel should coordinate with the Green Music Center during outdoor events that will generate high traffic levels. During that period, traffic control services at the Rohnert Park interchange may be necessary. Therefore, the casino/hotel project should provide funding for special event traffic monitoring at the Rohnert Park Expressway interchange to identify conflicts during outdoor events generate high traffic levels. If conflicts occur, the project should provide traffic management coordination between the casino/hotel project and Green Music Center in consultation with CHP and Caltrans to assist in traffic control

Because no fixed route service will be available at the project site, the casino/hotel should provide a shuttle that serves the two Rohnert Park transfer stations. The shuttle should run throughout the day or could be called out on demand. The casino should also sponsor charter buses from farther away destinations such as Marin County and the south Bay. The buses could serve specific groups such as senior citizens or social clubs, while reducing the number of single occupancy vehicles to the site. Preferential carpool or vanpool spaces should also be provided at the project site to encourage ridesharing by patrons and employees.



Table A 7 – Alternative A Mitigated Freeway Level of Service Summary

US-101 Section/Ramp	Criteria		Existing		2008		2008 + Alt A		2020		2020 + Alt A		2020 + Alt A Mitigated	
	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)
Northbound														
US-101 South of Gravenstein Highway (NB)	E	C	C	22.2	C	19.1	D	26.9	C	25.6	E	38.4	E	38.4
Gravenstein Highway NB Off-Ramp	E	D	C	30.8	C	27.4	E	35.2	D	34.1	F	41.8	D	29.1
Gravenstein Highway NB On-Ramp	E	D	D	34.5	D	29.5	E	36.5	E	36.1	F	43.1	E	40.4
US-101 Between Gravenstein Highway and Rohnert Park Expressway (NB)	E	D	C	28.1	C	23.5	D	31.7	D	32.3	F	-	E	40.4
Rohnert Park Expressway NB Off-Ramp	E	D	D	33.6	D	28.8	D	33.9	E	37.1	F	42.1	E	40.4
Rohnert Park Expressway NB On-Ramp (Loop Ramp)	E	D	C	32.1	C	21.8	C	24.5	C	23.2	C	25.9	C	25.9
Rohnert Park Expressway NB On-Ramp	E	D	C	32.5	C	22.1	D	31.2	D	29.0	E	39.1	E	39.1
US-101 Between Rohnert Park Expressway and Wilfred Avenue (NB)	E	D	C	28.9	C	22.1	D	31.2	D	29.0	E	39.1	E	39.1
Wilfred Avenue NB Off-Ramp	E	E	C	35.4	C	22.1	D	31.2	D	29.0	E	39.1	E	39.1
Wilfred Avenue NB On-Ramp	E	F	D	42.0	D	30.3	D	33.6	E	40.4	E	41.0	E	41.0
US-101 Between Wilfred Avenue and Santa Rosa Avenue (NB)	E	D	D	26.7	D	30.3	D	33.6	E	40.4	E	41.0	E	41.0
Santa Rosa Avenue NB Off-Ramp	E	E	D	37.2	D	30.3	D	33.6	E	40.4	E	41.0	E	41.0
US-101 North of Santa Rosa Avenue (NB)	E	C	C	20.3	C	22.0	C	23.8	D	29.7	D	32.6	D	32.6
Southbound														
US-101 North of Santa Rosa Avenue (SB)	E	C	C	22.9	C	24.1	D	26.1	D	28.5	D	31.2	D	31.2
Santa Rosa Avenue SB On-Ramp	E	D	D	31.2	D	32.7	E	36.2	F	-	F	-	C	24.8
US-101 Between Santa Rosa Avenue and Wilfred Avenue (SB)	E	D	D	31.5	D	32.7	E	36.2	F	-	F	-	C	24.8
Wilfred Avenue SB Off-Ramp	E	E	E	38.0	E	38.8	E	40.8	F	44.8	F	46.8	D	33.0
Wilfred Avenue SB On-Ramp	E	D	D	33.7	D	33.4	E	39.4	E	39.9	F	48.8	D	34.2
US-101 Between Rohnert Park Expressway and Wilfred Avenue (SB)	E	E	D	35.2	D	33.4	E	39.4	E	39.9	F	48.8	D	34.2
Rohnert Park Expressway SB Off-Ramp	E	E	D	38.0	D	33.4	E	39.4	E	39.9	F	48.8	D	34.2
Rohnert Park Expressway SB On-Ramp (Loop Ramp)	E	E	D	36.0	D	30.9	D	35.4	E	38.5	F	41.3	C	26.1
Rohnert Park Expressway SB On-Ramp	E	E	D	35.1	D	30.1	D	36.1	F	37.5	F	43.0	D	40.0
US-101 Between Rohnert Park Expressway and Gravenstein Highway (SB)	E	D	C	27.1	C	22.3	D	29.8	E	36.6	F	-	D	40.0
Gravenstein Highway SB Off-Ramp	E	D	D	33.9	D	29.2	E	36.1	F	40.3	F	47.2	D	40.0
Gravenstein Highway SB On-Ramp	E	D	D	33.7	D	32.1	E	38.3	F	42.3	F	48.5	D	29.7
US-101 South of Gravenstein Highway (SB)	E	C	C	24.7	C	21.8	D	29.0	D	32.0	F	-	C	23.5



Mitigations to reduce the impact of the construction include the implementation of a construction traffic management plan for the duration of construction of the project and training for construction delivery vehicle drivers. Construction material importation should be scheduled outside of the areawide commute peak hours. Debris along the truck route caused by trucks should be monitored daily and the roadways should be cleaned as necessary.

To help ensure adequate public safety during construction, particularly near the project site, the tribe should provide flagging when necessary in consultation with CHP, Caltrans, and the County's Sheriff's Department to assist with traffic control.

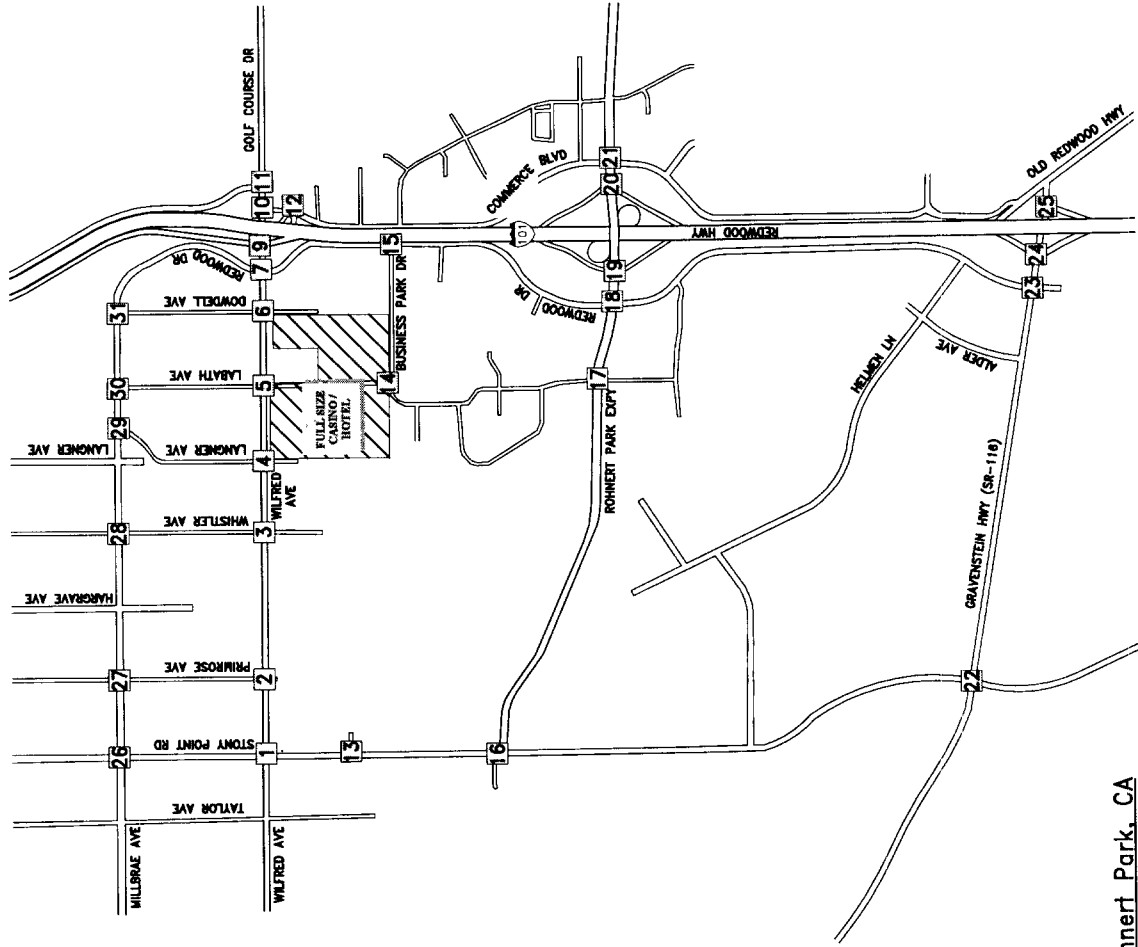


FIGURE A1



Graton Rancheria Alternative A - Rohnert Park, CA

PROJECT LOCATION

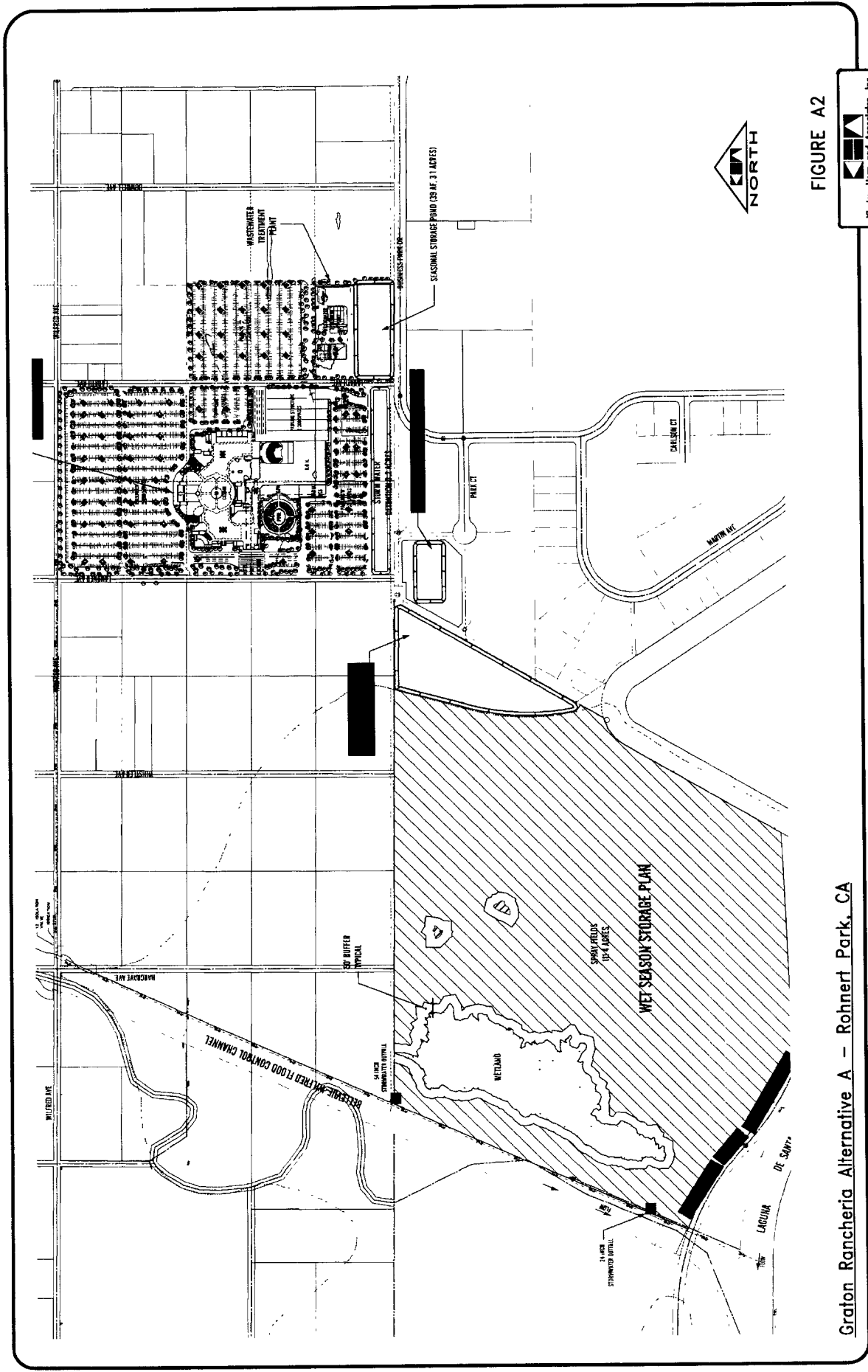


FIGURE A2



Graton Rancheria Alternative A - Rohnert Park, CA

SITE PLAN

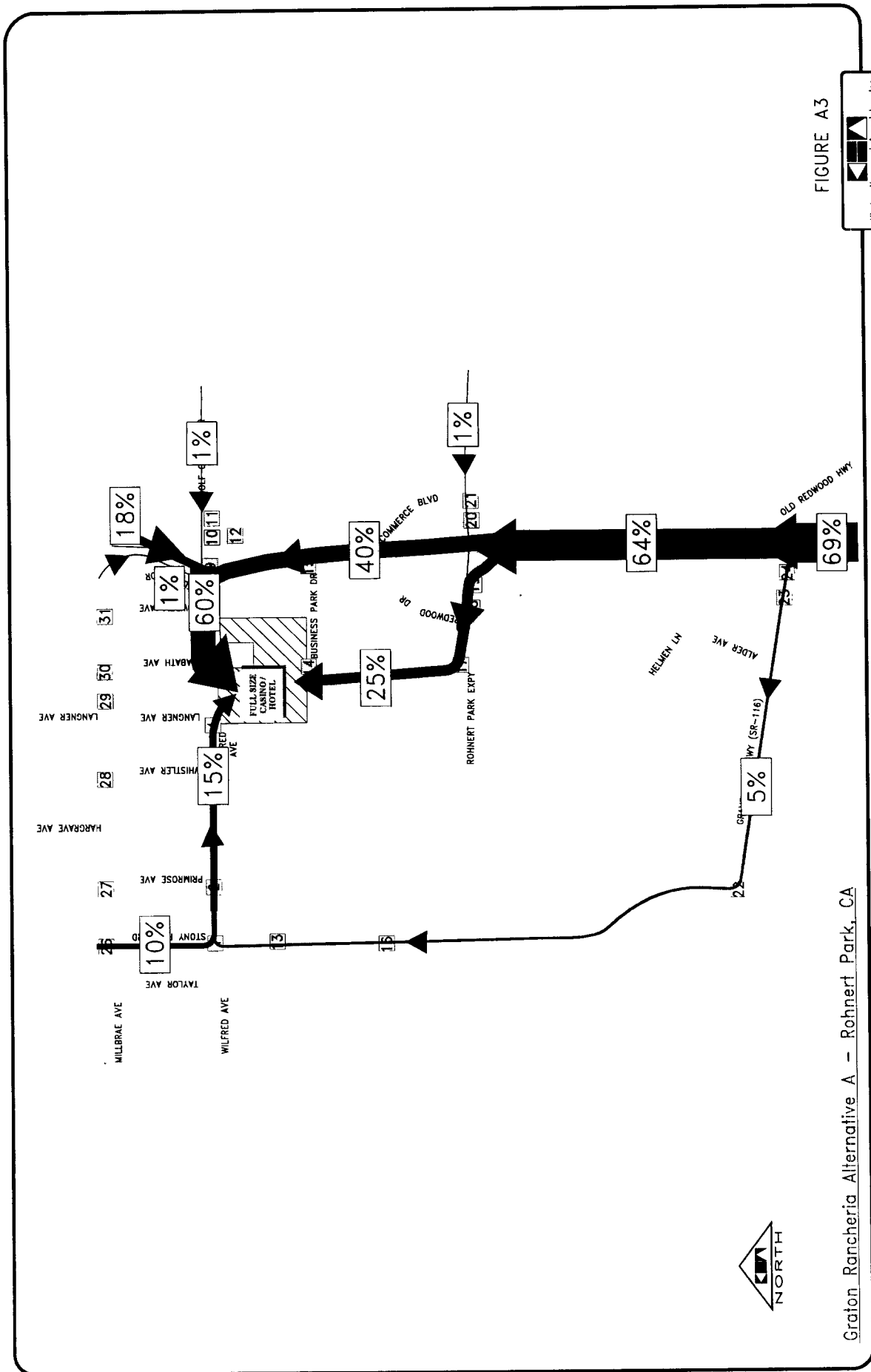


FIGURE A3



Groton Rancheria Alternative A - Rohnert Park, CA

TRIP DISTRIBUTION - IN

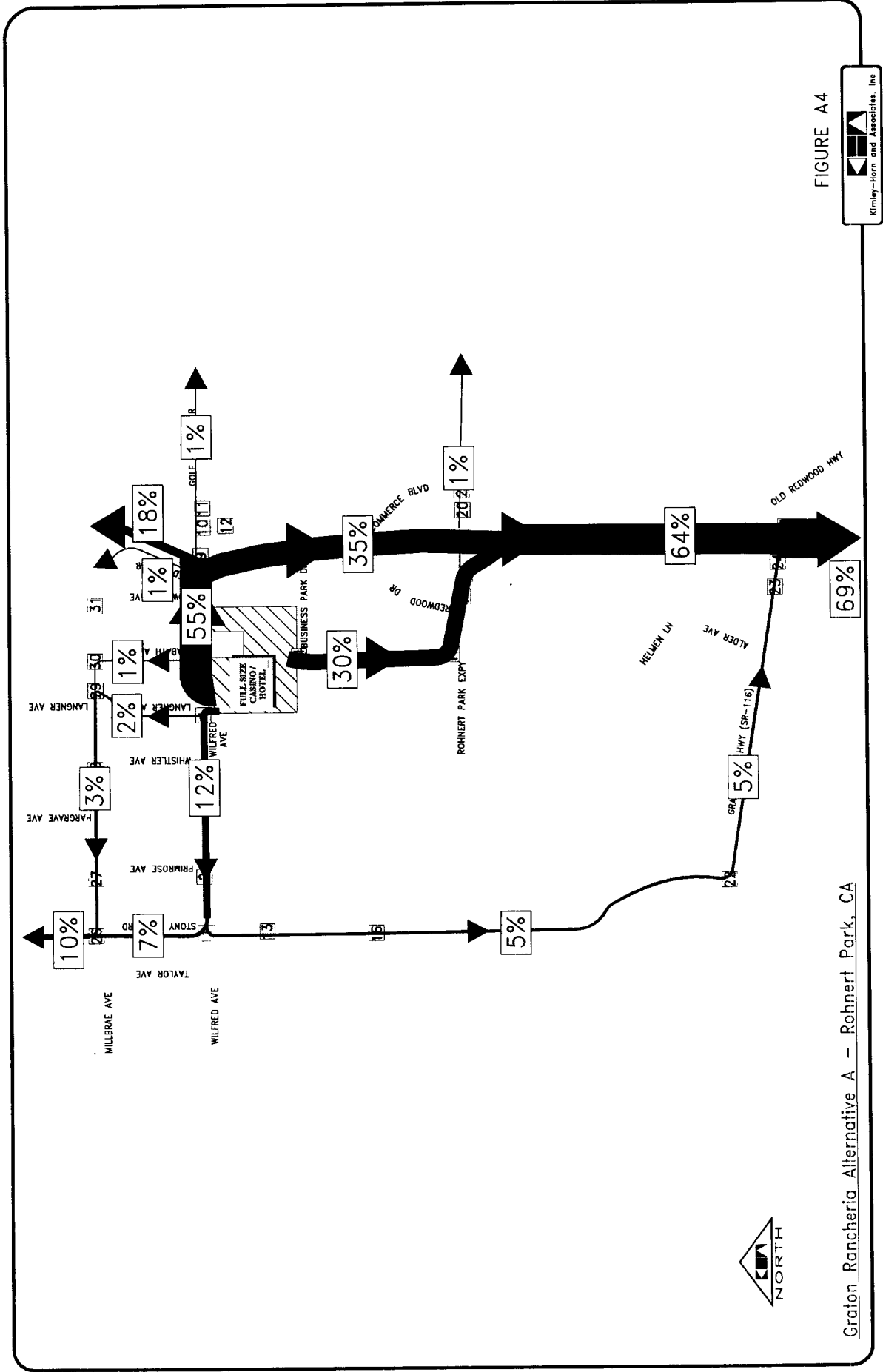
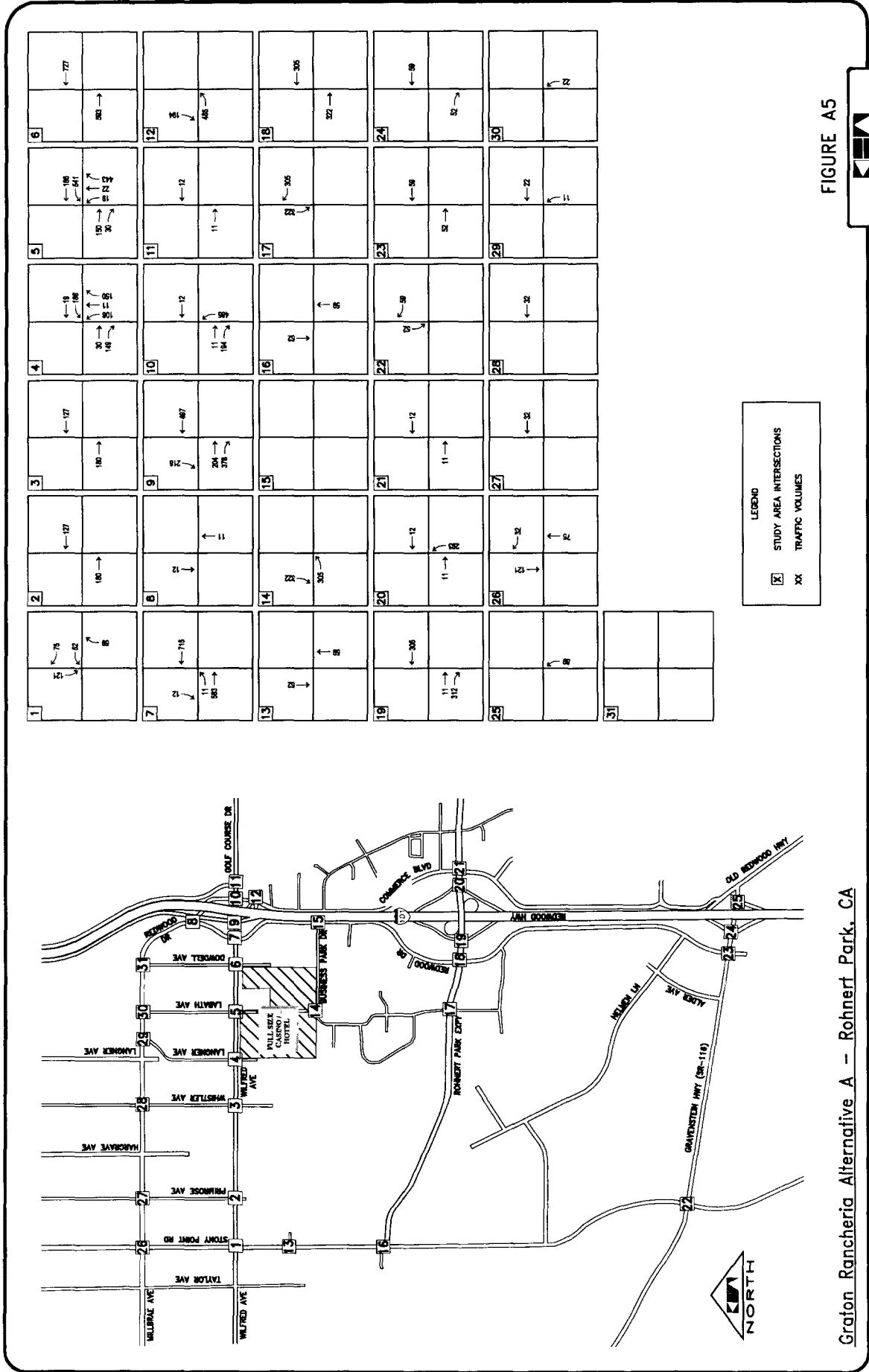


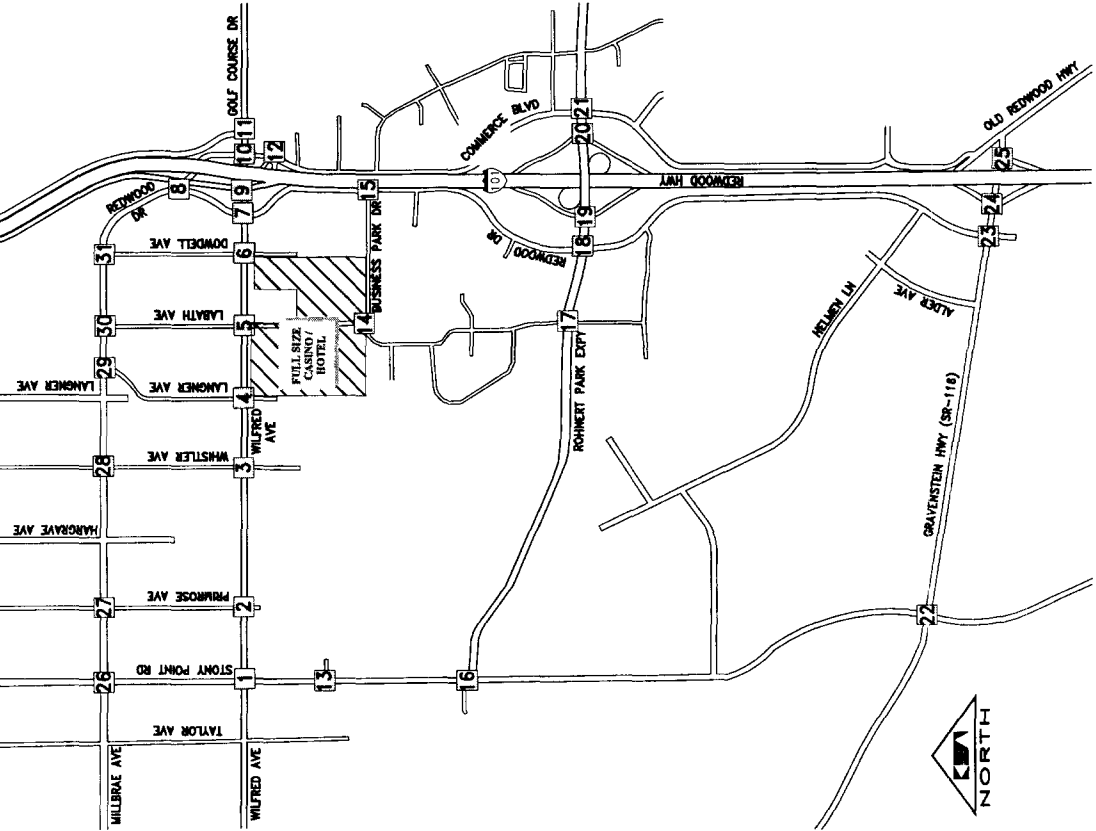
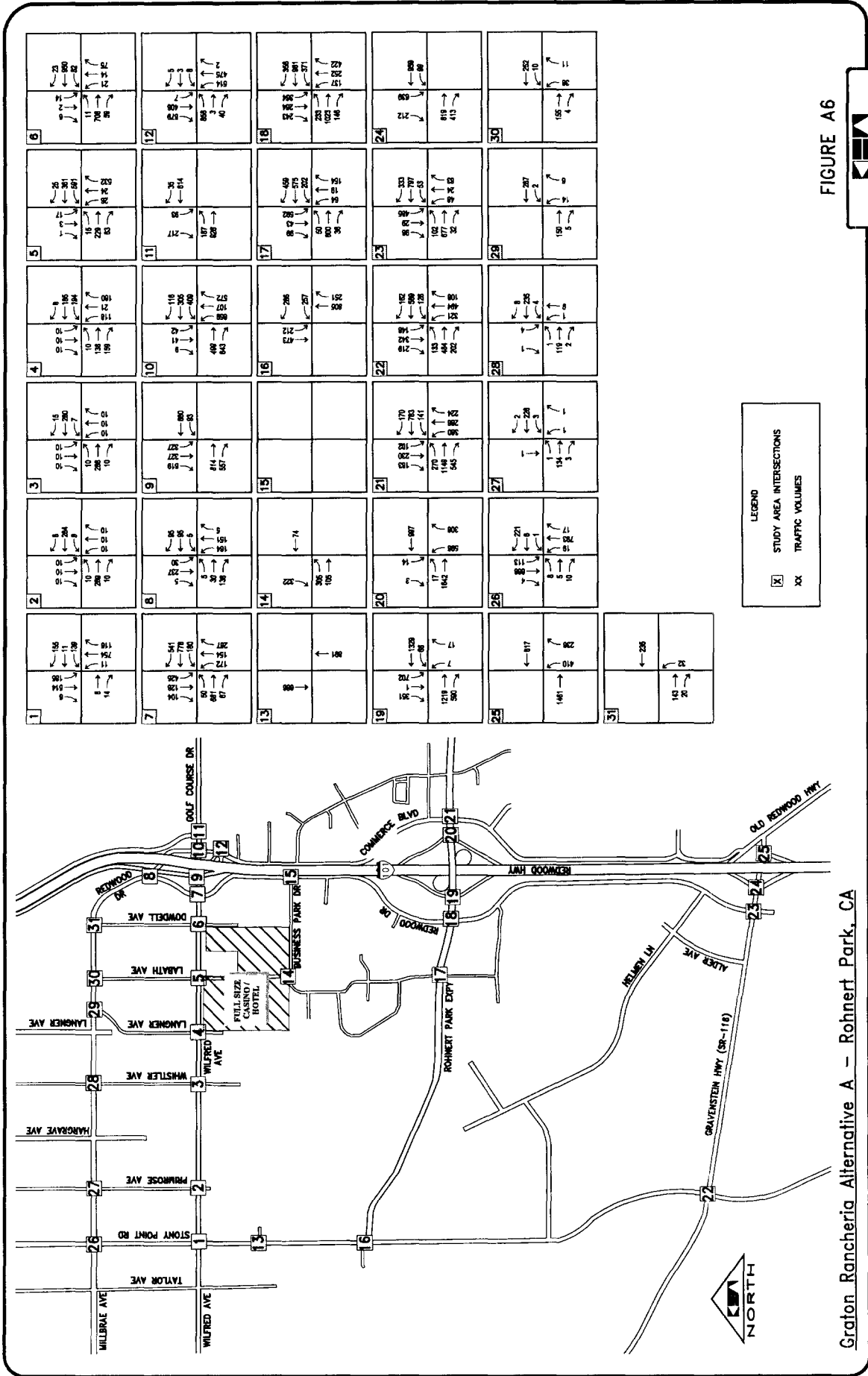
FIGURE A4



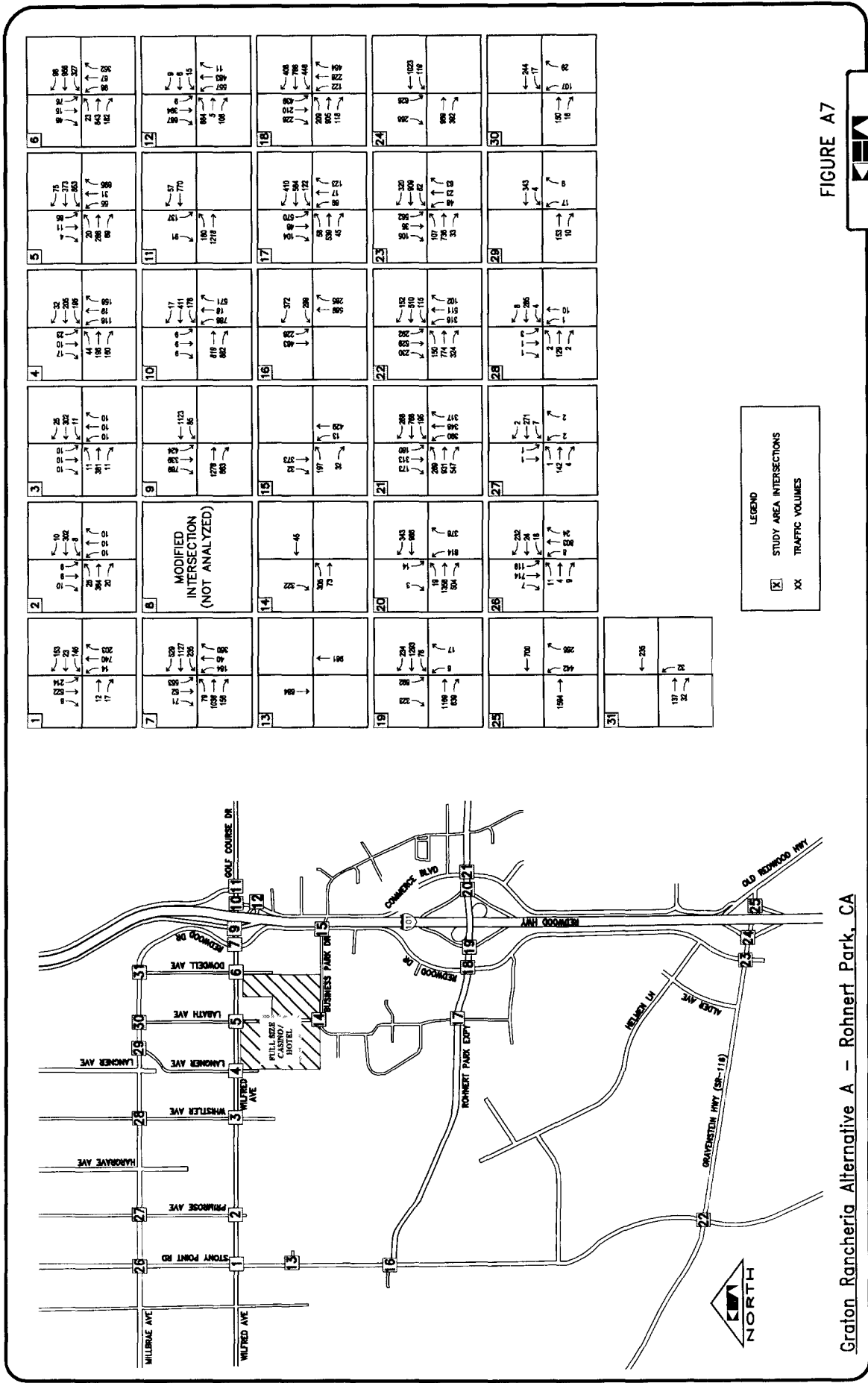


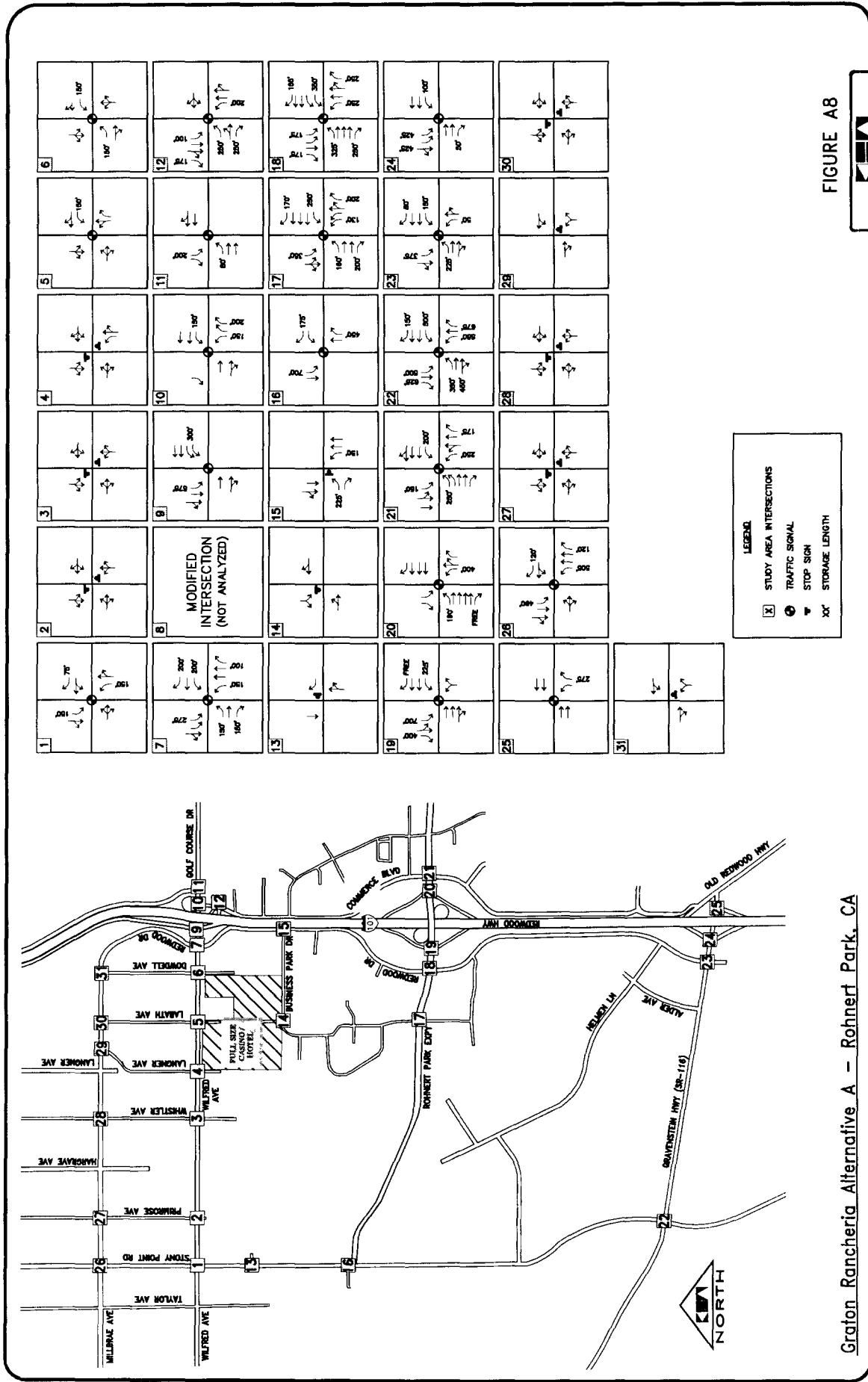
Graton Rancheria Alternative A - Rohnert Park, CA

PROJECT GENERATED PM TRAFFIC VOLUMES



1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31					





Graton Rancheria Alternative A - Rohnert Park, CA

NEAR-TERM MITIGATED LANE GEOMETRY AND TRAFFIC CONTROL

FIGURE A8

Kimley-Horn and Associates, Inc.

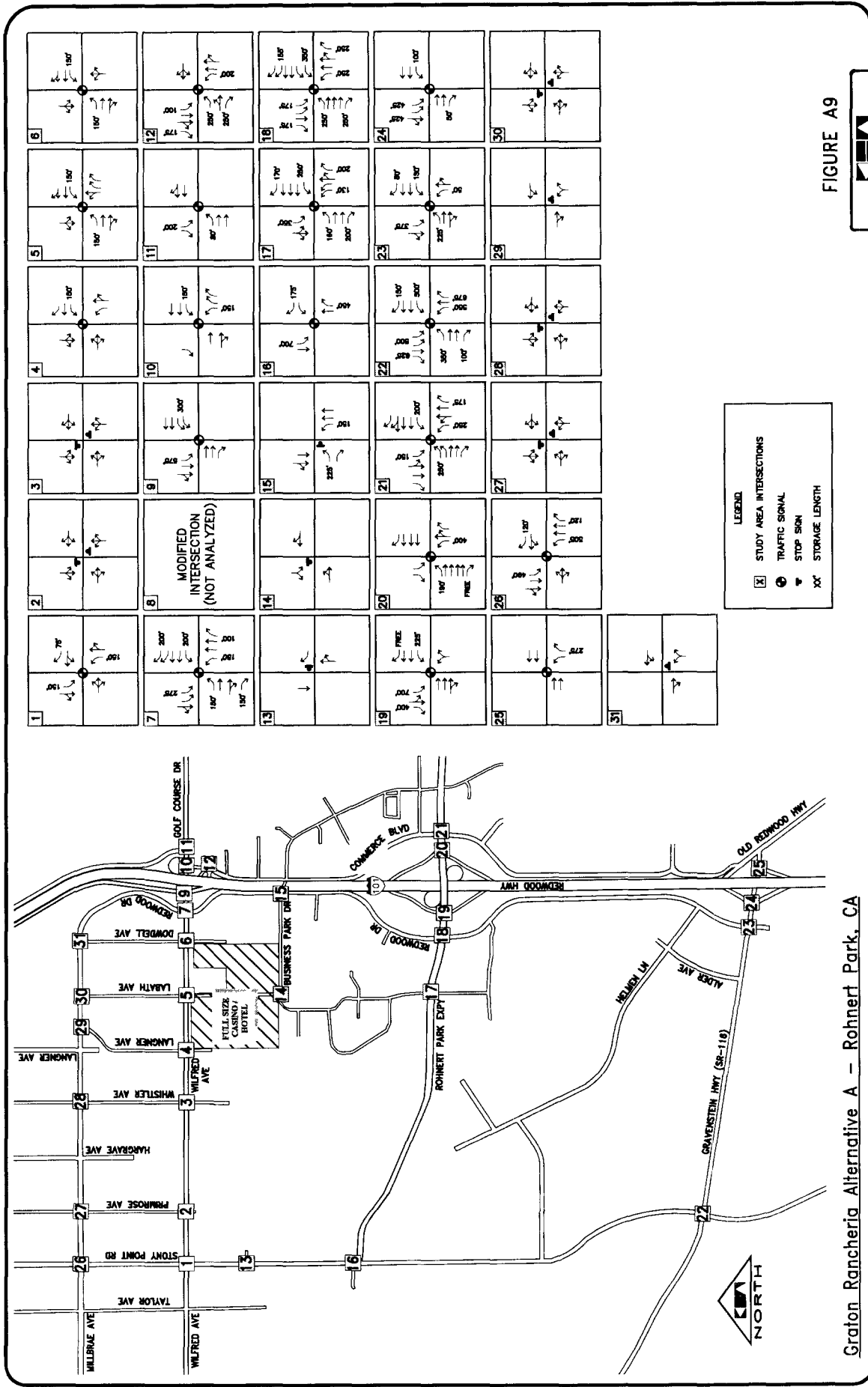


FIGURE A9



Graton Rancheria Alternative A - Rohnert Park, CA

LONG-TERM MITIGATED LANE GEOMETRY AND TRAFFIC CONTROL

ALTERNATIVE B – NORTHWEST STONY POINT SITE

The Alternative B casino and hotel is proposed to be located as shown in **Figure B1**, which is bordered by Wilfred Avenue in the north, Rohnert Park Expressway in the south, Stony Point Road in the west, and Langner Avenue in the east.

The site layout as shown in **Figure B2** includes a main building of approximately 450,000 square feet for a casino, restaurants, food court, event center, banquet facilities, lobby, pool, and other ancillary functions. In addition, the project is planned to include up to 300 hotel rooms, primarily for casino guests.

A breakdown of square footage as it relates to traffic impacts is shown below:

- Casino and Entertainment areas – 408,150 s.f.
- Lobby/Bar/Back of House/Sundries – 14,750 s.f.
- Pool and Spa – 27,100 s.f.
450,000 s.f.

- Hotel Rooms – 291,000 s.f.

The site plan also shows supporting uses such as parking lots, parking structure, and wastewater treatment facilities.

Site Access

The main project access is from the south side of Wilfred Avenue, where an existing driveway aligns with Primrose Avenue. This approach is assumed to operate as a full movement driveway with no turn limitations.

A second project access from Stony Point Road is located on this plan approximately 880 feet south of the Stony Point Road/Wilfred Avenue intersection. The location is at an existing driveway access; however, due to conflicts with the northbound turn bay at the Stony Point Road/Wilfred Avenue intersection, the access is assumed to be limited to right in/out operation.

Currently, neither access is signalized.

Trip Generation – Alternative B

Trip generation for Alternative B is identical to Alternative A. See Trip Generation – Alternatives A, B, and C section under Alternative A for specific information.

Project Trip Distribution and Assignment

Based on the factors discussed in the General Project Information section above it was determined that approximately 30% of the project traffic would be distributed to destinations north of the site, with the remaining 70% distributed south of the site. To be conservative, only a small percentage of project traffic was assumed to be generated or attracted in the immediate vicinity of the project site. The project traffic distribution is shown in **Figure B3** and **Figure B4**. **Figure B5** illustrates project traffic assigned to the study intersections based on the assumed trip distribution. As seen in **Figure B5**, most of the project traffic is expected to come from the freeway therefore it was assumed that most of the traffic would use Primrose Avenue because of its closer proximity to the freeway. As noted in the distribution, some traffic leaving the project site is expected to avoid congestion at Wilfred Avenue and Stony Point Road by using Millbrae Avenue.

Near-Term Plus Project Traffic Volumes

Near-term 2008 traffic volumes were combined with vehicle trips expected to be generated by the Alternative B casino and hotel project. **Figure B6** illustrates the combined near-term turning movement volumes at the study intersections.

Cumulative Plus Project Traffic Volumes

Long-term 2020 traffic volumes were combined with vehicle trips expected to be generated by the Alternative B casino and hotel project. **Figure B7** illustrates the combined long-term turning movement volumes at the study intersections.

Alternative B LOS Conditions and Impacts at Intersections

Traffic operations were evaluated under the following development conditions:

- Near-term conditions with Alternative B (year 2008)
- Long-term Cumulative conditions with Alternative B (year 2020)

In the near-term analysis for Alternative B, it was assumed that the Wilfred Avenue widening project will have taken place before the casino/hotel opens. The Memorandum of Understanding (MOU) between the City of Rohnert Park and the Federated Indians of the Graton Rancheria stated that the tribe would help financially to speed up the timeline of the widening project to occur before the casino/hotel opens in 2008.

Results of the analysis are presented in **Table B1**. (Results shown as bold in the table do not meet operational standards.) The signal control is listed as TS for a signalized intersection and TWSC for a two-way stop-controlled intersection. Two-way stop-controlled (TWSC) intersections maybe operate acceptably overall but only the worst approach is reported in the table. The overall level of service is reported for signalized intersections. Additional detail is provided in the **Appendix**. As shown in the results, the

following intersections and approaches will fail to meet acceptable level of service thresholds based on established significance criteria and with the addition of project-related traffic.

Table B 1 – Alternative B Levels of Service

	Intersection	Criteria	Signal Control	2005		2008				2020			
				Existing		Base (w/o Proj.)		With Project		Base (w/o Proj.)		With Project	
				LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
1	Stony Point Rd/ Wilfred Ave	D	TWSC	F	109.1	F	238.0	F	OVRFL	F	401.6	F	OVRFL
2	Primrose Ave/ Wilfred Ave	D	TWSC	A	9.4	B	11.3	F	OVRFL	B	12.4	F	OVRFL
3	Whistler Ave/ Wilfred Ave	D	TWSC	A	9.4	B	11.3	F	84.4	B	12.4	F	111.8
4	Langer Ave/Wilfred Ave	D	TWSC	A	9.4	B	11.3	F	82.9	B	12.4	F	111.7
5	Labath Ave/Wilfred Ave	D	TWSC	A	9.1	E	48.3	F	OVRFL	F	491.5	F	OVRFL
6	Dowdell Ave/Wilfred Ave	D	TWSC	A	9.1	F	333.5	F	OVRFL	F	OVRFL	F	OVRFL
7	Redwood Dr/Wilfred Ave	D	TS	C	28.1	D	37.1	F	154.4	F	87.9	F	275.0
8	Redwood Dr/ Commerce Blvd	C	TS	D	46.5	C	26.6	C	26.6	-	-	-	-
9	Wilfred Ave/ US-101 SB Ramps	D	TS	-	-	C	22.5	E	58.4	C	33.2	F	106.7
10	Golf Course Dr/ Commerce Blvd	D	TS	E	61.7	D	44.0	F	90.0	F	96.5	F	186.3
11	Golf Course Dr/ Roberts Lake Rd	C	TS	B	18.4	B	17.0	B	15.5	B	10.9	B	11.1
12	Commerce Blvd/ US-101 NB Ramps	D	TS	C	28.7	C	34.9	F	86.5	E	69.8	F	150.0
13	Project Driveway/ Stony Point Rd	D	TWSC	A	0.0	A	0.0	D	27.3	A	0.0	C	24.3
14	Business Park Dr/ Labath Ave	D	-	-	-	-	-	-	-	-	-	-	-
15	Business Park Dr/ Redwood Dr	D	TWSC	C	23.4	D	26.5	D	26.5	C	16.5	C	16.5
16	Rohnert Park Expwy/ Stony Point Rd	D	TS	C	25.2	C	24.0	E	55.6	C	22.1	D	45.9
17	Rohnert Park Expwy/ Labath Ave	C	TS	C	27.5	C	33.1	C	34.4	C	33.0	C	34.0
18	Rohnert Park Expwy/ Redwood Dr	C	TS	C	33.4	D	35.6	D	43.6	D	36.0	D	41.8
19	Rohnert Park Expwy/ US-101 SB Ramps	D	TS	C	23.2	C	23.2	C	21.6	C	24.5	E	56.0
20	Rohnert Park Expwy/ US-101 NB Ramps	D	TS	B	14.9	B	17.6	C	23.9	B	17.1	C	24.1
21	Rohnert Park Expwy/ Commerce Blvd	C	TS	C	31.5	C	33.9	C	33.9	C	34.9	C	34.9
22	Gravenstein Hwy/ Stony Point Rd	D	TS	C	34.7	C	31.5	D	39.5	D	39.9	D	42.4
23	Gravenstein Hwy/ Redwood Dr	D	TS	C	29.5	C	27.8	C	28.6	C	34.6	D	36.5
24	Gravenstein Hwy/ US-101 SB Ramps	D	TS	C	21.0	B	17.8	B	18.4	B	17.0	C	28.2
25	Gravenstein Hwy/ US-101 NB Off-Ramp	D	TS	B	16.2	B	13.5	C	21.1	B	18.7	C	23.0
26	Millbrae Ave/ Stony Point Rd	D	TWSC	E	38.3	E	38.2	F	57.8	F	70.6	F	144.7
27	Millbrae Ave/ Primrose Ave	D	TWSC	B	11.1	B	11.4	B	11.4	B	12.4	B	12.4
28	Millbrae Ave/ Whistler Ave	D	TWSC	B	11.3	B	11.5	B	11.5	B	12.4	B	12.4
29	Millbrae Ave/ Langner Ave	D	TWSC	A	9.6	A	9.9	A	9.9	B	11.2	B	11.2
30	Millbrae Ave/ Labath Ave	D	TWSC	B	10.8	B	11.2	B	11.2	B	13.5	B	13.5
31	Millbrae Ave/ Dowdell Ave	D	TWSC	B	11.2	B	11.3	B	11.3	B	11.6	B	11.6

2008 Results

- Stony Point Road/Wilfred Avenue
- Primrose Avenue/Wilfred Avenue
- Whistler Avenue/Wilfred Avenue
- Langner Avenue/Wilfred Avenue
- Labath Avenue/Wilfred Avenue
- Dowdell Avenue/Wilfred Avenue
- Redwood Drive/Wilfred Avenue
- Wilfred Avenue/US-101 SB Ramps
- Golf Course Drive/Commerce Boulevard
- Commerce Boulevard/US-101 NB Ramps
- Rohnert Park Expressway/Stony Point Road
- Rohnert Park Expressway/Redwood Drive
- Millbrae Avenue/Stony Point Road

2020 Results

- Stony Point Road/Wilfred Avenue
- Primrose Avenue/Wilfred Avenue
- Whistler Avenue/Wilfred Avenue
- Langner Avenue/Wilfred Avenue
- Labath Avenue/Wilfred Avenue
- Dowdell Avenue/Wilfred Avenue
- Redwood Drive/Wilfred Avenue
- Wilfred Avenue/US-101 SB Ramps
- Golf Course Drive/Commerce Boulevard
- Commerce Boulevard/US-101 NB Ramps
- Rohnert Park Expressway/Redwood Drive
- Rohnert Park Expressway/US-101 SB Ramps
- Millbrae Avenue/Stony Point Road

Alternative B Traffic Signal Warrant Analysis

Alternative B, near-term and long-term, traffic volumes at unsignalized study intersections were compared against peak hour warrant in the *2003 Manual on Uniform Traffic Control Devices (MUTCD)* and the *California Supplement*.

Results of the analysis showed that the following intersections will satisfy traffic signal Warrant #3 by year 2008 and 2020.

- Stony Point Road/Wilfred Avenue (2008 and 2020)
- Primrose Avenue/Wilfred Avenue (2008 and 2020)
- Labath Avenue/Wilfred Avenue (2008 and 2020)
- Dowdell Avenue/Wilfred Avenue (2008 and 2020)
- Project Driveway/Stony Point Road (2008 and 2020)

- Millbrae Avenue/Stony Point Road (2008 and 2020)

Other warrants such as for minimum vehicle volumes, interruption of continuous traffic, and traffic progression were not evaluated because they generally require higher traffic volumes to be satisfied. Accident history and school areas were also not evaluated based on the results of field observations, which noted that neither of these warrant thresholds was likely to be met. A copy of the analysis summary for Warrant #3 is included in the **Appendix**.

Alternative B LOS Conditions and Impacts on Freeway and Ramps

Project trips generated by the proposed casino and hotel were added to the year 2008 and 2020 forecast freeway volumes.

Traffic analyses were completed to evaluate the operation of the study freeway segments and ramps in the year 2008 and 2020, with the addition on the casino and hotel project. Freeway segment analyses were limited to the mix-use travel lanes which are expected to have significantly more congestion than the future HOV lanes.

Results of the analyses are presented in **Table B2**. (Results shown as bold in the table do not meet operational standards.) As shown in the table, project traffic will add to the background congestion of the freeway. Significant congestion is expected with the project.

Table B 2 – Alternative B Freeway Levels of Service

US-101 Section/Ramp	Criteria		Existing		2008		2008 + Alt B		2020		2020 + Alt B		
	LOS	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)
Northbound													
US-101 South of Gravenstein Highway (NB)	E	C	22.2	C	19.1	C	25.1	C	25.6	E	38.4	E	38.4
Gravenstein Highway NB Off-Ramp	E	D	30.8	C	27.4	C	33.7	D	34.1	F	41.8	F	41.8
Gravenstein Highway NB On-Ramp	E	D	34.5	D	29.5	E	35.2	E	36.1	F	43.1	F	43.1
US-101 Between Gravenstein Highway and Rohnert Park Expressway (NB)	E	D	28.1	C	23.5	D	28.8	D	32.3	F	-	F	-
Rohnert Park Expressway NB Off-Ramp	E	D	33.6	D	28.8	D	34.2	E	37.1	F	43.7	F	43.7
Rohnert Park Expressway NB On-Ramp (Loop Ramp)	E	D	32.1	C	21.8	C	21.8	C	23.2	C	26.7	C	26.7
Rohnert Park Expressway NB On-Ramp	E	D	32.5	C	22.1	D	29.1	D	29.0	E	37.4	E	37.4
US-101 Between Rohnert Park Expressway and Wilfred Avenue (NB)	E	D	28.9	C	22.1	D	29.1	D	29.0	E	37.4	E	37.4
Wilfred Avenue NB Off-Ramp	E	E	35.4	C	22.1	D	29.1	D	29.0	E	37.4	E	37.4
Wilfred Avenue NB On-Ramp	E	F	42.0	D	30.3	D	33.9	E	40.4	F	44.3	F	44.3
US-101 Between Wilfred Avenue and Santa Rosa Avenue (NB)	E	D	26.7	D	30.3	D	33.9	E	40.4	F	44.3	F	44.3
Santa Rosa Avenue NB Off-Ramp	E	E	37.2	D	30.3	D	33.9	E	40.4	F	44.3	F	44.3
US-101 North of Santa Rosa Avenue (NB)	E	C	20.3	C	22.0	C	23.8	D	29.7	D	32.6	D	32.6
Southbound													
US-101 North of Santa Rosa Avenue (SB)	E	C	22.9	C	24.1	D	26.1	D	28.5	D	31.2	D	31.2
Santa Rosa Avenue SB On-Ramp	E	D	31.2	D	32.7	E	39.3	F	-	F	-	F	-
US-101 Between Santa Rosa Avenue and Wilfred Avenue (SB)	E	D	31.5	D	32.7	E	39.3	F	-	F	-	F	-
Wilfred Avenue SB Off-Ramp	E	E	38.0	E	38.8	E	40.8	F	44.8	F	49.7	F	49.7
Wilfred Avenue SB On-Ramp	E	D	33.7	D	33.4	F	45.0	E	39.9	F	54.1	F	54.1
US-101 Between Rohnert Park Expressway and Wilfred Avenue (SB)	E	E	35.2	D	33.4	F	45.0	E	39.9	F	54.1	F	54.1
Rohnert Park Expressway SB Off-Ramp	E	E	38.0	D	33.4	F	45.0	E	39.9	F	54.1	F	54.1
Rohnert Park Expressway SB On-Ramp (Loop Ramp)	E	E	36.0	D	30.9	D	34.5	E	38.5	F	43.0	F	43.0
Rohnert Park Expressway SB On-Ramp	E	E	35.1	D	30.1	D	34.1	F	37.5	F	42.3	F	42.3
US-101 Between Rohnert Park Expressway and Gravenstein Highway (SB)	E	D	27.1	C	22.3	D	27.1	E	36.6	F	-	F	-
Gravenstein Highway SB Off-Ramp	E	D	33.9	D	29.2	D	34.0	F	40.3	F	46.2	F	46.2
Gravenstein Highway SB On-Ramp	E	D	33.7	D	32.1	E	37.2	F	42.3	F	48.5	F	48.5
US-101 South of Gravenstein Highway (SB)	E	C	24.7	C	21.8	D	27.4	D	32.0	F	-	F	-



Potential Effects on Intersection Safety

Traffic volumes generated by the project were reviewed in consideration of existing intersection collision history and the potential for increased accidents. According to collision data, accidents involving bicyclist and pedestrians are very low. Many intersections did not report any collisions of this type during the survey period. This suggests that bicycle and pedestrian volumes are relatively low and study intersections have minimal safety hazards for individuals biking or walking. Although the project will introduce increased traffic volumes at some intersections, bicyclists and pedestrians are expected to be able to travel through study intersections with similar levels of safety. Historically casinos do not attract a significant amount of bicycle and pedestrian traffic. . Therefore, the expected amount of pedestrian and bicycle traffic is nominal and a significant increase in bicycle and pedestrian accidents is unlikely.

The potential for increased collisions between motorized vehicles was also considered. Collision frequency and severity are a function of many complex factors that vary depending on the location and type of intersection or roadway segment. Factors include traffic control such as signals or stop signs, lane and shoulder widths, grades, driveway densities, roadside hazards or obstacles, presence of left and right turn lanes, sight distance, congestion, and others.

Because of the number and interrelationships of the variables, accurate crash prediction is difficult. However, the proposed casino and hotel project will increase roadway congestion, a factor which could result in an increase in traffic collisions if left unmitigated. Other factors are expected to remain unaffected.

As noted previously, the purpose of this study is to address the traffic and transportation effects of the proposed casino and hotel development. This includes mitigation improvements to restore traffic operations to levels within acceptable standards or to levels as good as or better than without the casino/hotel project. Any potential increases in accidents due to project-related traffic would be offset by the implementation of roadway improvements included as mitigation. Therefore, if mitigations are implemented as proposed in this report, no significant increase in daytime or nighttime collisions is expected.

Queuing Summary

As congestion increases it is common for traffic at signals and stop signs to form lines of stopped (or queued) vehicles. Queue lengths were determined for each lane and measure the distance that vehicles will backup in each direction approaching an intersection. The 95th percentile queue is calculated by using 95th percentile traffic to account for fluctuations in traffic and represents a condition where 95 percent of the time during the peak period, traffic volumes and related queuing will be at, or less, than determined by the analysis. Average queuing is generally less. Ninety-fifth percentile queuing was checked under the various future year development conditions and in consideration of the planned intersection and signal timing improvements. A typical vehicle length of 25 feet is used in the queuing analysis. A summary of the queuing results can be seen in **Table B3**. The results indicate dedicated turn lanes where queuing may exceed their storage limits. It should be noted that some variations in intersection queuing between scenarios is a result of planned intersection and signal timing improvements.

Most queuing impacts can be mitigated and are included in the mitigations section. There are some significant and unavoidable queuing impacts due to existing and/or proposed right-of-way at the following locations:

- Redwood Drive/Wilfred Avenue
- Redwood Drive/Rohnert Park Expressway
- Commerce Boulevard/Rohnert Park Expressway

Table B 3 – Alternative B Queuing Summary

Intersection	Turning Movement	Bay Length	Queue Length		Intersection	Turning Movement	Bay Length	Queue Length	
			2008	2020				2008	2020
1 Stony Point Road and Wilfred Avenue	EBL				16 Stony Point Road and Rohnert Park Expy	EBL			
	EBR					EBR			
	WBL					WBL			
	WBR	35	33	45		WBR	500	600	550
	NBL	150	<25	<25		NBL			
	NBR					NBR	450	250	225
	SBL	150	30	33		SBL	700	350	350
4 Langner Avenue and Wilfred Avenue	SBR				SBR				
	EBL				17 Labath Avenue and Rohnert Park Expy	EBL	160	50	100
	EBR					EBR	200	50	50
	WBL	150		<25		WBL	250	225	125
	WBR					WBR			
	NBL					NBL	130	50	100
	NBR					NBR	130	200	150
SBL				SBL		100	300	225	
5 Labath Avenue and Wilfred Avenue	SBR				SBR				
	EBL	150		<25	18 Redwood Drive and Rohnert Park Expy	EBL	200	325	300
	EBR					EBR	200	150	175
	WBL	150		30		WBL	450	425	450
	WBR					WBR	160	325	300
	NBL					NBL	250	175	225
	NBR					NBR	250	500	575
SBL				SBL		250	450	425	
6 Dowdell Avenue and Wilfred Avenue	SBR				SBR	175	275	275	
	EBL	150		<25	19 SB US 101 Ramps and Rohnert Park Expy	EBL			
	EBR					EBR			
	WBL	150		508		WBL	275	50	100
	WBR					WBR			
	NBL					NBL			
	NBR					NBR			
SBL				SBL		400	600	475	
7 Redwood Drive and Wilfred Avenue	SBR				SBR	400	350	425	
	EBL	150		150	EBL	190	25	25	
	EBR	150		250	EBR				
	WBL				20 NB US 101 Ramps and Rohnert Park Expy	WBL			
	WBR					WBR			
	NBL	150	600	775		NBL	225	350	400
	NBR	100	825	475		NBR			
SBL	275	725	625	SBL					
SBR				SBR					
8 Redwood Drive and Commerce Boulevard	EBL	75	25			21 Commerce Blvd and Rohnert Park Expy	EBL	250	300	300
	EBR	75	175		EBR		240	450	425
	WBL	100	25		WBL		200	175	225
	WBR				WBR				
	NBL	150	200		NBL		250	375	300
	NBR	150	<25		NBR		175	275	300
	SBL	200	50		SBL		150	125	225
9 Wilfred Avenue and SB US 101 Ramps	SBR				SBR	150	200	200	
	EBL				EBL	250	175	175	
	EBR				EBR				
	WBL	300	225	150	WBL	500	175	175	
	WBR				WBR	150	225	250	
	NBL				NBL	550	350	350	
	NBR				NBR	675	100	100	
10 Golf Course Drive and Commerce Blvd	SBL	250	525	500	SBL	500	250	275	
	SBR				SBR	625	225	250	
	EBL				EBL	225	125	150	
	EBR				EBR				
	WBL	100	1050	625	WBL	150	75	75	
	WBR				WBR	80	325	400	
	NBL	150	1375	825	NBL	50	50	50	
11 Roberts Lake Drive and Golf Course Drive	NBR				NBR				
	SBL	200	125	200	SBL	225	450	525	
	SBR				SBR				
	EBL	80	200	350	EBL				
	EBR				EBR	50	350	325	
	WBL				WBL	100	125	75	
	WBR				WBR				
12 Commerce Blvd and NB US 101 Ramps	NBL				24 Gravenstein Hwy and SB US 101 Ramps	NBL			
	NBR	200	600	525		NBR			
	SBL	100	<25	<25		SBL	425	625	725
	SBR	175	675	800		SBR	425	200	300
	EBL	225	78	35		EBL			
	EBR					EBR			
	WBL					WBL			
15 Business Park Drive and Redwood Drive	WBR				25 Gravenstein Hwy and NB US 101 Ramps	WBR			
	NBL	150	<25	<25		NBL			
	NBR					NBR	275	225	250
	SBL					SBL			
	SBR					SBR			
	EBL					EBL			
	EBR					EBR			
26 Stony Point Road and Milbrae Avenue	WBL				WBL				
	WBR				WBR	120	45	55	
	NBL				NBL	505	<25	<25	
	NBR				NBR	120	<25	<25	
	SBL				SBL	490	<25	<25	
	SBR				SBR				

Alternative B Mitigations

Intersections with levels of service below established thresholds were investigated to determine the role of the Alternative B traffic in the projected operating conditions at those intersections. The evaluation disclosed that the following improvements as shown on **Table B4** are needed in the near-term (2008) and long-term (2020) to mitigate project impacts.

The basis of the Alternative B mitigations is the assumption that intersection #13, the Project Driveway at Stony Point Road, should be relocated further south along Stony Point Road and be signalized so that it can function as a full movement access. This change permits more project traffic to conveniently arrive and exit from the site and use the Rohnert Park Expressway interchange, thus relieving some the traffic pressure through the Wilfred Avenue interchange.

In the event that intersection #13 cannot be relocated and signalized as discussed above, additional mitigation improvements will be needed, particularly at intersections surrounding the Wilfred Avenue interchange.

Table B5 summarizes the expected levels of service with the proposed mitigation. As mentioned previously, the signal control is listed as TS for a signalized intersection and TWSC for a two-way stop-controlled intersection. Two-way stop-controlled (TWSC) intersections maybe operate acceptably overall but only the worst approach is reported in the table. The overall level of service is reported for signalized intersections.

Figures B8 and B9 illustrate the mitigated lane geometry and traffic control.

A single asterisk in the table denotes an intersection that operates at an acceptable level of service and does not require mitigation, but a mitigated level of service and delay are provided for reference as a result of the mitigation to signalize the Project Driveway/ Stony Point Road which changes traffic patterns at some intersections. A double asterisk indicates an intersection where the delay increases as a result of the mitigation to signalize the Project Driveway/Stony Point Road intersection.



Table B 4 – Alternative B Summary of Mitigations

Period	#	Intersection	Mitigation	Requires ROW?	Reason
2008	1	Stony Point Rd/ Wilfred Ave	<ul style="list-style-type: none"> Signalize Widen Wilfred to 3 lanes (Add WB left) ¹ 	No Yes	Capacity Capacity
	2	Pnmrose Ave/ Wilfred Ave	<ul style="list-style-type: none"> Signalize Add 2 NB rights and change NB all shared to left-through Widen Wilfred to 3 lanes (Add EB left & WB left) ¹ 	No Tnbe land Yes	Capacity Capacity Capacity
	3	Whistler Ave/ Wilfred Ave	<ul style="list-style-type: none"> Widen Wilfred to 3 lanes (Add EB left & WB left) ¹ 	Yes	Capacity
	4	Langer Ave/ Wilfred Ave	<ul style="list-style-type: none"> Widen Wilfred to 3 lanes (Add EB left & WB left) ¹ 	Yes	Capacity
	5	Labath Ave/ Wilfred Ave	<ul style="list-style-type: none"> Signalize Widen Wilfred to 3 lanes (Add EB left & WB left) ¹ 	No Yes	Capacity Capacity
	6	Dowdell Ave/ Wilfred Ave	<ul style="list-style-type: none"> Signalize Widen Wilfred to 3 lanes (Add EB left & WB left) ¹ 	No Yes	Capacity Capacity
	7	Redwood Dr/ Wilfred Ave	<ul style="list-style-type: none"> Add EB left and through and change EB all-shared to through-right Add WB left and change WB left-through to through Change phasing east-west to protected from split 	Yes Yes No	Capacity Capacity Capacity
	8	Redwood Dr/ Commerce Blvd	No mitigation necessary	-	-
	9	Wilfred Ave/ US-101 SB Ramps	<ul style="list-style-type: none"> Extend SB left turn bay to 500 feet 	Yes	Queue
	10	Golf Course Dr/ Commerce Blvd	<ul style="list-style-type: none"> Relocate the Commerce Blvd/Golf Course Dr intersection to the east and relocate the Roberts Lake Rd/Golf Course Dr intersection to the west closer to the railroad crossing. The two intersections on either side of the railroad crossing will operate as one intersection. The relocation will require the purchase of ROW on the south side of Golf Course Dr. 	Yes	Capacity
	11	Golf Course Dr/ Roberts Lake Rd	<ul style="list-style-type: none"> Relocate the Commerce Blvd/Golf Course Dr intersection to the east and relocate the Roberts Lake Rd/Golf Course Dr intersection to the west closer to the railroad crossing. The two intersections on either side of the railroad crossing will operate as one intersection. The relocation will require the purchase of ROW on the south side of Golf Course Dr. 	Yes	Capacity
	12	Commerce Blvd/ US-101 NB Ramps	<ul style="list-style-type: none"> Add NB loop off-ramp that drops traffic onto WB Wilfred Ave. Will require a short tunnel section to go under the NB on-ramp and Golf Course Road as well as demolition of the existing Chevron gas station. Will require removal of the section of Commerce Blvd between Golf Course Dr and Redwood Dr to allow for the construction of the loop off-ramp. May require a pump station. May obstruct access to the proposed SMART station from Commerce Blvd via Golf Course Dr - access will be provided from Commerce Blvd via Redwood Dr. Change SB through to through-right. Will require a two lane on-ramp with one lane as an auxiliary lane between the Wilfred Avenue and Santa Rosa Avenue interchanges. May require additional bridge structure widening over Wilfred Avenue as well as over the Northwest Pacific Railroad tracks. 	Yes Yes	Capacity Capacity
	13	Project Driveway/ Stony Point Rd	<ul style="list-style-type: none"> Signalize Add NB right and change NB through-right to through Add WB left out of project driveway 	No Tnbe land Tnbe land	Capacity Capacity Capacity
	14	Business Park Dr/ Labath Ave	Alternative A intersection	-	-
	15	Business Park Dr/ Redwood Dr	No mitigation necessary	-	-
	16	Rohnert Park Expwy/ Stony Point Rd	<ul style="list-style-type: none"> Add WB right (turn bay = 600 feet) and extend existing bay to 600 feet 	Tnbe land	Capacity
	17	Rohnert Park Expwy/ Labath Ave	<ul style="list-style-type: none"> Extend NB right turn bay to 200 feet Extend SB left turn bay to 300 feet 	Yes Yes	Queue Queue
	18	Rohnert Park Expwy/ Redwood Dr	<ul style="list-style-type: none"> Optimize signal timing Extend EB left turn bay to 250 feet 	No No	Capacity Queue
	19	Rohnert Park Expwy/ US-101 SB Ramps	<ul style="list-style-type: none"> Extend SB left turn bay to 600 feet 	Yes	Queue
	20	Rohnert Park Expwy/ US-101 NB Ramps	<ul style="list-style-type: none"> Extend NB left turn bay to 425 feet 	Yes	Queue
	21	Rohnert Park Expwy/ Commerce Blvd	<ul style="list-style-type: none"> Optimize signal timing 	No	Queue
	22	Gravenstein Hwy/ Stony Point Rd	No mitigation necessary	-	-
	23	Gravenstein Hwy/ Redwood Dr	<ul style="list-style-type: none"> Extend SB left turn bay to 375 feet Optimize signal timing 	Yes No	Queue Queue
	24	Gravenstein Hwy/ US-101 SB Ramps	<ul style="list-style-type: none"> Optimize signal timing 	No	Queue
	25	Gravenstein Hwy/ US-101 NB Off-Ramp	No mitigation necessary	-	-
	26	Millbrae Ave/ Stony Point Rd	<ul style="list-style-type: none"> Signalize 	No	Capacity
	27	Millbrae Ave/ Pnmrose Ave	No mitigation necessary	-	-
	28	Millbrae Ave/ Whistler Ave	No mitigation necessary	-	-
	29	Millbrae Ave/ Langner Ave	No mitigation necessary	-	-
	30	Millbrae Ave/ Labath Ave	No mitigation necessary	-	-
	31	Millbrae Ave/ Dowdell Ave	No mitigation necessary	-	-

¹ In summary, widen Wilfred Ave to three lanes from Stony Point Rd to Redwood Dr



Period	#	Intersection	Mitigation	Requires ROW?	Reason
2020	1	Stony Point Rd/ Wilfred Ave	<ul style="list-style-type: none"> Signalize Widen Wilfred to 3 lanes (Add WB left) ¹ 	No Yes	Capacity Capacity
	2	Primrose Ave/ Wilfred Ave	<ul style="list-style-type: none"> Signalize Add 2 NB rights and change all shared to through-left Widen Wilfred to 3 lanes (Add WB left and EB left) ¹ 	No Yes	Capacity Capacity
	3	Whistler Ave/ Wilfred Ave	<ul style="list-style-type: none"> Widen Wilfred to 3 lanes (Add WB left and EB left) ¹ 	Yes	Capacity
	4	Langer Ave/ Wilfred Ave	<ul style="list-style-type: none"> Widen Wilfred to 3 lanes (Add EB left) ¹ 	Yes	Capacity
	5	Labath Ave/ Wilfred Ave	<ul style="list-style-type: none"> Signalize Add NB right and NB left change NB all shared to through Add 1 SB left and change SB all shared to through-right 	No Yes Yes	Capacity Capacity Capacity
	6	Dowdell Ave/ Wilfred Ave	<ul style="list-style-type: none"> Signalize Add a second WB left turn Add an EB right turn bay and change the EB through-right to through Add 1 SB left turn bay and 1 SB right turn bay and change all shared to through Add 1 NB left turn bay and 1 NB right turn bay and change all shared to through-right 	No Yes Yes Yes Yes	Capacity Capacity Capacity Capacity Capacity
	7	Redwood Dr/ Wilfred Ave	<ul style="list-style-type: none"> Add WB through Change NB through to left-through Add WB left and change WB left-through to through Change phasing east-west to protected from split 	Yes Yes Yes No	Capacity Capacity Capacity Capacity
	8	Redwood Dr/ Commerce Blvd	Modified Intersection (not analyzed)	-	-
	9	Wilfred Ave/ US-101 SB Ramps	<ul style="list-style-type: none"> Add EB right and change EB through-right to through Extend SB left turn bay to 500 feet 	Yes Yes	Capacity Queue
	10	Golf Course Dr/ Commerce Blvd	<ul style="list-style-type: none"> Relocate the Commerce Blvd/Golf Course Dr intersection to the east and relocate the Roberts Lake Rd/Golf Course Dr intersection to the west closer to the railroad crossing. The two intersections on either side of the railroad crossing will operate as one intersection. The relocation will require the purchase of ROW on the south side of Golf Course Dr. 		Capacity
	11	Golf Course Dr/ Roberts Lake Rd	<ul style="list-style-type: none"> Relocate the Commerce Blvd/Golf Course Dr intersection to the east and relocate the Roberts Lake Rd/Golf Course Dr intersection to the west closer to the railroad crossing. The two intersections on either side of the railroad crossing will operate as one intersection. The relocation will require the purchase of ROW on the south side of Golf Course Dr. 	Yes	Capacity
	12	Commerce Blvd/ US-101 NB Ramps	<ul style="list-style-type: none"> Add NB loop off-ramp that drops traffic onto WB Wilfred Ave. Will require a short tunnel section to go under the NB on-ramp and Golf Course Road as well as demolition of the existing Chevron gas station. May require a pump station. May obstruct access to the proposed SMART station from Commerce Blvd via Golf Course Dr - access will be provided from Commerce Blvd via Redwood Dr. Change SB through to through-right. Will require a two lane on-ramp with one lane as an auxiliary lane between the Wilfred Avenue and Santa Rosa Avenue interchanges. May require additional bridge structure widening over Wilfred Avenue as well as over the Northwest Pacific Railroad tracks. 	Yes Yes	Capacity Capacity
	13	Project Driveway/ Stony Point Rd	<ul style="list-style-type: none"> Signalize Add NB right and change NB through-right to through Add WB left out of project driveway 	No Tribe land Tribe land	Capacity Capacity Capacity
	14	Business Park Dr/ Labath Ave	Alternative A intersection	-	-
	15	Business Park Dr/ Redwood Dr	No mitigation necessary	-	-
	16	Rohnert Park Expwy/ Stony Point Rd	<ul style="list-style-type: none"> Add WB right (turn bay = 600 feet) and extend existing bay to 600 feet 	Tribe land	Capacity
	17	Rohnert Park Expwy/ Labath Ave	<ul style="list-style-type: none"> Optimize signal timing Extend SB left turn bay to 300 feet 	No Yes	Capacity Queue
	18	Rohnert Park Expwy/ Redwood Dr	<ul style="list-style-type: none"> Optimize signal timing Extend EB left turn bay to 250 feet 	No No	Capacity Queue
	19	Rohnert Park Expwy/ US-101 SB Ramps	<ul style="list-style-type: none"> Extend SB left turn bay to 600 feet 	Yes	Queue
	20	Rohnert Park Expwy/ US-101 NB Ramps	<ul style="list-style-type: none"> Extend NB left turn bay to 425 feet 	Yes	Queue
	21	Rohnert Park Expwy/ Commerce Blvd	<ul style="list-style-type: none"> Optimize signal timing 	No	Queue
	22	Gravenstein Hwy/ Stony Point Rd	No mitigation necessary	-	-
	23	Gravenstein Hwy/ Redwood Dr	<ul style="list-style-type: none"> Extend SB left turn bay to 375 feet Optimize signal timing 	Yes No	Queue Queue
	24	Gravenstein Hwy/ US-101 SB Ramps	<ul style="list-style-type: none"> Optimize signal timing 	No	Queue
	25	Gravenstein Hwy/ US-101 NB Off-Ramp	No mitigation necessary	-	-
	26	Milbrae Ave/ Stony Point Rd	<ul style="list-style-type: none"> Signalize 	No	Capacity
	27	Milbrae Ave/ Primrose Ave	No mitigation necessary	-	-
	28	Milbrae Ave/ Whistler Ave	No mitigation necessary	-	-
	29	Milbrae Ave/ Langner Ave	No mitigation necessary	-	-
	30	Milbrae Ave/ Labath Ave	No mitigation necessary	-	-
	31	Milbrae Ave/ Dowdell Ave	No mitigation necessary	-	-

¹ In summary, widen Wilfred Ave to three lanes on Stony Point Rd to the Urban Growth Boundary

Table B 5 – Alternative B Mitigated Intersection Levels of Service

Intersection	Criteria	Signal Control	2005		2008						2020						
			Existing		Base (w/o Proj)		With Project		Mitigated		Base (w/o Proj)		With Project		Mitigated		
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	
1	Stony Point Rd/ Wilfred Ave	D	TWSC	F	109.1	F	238.0	F	OVRFL	C	25.1	F	401.6	F	OVRFL	C	29.6
2	Primrose Ave/ Wilfred Ave	D	TWSC	A	9.4	B	11.3	F	OVRFL	C	34.9	B	12.4	F	OVRFL	D	36.8
3	Whistler Ave/ Wilfred Ave	D	TWSC	A	9.4	B	11.3	F	84.4	F	51.0	B	12.4	F	111.8	F	63.8
4	Langer Ave/Wilfred Ave	D	TWSC	A	9.4	B	11.3	F	82.8	F	50.2	B	12.4	F	111.7	F	63.8
5	Labath Ave/Wilfred Ave	D	TWSC	A	9.1	E	48.3	F	OVRFL	C	30.9	F	491.5	F	OVRFL	D	38.9
6	Dowdell Ave/Wilfred Ave	D	TWSC	A	9.1	F	333.5	F	OVRFL	D	51.1	F	OVRFL	F	OVRFL	D	43.0
7	Redwood Dr/Wilfred Ave	D	TS	C	28.1	D	37.1	F	154.4	D	38.2	F	87.9	F	275.0	D	47.2
8	Redwood Dr/ Commerce Blvd	C	TS	D	46.5	C	26.6	C	26.6	C	26.6	-	-	-	-	-	-
9	Wilfred Ave/ US-101 SB Ramps	D	TS	-	-	C	22.5	E	58.4	D	50.9	C	33.2	F	106.7	D	49.0
10	Golf Course Dr/ Commerce Blvd	D	TS	E	61.7	D	44.0	F	90.0	D	38.0	F	96.5	F	186.3	D	53.2
11	Golf Course Dr/ Roberts Lake Rd	C	TS	B	18.4	B	17.0	B	15.5	D	38.0	B	10.9	B	11.1	D	53.2
12	Commerce Blvd/ US-101 NB Ramps	D	TS	C	28.7	C	34.9	F	86.5	C	26.9	E	69.8	F	150.0	D	39.2
13	Project Driveway/ Stony Point Rd	D	TWSC	A	0.0	A	0.0	D	27.3	B	14.2	A	0.0	C	24.3	B	14.6
14	Business Park Dr/ Labath Ave	D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	Business Park Dr/ Redwood Dr	D	TWSC	C	23.4	D	26.5	D	26.5	D	26.5	C	16.5	C	16.5	C	16.5
16	Rohnert Park Expwy/ Stony Point Rd	D	TS	C	25.2	C	24.0	E	55.6	C	27.6	C	22.1	D	45.9	C	29.2
17	Rohnert Park Expwy/ Labath Ave	C	TS	C	27.5	C	33.1	C	34.4	C	33.9	C	33.0	C	34.0	C	29.3
18	Rohnert Park Expwy/ Redwood Dr	C	TS	C	33.4	D	35.6	D	43.6	C	26.7	D	36.0	D	41.8	C	34.3
19	Rohnert Park Expwy/ US-101 SB Ramps	D	TS	C	23.2	C	23.2	C	21.6	C	24.1	C	24.5	E	56.0	C	25.3
20	Rohnert Park Expwy/ US-101 NB Ramps	D	TS	B	14.9	B	17.6	C	23.9	C	23.7	B	17.1	C	24.1	C	24.1
21	Rohnert Park Expwy/ Commerce Blvd	C	TS	C	31.5	C	33.9	C	33.9	C	33.2	C	34.9	C	34.9	C	34.9
22	Gravenstein Hwy/ Stony Point Rd	D	TS	C	34.7	C	31.5	D	39.5	D	46.1**	D	39.9	D	42.4	D	48.7**
23	Gravenstein Hwy/ Redwood Dr	D	TS	C	29.5	C	27.8	C	28.6	C	32.4	C	34.6	D	36.5	D	40.4
24	Gravenstein Hwy/ US-101 SB Ramps	D	TS	C	21.0	B	17.8	B	18.4	C	23.4	B	17.0	C	28.2	C	32.1
25	Gravenstein Hwy/ US-101 NB Off-Ramp	D	TS	B	16.2	B	13.5	C	21.1	C	25.2**	B	18.7	C	23.0	C	30.1**
26	Millbrae Ave/ Stony Point Rd	D	TWSC	E	38.3	E	38.2	F	57.8	B	18.6	F	70.6	F	144.7	B	19.4
27	Millbrae Ave/ Primrose Ave	D	TWSC	B	11.1	B	11.4	B	11.4	B	11.4	B	12.4	B	12.4	B	12.4
28	Millbrae Ave/ Whistler Ave	D	TWSC	B	11.3	B	11.5	B	11.5	B	11.5	B	12.4	B	12.4	B	12.4
29	Millbrae Ave/ Langner Ave	D	TWSC	A	9.6	A	9.9	A	9.9	A	9.9	B	11.2	B	11.2	B	11.2
30	Millbrae Ave/ Labath Ave	D	TWSC	B	10.8	B	11.2	B	11.2	B	11.2	B	13.5	B	13.5	B	13.5
31	Millbrae Ave/ Dowdell Ave	D	TWSC	B	11.2	B	11.3	B	11.3	B	11.3	B	11.6	B	11.6	B	11.6

Results indicate that the freeway will not meet standards with the project, even with the future construction of HOV lanes, ramp metering, and auxiliary lanes associated with the Wilfred interchange project. As mitigation the project should do the following which will result in the mitigated levels of service shown in **Table B6**:

- Adjust the ramp metering to account for the additional project traffic at the Wilfred Avenue interchange in the near-term (2008). Most metering adjustments can be minor and are not expected to have queuing effects on the local street network. However, the southbound on-ramp will require heavy metering to obtain an acceptable level of service for the freeway ramp merge area which may create a long queue backed up on the ramp.
- The project should contribute to the construction of auxiliary lanes between Rohnert Park Expressway and Gravenstein Highway (SR-116) in the long-term (2020).
- The project should contribute to the construction of the Wilfred Avenue interchange project, including HOV lanes, ramp metering, and auxiliary lanes in the near-term (2008).
- The project should contribute to the construction of an additional traffic lane in the southbound direction from Santa Rosa Avenue to Wilfred Avenue and from Gravenstein Highway (SR-116) to south of Gravenstein Highway (SR-116) as well as an additional traffic lane in the northbound direction from south of Gravenstein Highway (SR-116) to Gravenstein Highway (SR-116) in the long-term (2020).

Aside from roadway improvements to mitigate protect impacts, the casino and hotel should coordinate with the Green Music Center during outdoor events that will generate high traffic levels. During that period, traffic control services at the Rohnert Park interchange may be necessary. Therefore, the casino/hotel project should provide funding for special event traffic monitoring at the Rohnert Park Expressway interchange to identify conflicts during outdoor events generate high traffic levels. If conflicts occur, the project should provide traffic management coordination between the casino/hotel project and Green Music Center in consultation with CHP and Caltrans to assist in traffic control.

Because no fixed route service will be available at the project site, the casino/hotel should provide a shuttle that serves the two Rohnert Park transfer stations. The shuttle should run throughout the day or could be called out on demand.

The casino should also sponsor charter buses from farther away destinations such as Marin County and the south Bay. The buses could serve specific groups such as senior citizens or social clubs, while reducing the number of single occupancy vehicles to the site. Preferential carpool or vanpool spaces should also be provided at the project site to encourage ridesharing by patrons and employees.



Table B 6 – Alternative B Mitigated Freeway Level of Service Summary

US-101 Section/Ramp	Criteria		Existing		2008		2008 + Alt B Mitigated		2020		2020 + Alt B Mitigated	
	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)
Northbound												
US-101 South of Gravenstein Highway (NB)	E	22.2	C	19.1	C	25.1	C	25.1	C	25.6	E	38.4
Gravenstein Highway NB Off-Ramp	E	30.8	C	27.4	D	33.7	D	33.7	D	34.1	F	41.8
Gravenstein Highway NB On-Ramp	E	34.5	D	29.5	E	35.2	E	35.2	E	36.1	F	43.1
US-101 Between Gravenstein Highway and Rohnert Park Expressway (NB)	E	28.1	C	23.5	D	28.8	D	28.8	D	32.3	F	42.1
Rohnert Park Expressway NB Off-Ramp	E	33.6	D	28.8	D	34.2	D	34.2	E	37.1	F	43.7
Rohnert Park Expressway NB On-Ramp (Loop Ramp)	E	32.1	C	21.8	C	21.8	C	21.8	C	23.2	C	26.7
Rohnert Park Expressway NB On-Ramp	E	28.9	C	22.1	D	29.1	D	29.1	D	29.0	E	37.4
US-101 Between Rohnert Park Expressway and Wilfred Avenue (NB)	E	35.4	C	22.1	D	29.1	D	29.1	D	29.0	E	37.4
Wilfred Avenue NB Off-Ramp	E	42.0	D	30.3	D	33.9	D	33.9	E	40.4	F	44.3
US-101 Between Wilfred Avenue and Santa Rosa Avenue (NB)	E	26.7	D	30.3	D	33.9	D	33.9	E	40.4	F	44.3
Santa Rosa Avenue NB Off-Ramp	E	37.2	D	30.3	D	33.9	D	33.9	E	40.4	F	44.3
US-101 North of Santa Rosa Avenue (NB)	E	20.3	C	22.0	C	23.8	C	23.8	D	29.7	D	32.6
Southbound												
US-101 North of Santa Rosa Avenue (SB)	E	22.9	C	24.1	D	26.1	D	26.1	D	28.5	D	31.2
Santa Rosa Avenue SB On-Ramp	E	31.2	D	32.7	E	39.3	E	39.3	F	44.8	F	49.7
US-101 Between Santa Rosa Avenue and Wilfred Avenue (SB)	E	31.5	D	32.7	E	39.3	E	39.3	F	44.8	F	49.7
Wilfred Avenue SB Off-Ramp	E	38.0	E	36.8	E	40.8	E	40.8	F	44.8	F	49.7
Wilfred Avenue SB On-Ramp	E	33.7	D	33.4	F	45.0	D	33.6	E	39.9	F	54.1
US-101 Between Rohnert Park Expressway and Wilfred Avenue (SB)	E	35.2	D	33.4	F	45.0	D	33.6	E	39.9	F	54.1
Rohnert Park Expressway SB Off-Ramp	E	38.0	D	33.4	F	45.0	D	33.6	E	39.9	F	54.1
Rohnert Park Expressway SB On-Ramp (Loop Ramp)	E	36.0	D	30.9	D	34.5	D	34.5	E	38.5	F	43.0
Rohnert Park Expressway SB On-Ramp	E	35.1	D	30.1	D	34.1	D	34.1	F	37.5	F	42.3
US-101 Between Rohnert Park Expressway and Gravenstein Highway (SB)	E	27.1	C	22.3	D	27.1	D	27.1	E	36.6	F	46.2
Gravenstein Highway SB Off-Ramp	E	33.9	D	29.2	D	34.0	D	34	F	40.3	F	46.2
Gravenstein Highway SB On-Ramp	E	33.7	D	32.1	E	37.2	E	37.2	F	42.3	F	48.5
US-101 South of Gravenstein Highway (SB)	E	24.7	C	21.8	D	27.4	D	27.4	D	32.0	F	48.5

Mitigations to reduce the impact of the construction include the implementation of a construction traffic management plan for the duration of construction of the project and training for construction delivery vehicle drivers. Construction material importation should be scheduled outside of the areawide commute peak hours. Debris along the truck route caused by trucks should be monitored daily and the roadways should be cleaned as necessary.

To help ensure adequate public safety during construction, particularly near the project site, the tribe should provide flagging when necessary in consultation with CHP, Caltrans, and the County's Sheriff's Department to assist with traffic control.

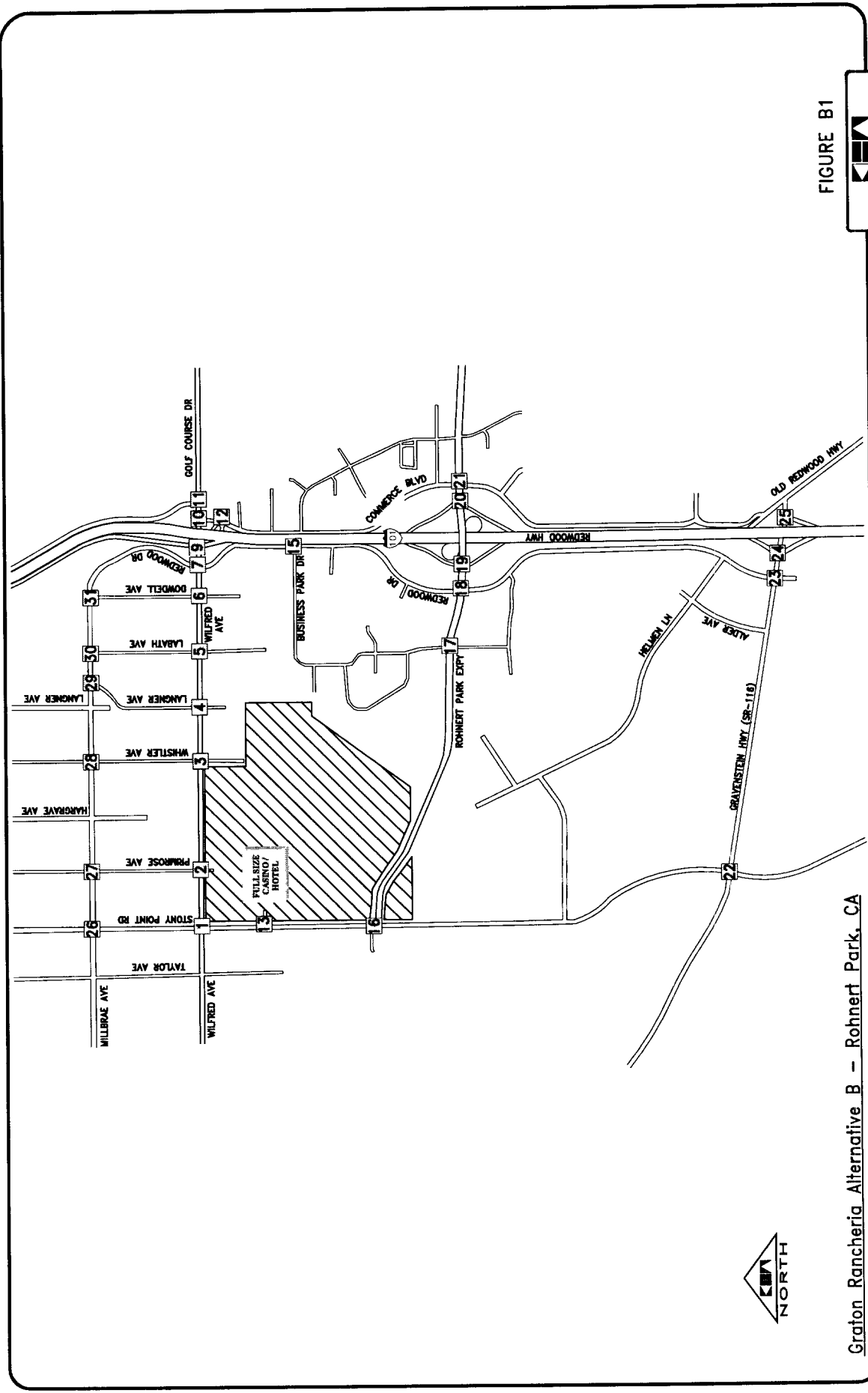


FIGURE B1



Graton Rancheria Alternative B - Rohnert Park, CA

PROJECT LOCATION

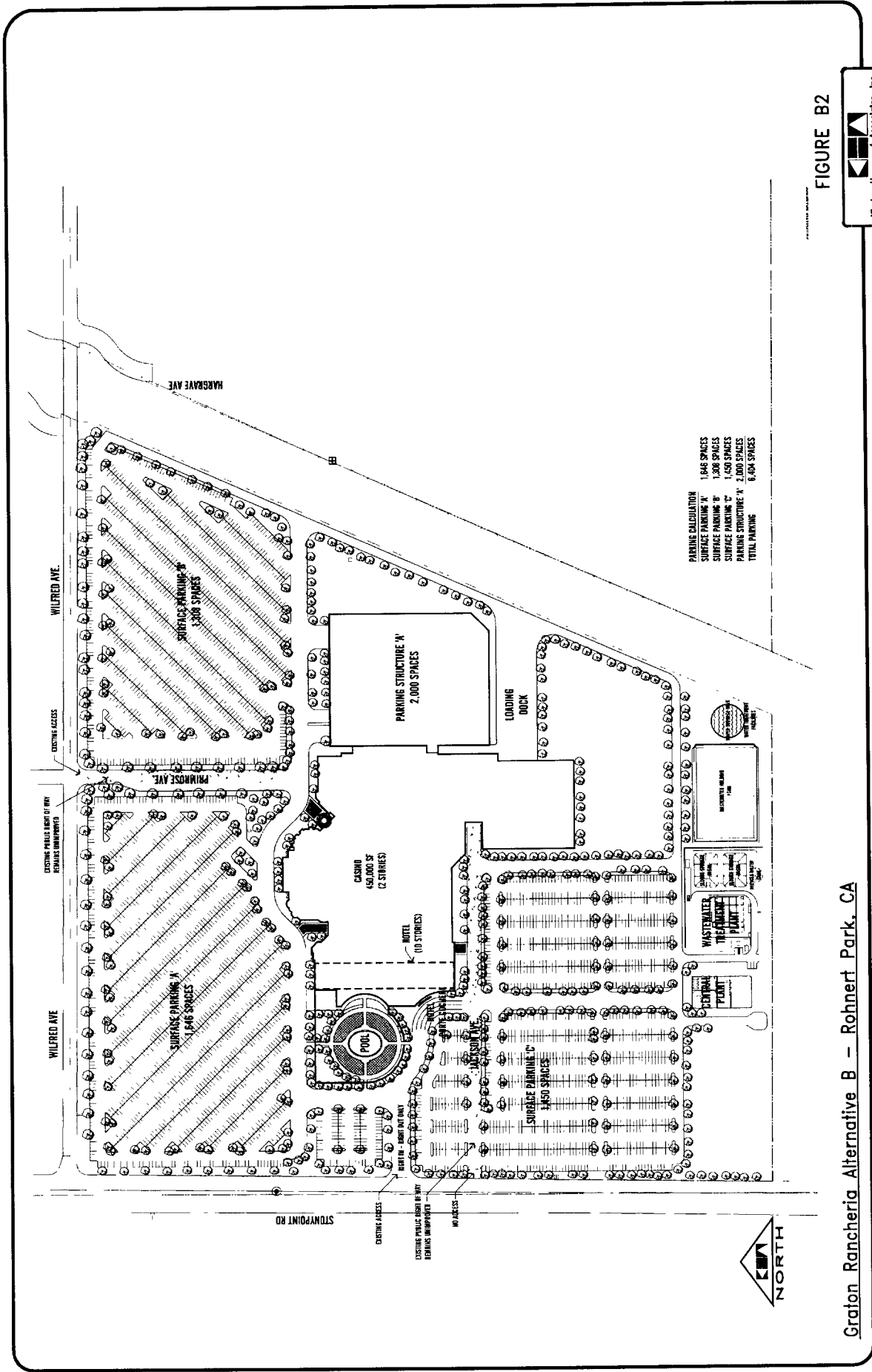


FIGURE B2



Graton Rancheria Alternative B - Rohnert Park, CA

SITE PLAN

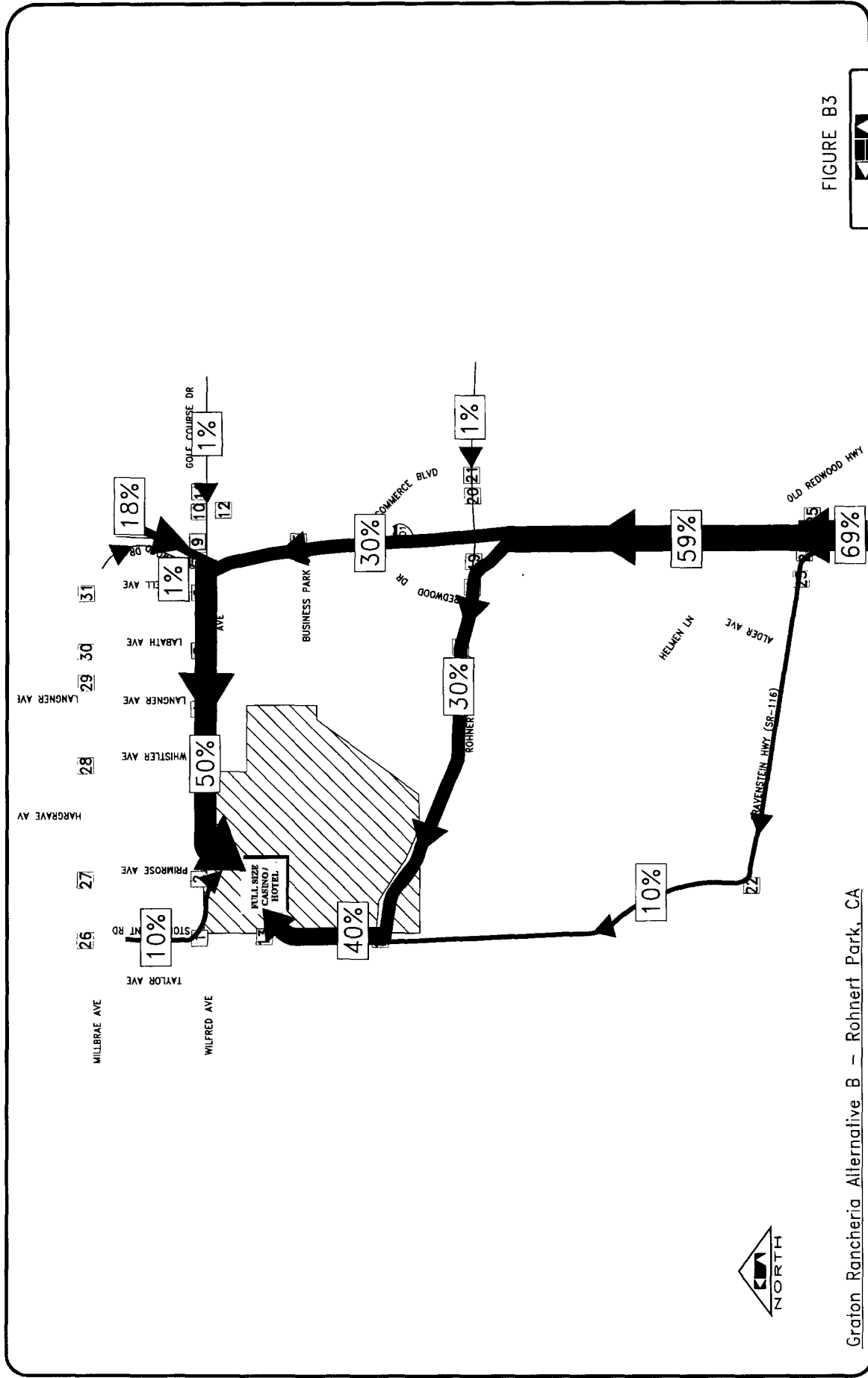


FIGURE B3



Graton Rancheria Alternative B - Rohnert Park, CA

TRIP DISTRIBUTION - IN



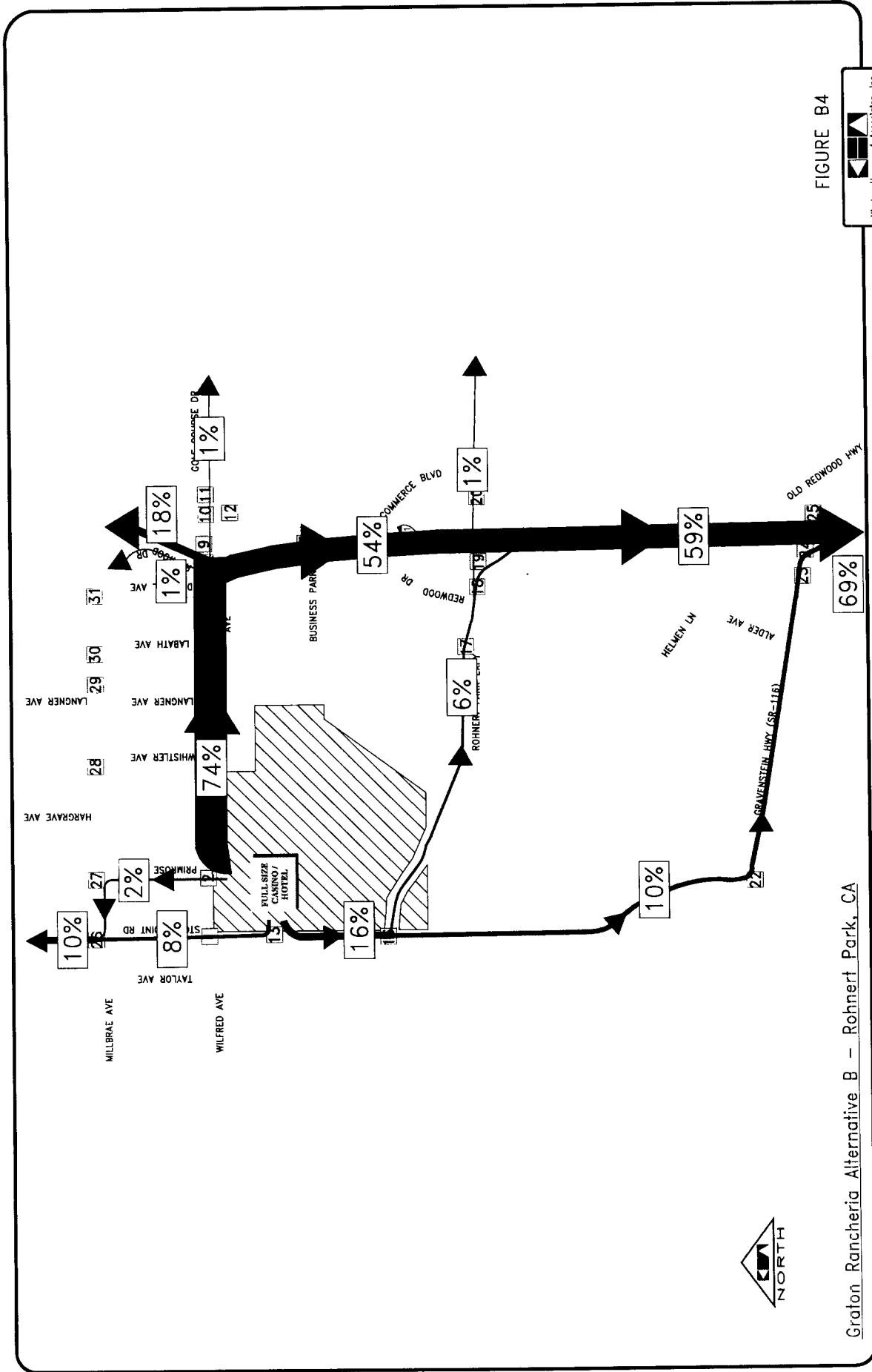


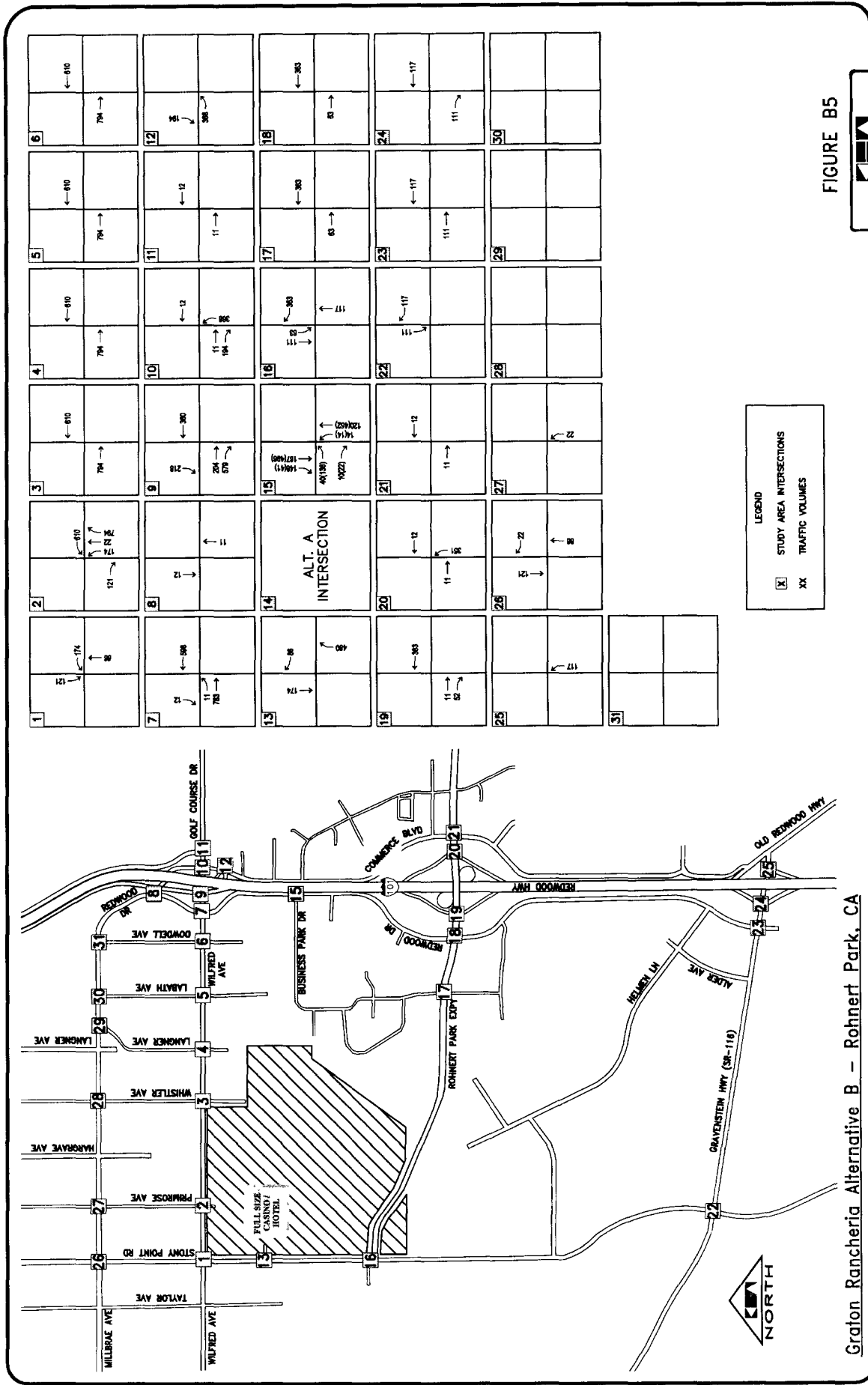
FIGURE B4



Graton Rancheria Alternative B - Rohnert Park, CA

TRIP DISTRIBUTION - OUT

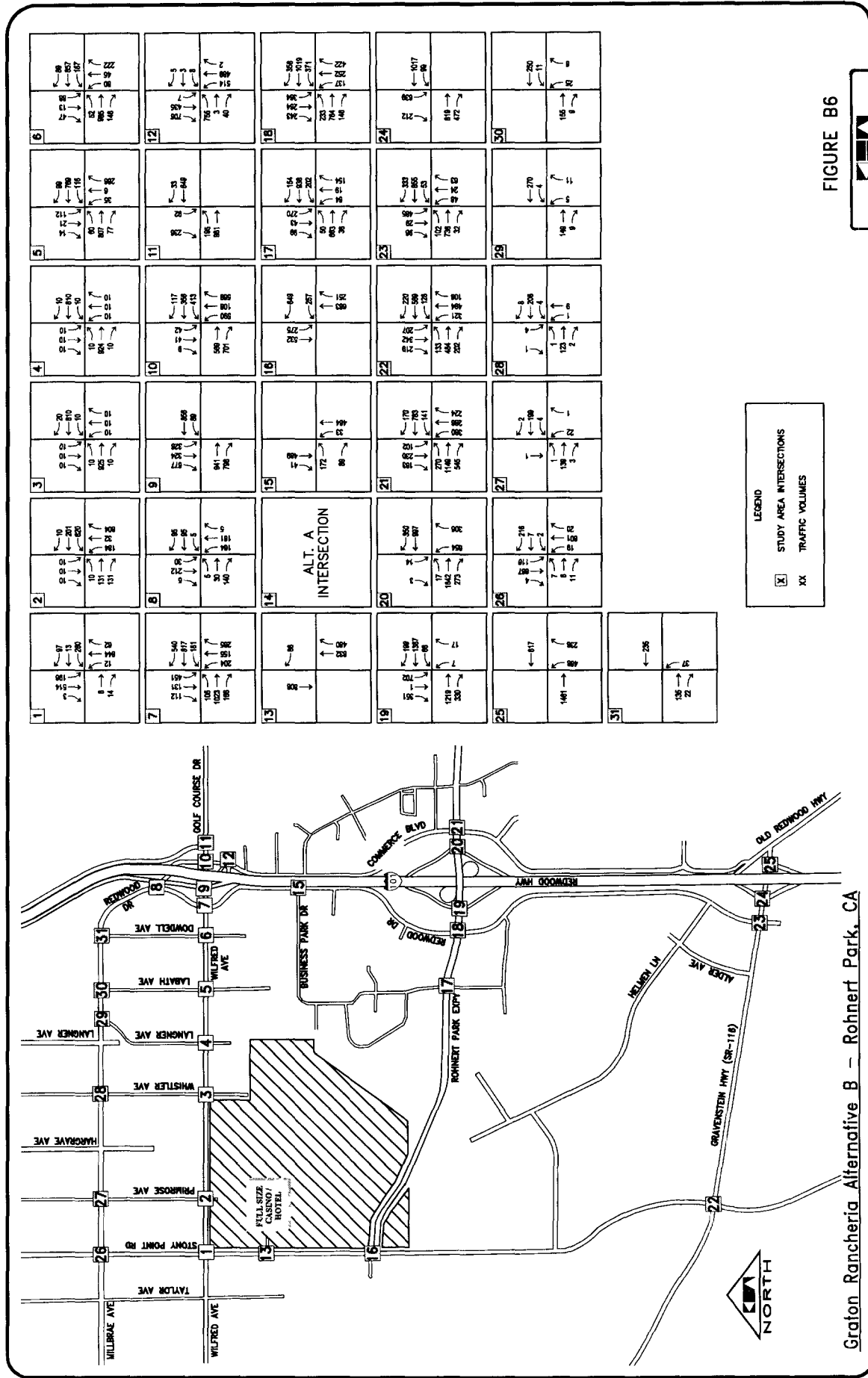




Grafton Rancheria Alternative B - Rohnert Park, CA

PROJECT GENERATED PM TRAFFIC VOLUMES





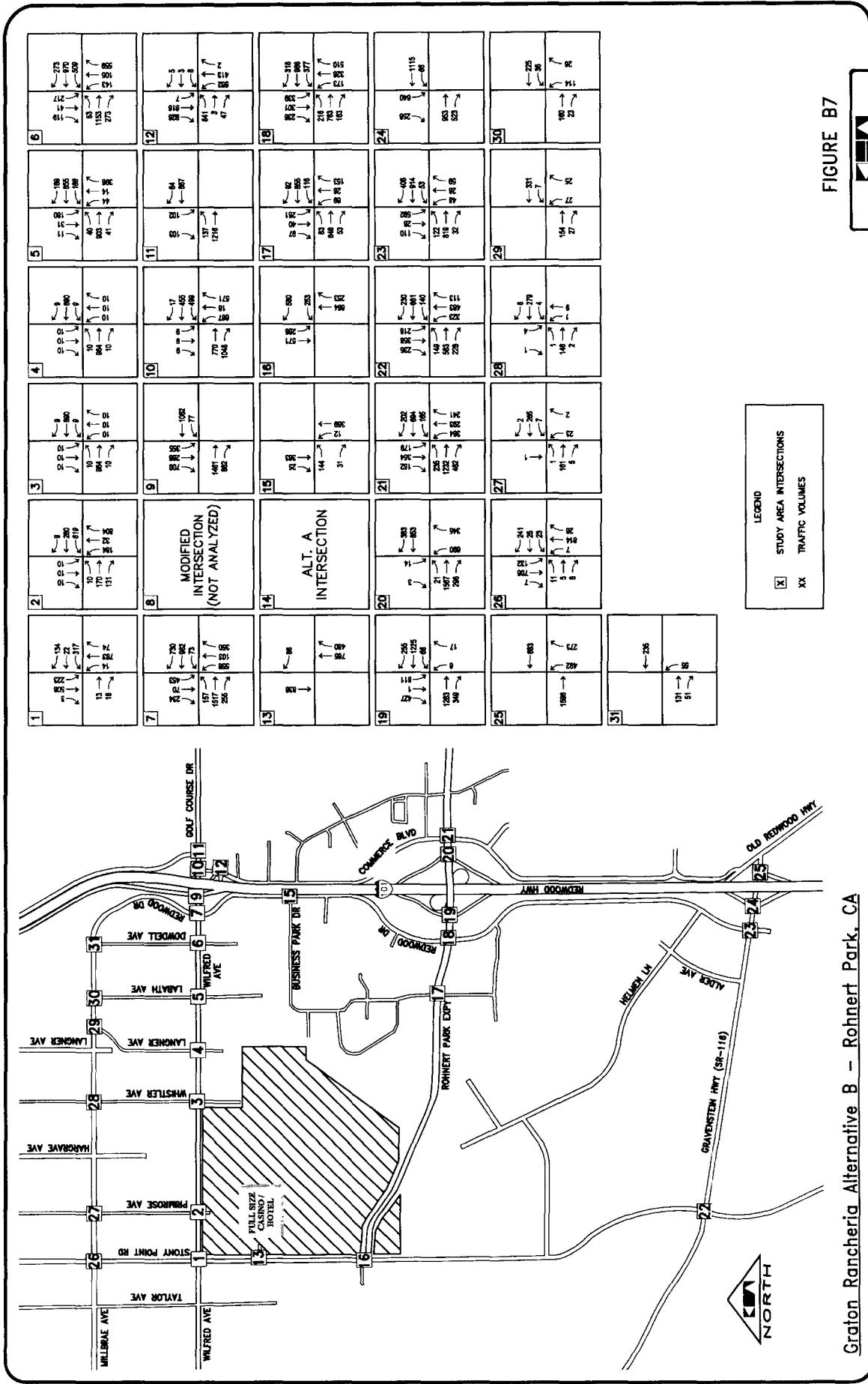
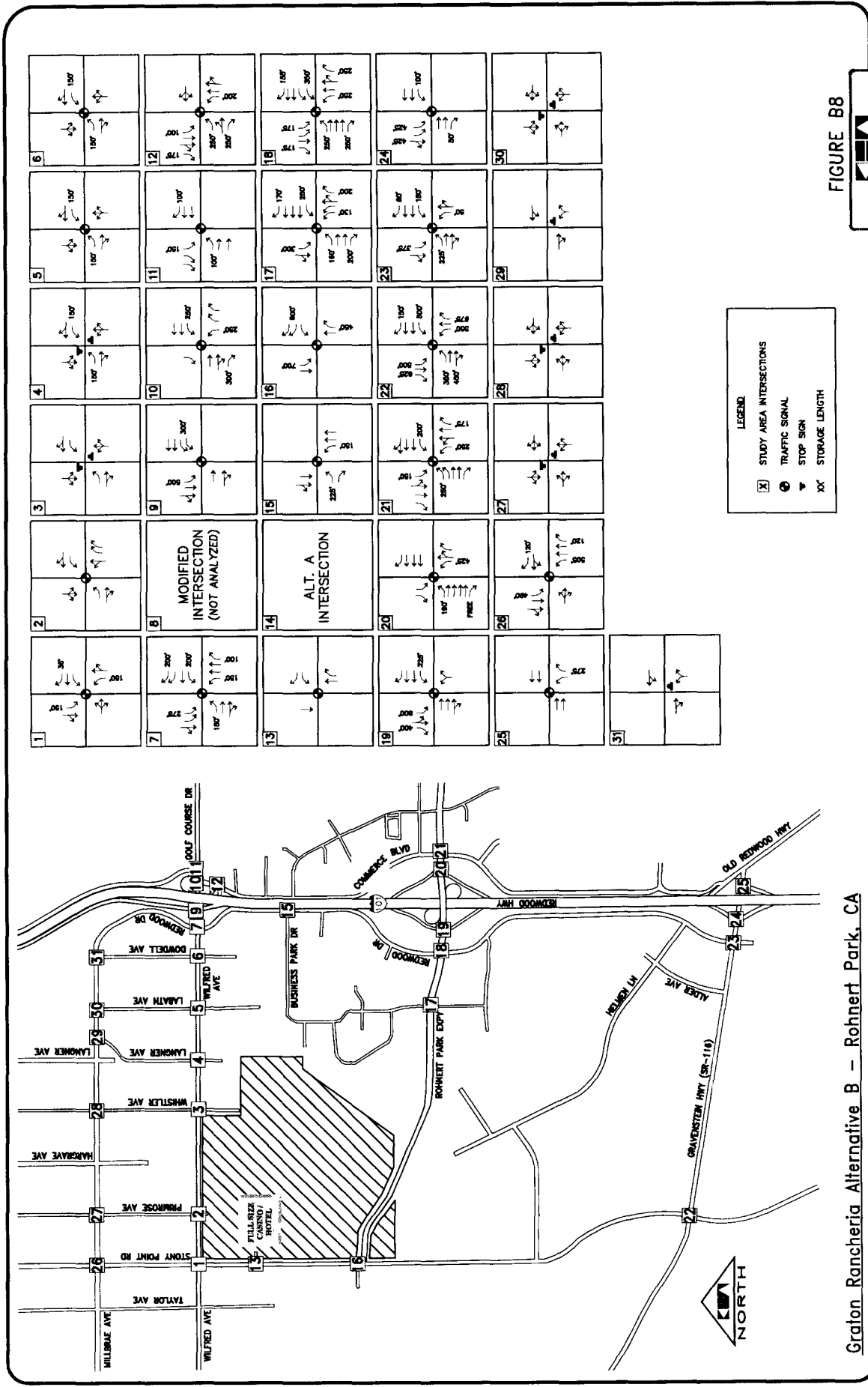


FIGURE B7



Graton Rancheria Alternative B - Rohnert Park, CA
 LONG-TERM CUMULATIVE + PROJECT PM TRAFFIC VOLUMES

LEGEND
 X STUDY AREA INTERSECTIONS
 XX TRAFFIC VOLUMES



Grafton Rancheria Alternative B - Rohnert Park, CA

NEAR-TERM MITIGATED LANE GEOMETRY AND TRAFFIC CONTROL

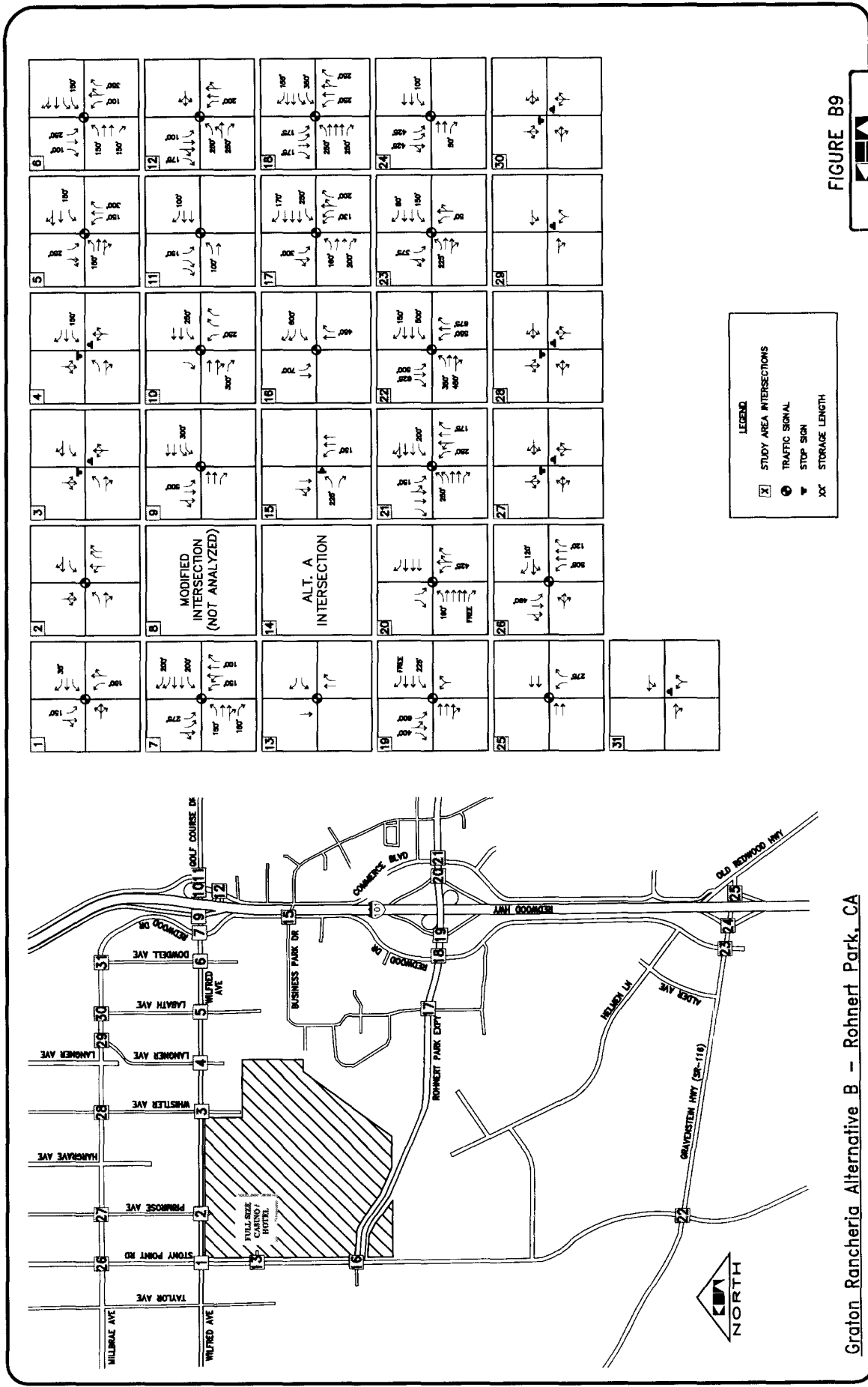


FIGURE B9

Kimley-Horn and Associates, Inc.

Graton Rancheria Alternative B - Rohnert Park, CA

LONG-TERM MITIGATED LANE GEOMETRY AND TRAFFIC CONTROL

ALTERNATIVE C – NORTHEAST STONY POINT SITE

The Alternative C casino and hotel is proposed to be located as shown in **Figure C1**, which is bordered by Wilfred Avenue in the north, Rohnert Park Expressway in the south, Stony Point Road in the west, and Langner Avenue in the east.

Figure C2 shows the proposed layout of the casino and hotel facility. As seen in the figure, the buildings and other related facilities are located in the northwest corner of the site. The site layout includes a main building of approximately 450,000 square feet for a casino, restaurants, food court, event center, banquet facilities, lobby, pool, and other ancillary functions. In addition the project is planned to include up to 300 hotel rooms, primarily for casino guests.

A breakdown of square footage as it relates to traffic impacts is shown below:

- Casino and Entertainment areas – 408,150 s.f.
- Lobby/Bar/Back of House/Sundries – 14,750 s.f.
- Pool and Spa – 27,100 s.f.
- 450,000 s.f.

- Hotel Rooms – 291,000 s.f.

The site plan also shows supporting uses such as parking lots, parking structure, and wastewater treatment facilities. This layout is virtually the same as Alternative A except in a different location on the project site.

Site Access

The only project access is from Wilfred Avenue from the south leg of Whistler Avenue. This approach is assumed to operate as a full movement intersection with no turn limitations. Currently, the access is unsignalized.

Trip Generation – Alternative C

Trip generation for Alternative C is identical to Alternative A. See Trip Generation – Alternatives A, B, and C section under Alternative A for specific information.

Project Trip Distribution and Assignment

Based on the factors discussed in the General Project Information section above it was determined that approximately 30% of the project traffic would be distributed to destinations north of the site, with the remaining 70% distributed south of the site. To be conservative, no project traffic was assumed to be generated or attracted in the immediate vicinity of the project site. The project traffic distribution is shown in **Figure C3** and **Figure C4**. **Figure C5** illustrates project traffic assigned to the study

intersections based on the assumed trip distribution. As seen in **Figure C5**, most of the project traffic is expected to come from the freeway therefore it was assumed that most of the traffic would use Whistler Avenue because of its closer proximity to the freeway. As noted in the distribution, some traffic leaving the project site is expected to avoid congestion at Wilfred Avenue and Stony Point Road by using Millbrae Avenue.

Near-Term Plus Project Traffic Volumes

Near-term 2008 traffic volumes were combined with vehicle trips expected to be generated by the Alternative C casino and hotel project. **Figure C6** illustrates the combined near-term turning movement volumes at the study intersections.

Cumulative Long -Term Plus Project Traffic Volumes

Long-term 2020 traffic volumes were combined with vehicle trips expected to be generated by the Alternative C casino and hotel project. **Figure C7** illustrates the combined long-term turning movement volumes at the study intersections.

Alternative C LOS Conditions and Impacts at Intersections

Traffic operations were evaluated under the following development conditions:

- Near-term conditions with Alternative C (year 2008)
- Long-term Cumulative conditions with Alternative C (year 2020)

In the near-term analysis for Alternative C, it was assumed that the Wilfred Avenue widening project will have taken place before the casino/hotel opens. The Memorandum of Understanding (MOU) between the City of Rohnert Park and the Federated Indians of the Graton Rancheria stated that the tribe would help financially to speed up the timeline of the widening project to occur before the casino/hotel opens in 2008.

Results of the analysis are presented in **Table C1**. (Results shown as bold in the table do not meet operational standards.) The signal control is listed as TS for a signalized intersection and TWSC for a two-way stop-controlled intersection. Two-way stop-controlled (TWSC) intersections maybe operate acceptably overall but only the worst approach is reported in the table. The overall level of service is reported for signalized intersections. Additional detail is provided in the **Appendix**. As shown in the results, the following intersections and approaches will fail to meet acceptable level of service thresholds based on established significance criteria and with the addition of project-related traffic.

Table C 1 – Alternative C Levels of Service

	Intersection	Criteria	Signal Control	2005		2008				2020			
				Existing		Base (w/o Proj.)		With Project		Base (w/o Proj.)		With Project	
				LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
1	Stony Point Rd/ Wilfred Ave	D	TWSC	F	109.1	F	238.0	F	OVRFL	F	401.6	F	OVRFL
2	Primrose Ave/ Wilfred Ave	D	TWSC	A	9.4	B	11.3	C	24.4	B	12.4	D	29.0
3	Whistler Ave/ Wilfred Ave	D	TWSC	A	9.4	B	11.3	F	OVRFL	B	12.4	F	OVRFL
4	Langer Ave/Wilfred Ave	D	TWSC	A	9.4	B	11.3	F	132.1	B	12.4	F	185.5
5	Labath Ave/Wilfred Ave	D	TWSC	A	9.1	E	48.3	F	OVRFL	F	491.5	F	OVRFL
6	Dowdell Ave/Wilfred Ave	D	TWSC	A	9.1	F	333.5	F	OVRFL	F	OVRFL	F	OVRFL
7	Redwood Dr/Wilfred Ave	D	TS	C	28.1	D	37.1	F	197.5	F	87.9	F	319.6
8	Redwood Dr/ Commerce Blvd	C	TS	D	46.5	C	26.6	C	26.6	-	-	-	-
9	Wilfred Ave/ US-101 SB Ramps	D	TS	-	-	C	22.5	D	53.7	C	33.2	F	98.3
10	Golf Course Dr/ Commerce Blvd	D	TS	E	61.7	D	44.0	F	132.0	F	96.5	F	238.9
11	Golf Course Dr/ Roberts Lake Rd	C	TS	B	18.4	B	17.0	B	15.5	B	10.9	B	11.1
12	Commerce Blvd/ US-101 NB Ramps	D	TS	C	28.7	C	34.9	F	110.2	E	69.8	F	177.5
13	Project Driveway/ Stony Point Rd	D	TWSC	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0
14	Business Park Dr/ Labath Ave	D	-	-	-	-	-	-	-	-	-	-	-
15	Business Park Dr/ Redwood Dr	D	TWSC	C	23.4	D	26.5	D	26.5	C	16.5	C	16.5
16	Rohnert Park Expwy/ Stony Point Rd	D	TS	C	25.2	C	24.0	D	36.8	C	22.1	C	31.4
17	Rohnert Park Expwy/ Labath Ave	C	TS	C	27.5	C	33.1	C	34.1	C	33.0	C	33.9
18	Rohnert Park Expwy/ Redwood Dr	C	TS	C	33.4	D	35.6	D	44.0	D	36.0	D	42.0
19	Rohnert Park Expwy/ US-101 SB Ramps	D	TS	C	23.2	C	23.2	C	21.5	C	24.5	C	24.7
20	Rohnert Park Expwy/ US-101 NB Ramps	D	TS	B	14.9	B	17.6	B	19.2	B	17.1	B	20.0
21	Rohnert Park Expwy/ Commerce Blvd	C	TS	C	31.5	C	33.9	C	33.9	C	34.9	C	34.9
22	Gravenstein Hwy/ Stony Point Rd	D	TS	C	34.7	C	31.5	D	39.3	D	39.9	D	42.2
23	Gravenstein Hwy/ Redwood Dr	D	TS	C	29.5	C	27.8	C	28.6	C	34.6	D	36.4
24	Gravenstein Hwy/ US-101 SB Ramps	D	TS	C	21.0	B	17.8	B	18.4	B	17.0	C	28.2
25	Gravenstein Hwy/ US-101 NB Off-Ramp	D	TS	B	16.2	B	13.5	C	21.1	B	18.7	C	23.0
26	Millbrae Ave/ Stony Point Rd	D	TWSC	E	38.3	E	38.2	F	57.8	F	70.6	F	144.6
27	Millbrae Ave/ Primrose Ave	D	TWSC	B	11.1	B	11.4	B	11.6	B	12.4	B	12.6
28	Millbrae Ave/ Whistler Ave	D	TWSC	B	11.3	B	11.5	B	11.5	B	12.4	B	12.6
29	Millbrae Ave/ Langner Ave	D	TWSC	A	9.6	A	9.9	A	9.9	B	11.2	B	11.2
30	Millbrae Ave/ Labath Ave	D	TWSC	B	10.8	B	11.2	B	11.2	B	13.5	B	13.5
31	Millbrae Ave/ Dowdell Ave	D	TWSC	B	11.2	B	11.3	B	11.3	B	11.6	B	11.6

2008 Results

- Stony Point Road/Wilfred Avenue
- Whistler Avenue/Wilfred Avenue
- Langner Avenue/Wilfred Avenue
- Labath Avenue/Wilfred Avenue
- Dowdell Avenue/Wilfred Avenue
- Redwood Drive/Wilfred Avenue
- Golf Course Drive/Commerce Boulevard
- Commerce Boulevard/US-101 NB Ramps
- Rohnert Park Expressway/Redwood Drive
- Millbrae Avenue/Stony Point Road

2020 Results

- Stony Point Road/Wilfred Avenue
- Whistler Avenue/Wilfred Avenue
- Langner Avenue/Wilfred Avenue
- Labath Avenue/Wilfred Avenue
- Dowdell Avenue/Wilfred Avenue
- Redwood Drive/Wilfred Avenue
- Wilfred Avenue/US-101 SB Ramps
- Golf Course Drive/Commerce Boulevard
- Commerce Boulevard/US-101 NB Ramps
- Rohnert Park Expressway/Redwood Drive
- Millbrae Avenue/Stony Point Road

Alternative C Traffic Signal Warrant Analysis

Alternative C, near-term and long-term, traffic volumes at unsignalized study intersections were compared against the peak hour warrant in the *2003 Manual on Uniform Traffic Control Devices (MUTCD)* and the *California Supplement*.

Results of the analysis showed that the following intersections will satisfy traffic signal Warrant #3 by the year 2008 and 2020.

- Stony Point Road/Wilfred Avenue (2008 and 2020)
- Whistler Avenue/Wilfred Avenue (2008 and 2020)
- Labath Avenue/Wilfred Avenue (2008 and 2020)
- Dowdell Avenue/Wilfred Avenue (2008 and 2020)
- Millbrae Avenue/Stony Point Road (2008 and 2020)

Other warrants such as for minimum vehicle volumes, interruption of continuous traffic, and traffic progression were not evaluated because they generally require higher traffic volumes to be satisfied. Accident history and school areas were also not evaluated

based on the results of field observations, which noted that neither of these warrant thresholds was likely to be met. A copy of the analysis summary for Warrant #3 is included in the **Appendix**.

Alternative C LOS Conditions and Impacts on Freeway and Ramps

Project trips generated by the proposed Alternative C casino and hotel were added to the year 2008 and 2020 forecast freeway volumes.

Traffic analyses were completed to evaluate the operation of the study freeway segments and ramps in the year 2008 and 2020, with the addition on the casino and hotel project. Freeway segment analyses were limited to the mix-use travel lanes which are expected to have significantly more congestion than the future HOV lanes.

Results of the analyses are presented in **Table C2**. (Results shown as bold in the table do not meet operational standards.) As shown in the table, project traffic will add to the background congestion of the freeway. Significant congestion is expected with the project.

Table C 2 – Alternative C Freeway Levels of Service

US-101 Section/Ramp	Criteria		Existing		2008		2008 + Alt C		2020		2020 + Alt C	
	LOS	LOS	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)
Northbound												
US-101 South of Gravenstein Highway (NB)	E	C	C	22.2	C	19.1	C	25.1	C	25.6	E	38.4
Gravenstein Highway NB Off-Ramp	E	D	C	30.8	C	27.4	D	31.8	D	34.1	F	41.8
Gravenstein Highway NB On-Ramp	E	D	D	34.5	D	29.5	D	33.4	E	36.1	F	43.1
US-101 Between Gravenstein Highway and Rohnert Park Expressway (NB)	E	D	C	28.1	C	23.5	D	28.8	D	32.3	F	-
Rohnert Park Expressway NB Off-Ramp	E	D	D	33.6	D	28.8	D	32.5	E	37.1	F	43.7
Rohnert Park Expressway NB On-Ramp (Loop Ramp)	E	D	C	32.1	C	21.8	D	31.4	C	23.2	F	41.8
Rohnert Park Expressway NB On-Ramp	E	D	C	32.5	C	22.1	D	30.4	D	29.0	E	38.6
US-101 Between Rohnert Park Expressway and Wilfred Avenue (NB)	E	D	C	28.9	C	22.1	D	30.4	D	29.0	E	38.6
Wilfred Avenue NB Off-Ramp	E	E	C	35.4	C	22.1	D	30.4	D	29.0	E	38.6
Wilfred Avenue NB On-Ramp	E	F	D	42.0	D	30.3	D	33.9	E	40.4	F	44.3
US-101 Between Wilfred Avenue and Santa Rosa Avenue (NB)	E	D	D	26.7	D	30.3	D	33.9	E	40.4	F	44.3
Santa Rosa Avenue NB Off-Ramp	E	E	D	37.2	D	30.3	D	33.9	E	40.4	F	44.3
US-101 North of Santa Rosa Avenue (NB)	E	C	C	20.3	C	22.0	C	23.8	D	29.7	D	32.6
Southbound												
US-101 North of Santa Rosa Avenue (SB)	E	C	C	22.9	C	24.1	D	26.1	D	28.5	D	31.2
Santa Rosa Avenue SB On-Ramp	E	D	D	31.2	D	32.7	E	36.2	F	-	F	-
US-101 Between Santa Rosa Avenue and Wilfred Avenue (SB)	E	D	D	31.5	D	32.7	E	36.2	F	-	F	-
Wilfred Avenue SB Off-Ramp	E	E	E	38.0	E	38.8	E	40.8	F	44.8	F	46.8
Wilfred Avenue SB On-Ramp	E	D	D	33.7	D	33.4	F	46.6	E	39.9	F	50.7
US-101 Between Rohnert Park Expressway and Wilfred Avenue (SB)	E	E	D	35.2	D	33.4	F	46.6	E	39.9	F	50.7
Rohnert Park Expressway SB Off-Ramp	E	E	D	38.0	D	33.4	F	46.6	E	39.9	F	50.7
Rohnert Park Expressway SB On-Ramp (Loop Ramp)	E	E	D	36.0	D	30.9	D	33.4	E	38.5	F	43.4
Rohnert Park Expressway SB On-Ramp	E	E	D	35.1	D	30.1	D	32.8	F	37.5	F	43.3
US-101 Between Rohnert Park Expressway and Gravenstein Highway (SB)	E	D	C	27.1	C	22.3	D	27.1	E	36.6	F	-
Gravenstein Highway SB Off-Ramp	E	D	D	33.9	D	29.2	D	32.5	F	40.3	F	46.2
Gravenstein Highway SB On-Ramp	E	D	D	33.7	D	32.1	E	35.7	F	42.3	F	48.4
US-101 South of Gravenstein Highway (SB)	E	C	C	24.7	C	21.8	D	27.4	D	32.0	F	-



Potential Effects on Intersection Safety

Traffic volumes generated by the project were reviewed in consideration of existing intersection collision history and the potential for increased accidents. According to collision data, accidents involving bicyclist and pedestrians are very low. Many intersections did not report any collisions of this type during the survey period. This suggests that bicycle and pedestrian volumes are relatively low and study intersections have minimal safety hazards for individuals biking or walking. Although the project will introduce increased traffic volumes at some intersections, bicyclists and pedestrians are expected to be able to travel through study intersections with similar levels of safety. Historically casinos do not attract a significant amount of bicycle and pedestrian traffic. . Therefore, the expected amount of pedestrian and bicycle traffic is nominal and a significant increase in bicycle and pedestrian accidents is unlikely.

The potential for increased collisions between motorized vehicles was also considered. Collision frequency and severity are a function of many complex factors that vary depending on the location and type of intersection or roadway segment. Factors include traffic control such as signals or stop signs, lane and shoulder widths, grades, driveway densities, roadside hazards or obstacles, presence of left and right turn lanes, sight distance, congestion, and others.

Because of the number and interrelationships of the variables, accurate crash prediction is difficult. However, the proposed casino and hotel project will increase roadway congestion, a factor which could result in an increase in traffic collisions if left unmitigated. Other factors are expected to remain unaffected.

As noted previously, the purpose of this study is to address the traffic and transportation effects of the proposed casino and hotel development. This includes mitigation improvements to restore traffic operations to levels within acceptable standards or to levels as good as or better than without the casino/hotel project. Any potential increases in accidents due to project-related traffic would be offset by the implementation of roadway improvements included as mitigation. Therefore, if mitigations are implemented as proposed in this report, no significant increase in daytime or nighttime collisions is expected.



Queuing Summary

As congestion increases it is common for traffic at signals and stop signs to form lines of stopped (or queued) vehicles. Queue lengths were determined for each lane and measure the distance that vehicles will backup in each direction approaching an intersection. The 95th percentile queue is calculated by using 95th percentile traffic to account for fluctuations in traffic and represents a condition where 95 percent of the time during the peak period, traffic volumes and related queuing will be at, or less, than determined by the analysis. Average queuing is generally less. Ninety-fifth percentile queuing was checked under the various future year development conditions and in consideration of the planned intersection and signal timing improvements. A typical vehicle length of 25 feet is used in the queuing analysis. A summary of the queuing results can be seen in **Table C3**. The results indicate dedicated turn lanes where queuing may exceed their storage limits. It should be noted that some variations in intersection queuing between scenarios is a result of planned intersection and signal timing improvements.

Most queuing impacts can be mitigated and are included in the mitigations section. There are some significant and unavoidable queuing impacts due to existing and/or proposed right-of-way at the following locations:

- Redwood Drive/Wilfred Avenue
- Redwood Drive/Rohnert Park Expressway
- Commerce Boulevard/Rohnert Park Expressway



Table C 3 – Alternative C Queuing Summary

Intersection	Turning Movement	Bay Length	Queue Length		Intersection	Turning Movement	Bay Length	Queue Length	
			2008	2020				2008	2020
1 Stony Point Road and Wilfred Avenue	EBL				16 Stony Point Road and Rohnert Park Expy	EBL			
	EBR					EBR			
	WBL					WBL			
	WBR	35	85	103		WBR	500	450	400
	NBL	150	<25	<25		NBL			
	NBR					NBR	450	225	225
4 Langner Avenue and Wilfred Avenue	SBL	150	35	40	SBL	700	400	400	
	SBR				SBR				
	EBL				17 Labath Avenue and Rohnert Park Expy	EBL	160	50	100
	EBR					EBR	200	50	50
	WBL	150		<25		WBL	250	225	125
	WBR					WBR			
NBL				NBL		130	50	100	
NBR				NBR		130	200	150	
5 Labath Avenue and Wilfred Avenue	SBL				SBL	100	300	225	
	SBR				SBR				
	EBL	150		<25	18 Redwood Drive and Rohnert Park Expy	EBL	200	325	300
	EBR					EBR	200	150	175
	WBL	150		28		WBL	450	450	450
	WBR					WBR	160	350	325
NBL				NBL		250	175	225	
NBR				NBR		250	500	550	
6 Dowdell Avenue and Wilfred Avenue	SBL				SBL	250	450	425	
	SBR				SBR	175	275	250	
	EBL	150		<25	19 SB US 101 Ramps and Rohnert Park Expy	EBL			
	EBR					EBR			
	WBL	150		463		WBL	275	50	100
	WBR					WBR			
NBL				NBL					
NBR				NBR					
7 Redwood Drive and Wilfred Avenue	SBL				20 NB US 101 Ramps and Rohnert Park Expy	SBL	400	600	475
	SBR					SBR	400	350	425
	EBL	150		150		EBL	190	25	25
	EBR	150		250		EBR			
	WBL					WBL			
	WBR					WBR			
8 Redwood Drive and Commerce Boulevard	NBL	150	650	775	21 Commerce Blvd and Rohnert Park Expy	NBL	225	300	375
	NBR	100	900	475		NBR			
	SBL	275	800	625		SBL	150	125	225
	SBR					SBR	150	200	200
	EBL	75	25			EBL	250	175	200
	EBR	75	175			EBR	240	450	425
9 Wilfred Avenue and SB US 101 Ramps	WBL	100	25		22 Stony Point Road and Gravenstein Hwy	WBL	200	175	225
	WBR					WBR			
	NBL	150	200			NBL	250	375	300
	NBR	150	<25			NBR	175	275	300
	SBL	200	50			SBL	150	125	225
	SBR					SBR	150	200	200
10 Golf Course Drive and Commerce Blvd	EBL				23 Redwood Road and Gravenstein Hwy	EBL	250	175	200
	EBR					EBR			
	WBL	300	225	150		WBL	500	175	200
	WBR					WBR	150	250	250
	NBL					NBL	550	375	375
	NBR					NBR	675	100	125
11 Roberts Lake Drive and Golf Course Drive	SBL	250	525	500	24 Gravenstein Hwy and SB US 101 Ramps	SBL	500	250	275
	SBR					SBR	625	25	275
	EBL					EBL	225	150	175
	EBR					EBR			
	WBL	150	1200	650		WBL	150	75	75
	WBR					WBR	80	350	425
12 Commerce Blvd and NB US 101 Ramps	NBL	150	2125	1050	25 Gravenstein Hwy and NB US 101 Ramps	NBL	50	50	50
	NBR					NBR			
	SBL					SBL	225	475	550
	SBR					SBR			
	EBL	80	200	375		EBL			
	EBR					EBR	50	375	550
15 Business Park Drive and Redwood Drive	WBL				26 Stony Point Road and Millbrae Avenue	WBL	100	125	50
	WBR					WBR			
	NBL					NBL			
	NBR					NBR			
	SBL	200	125	200		SBL	425	675	775
	SBR					SBR	425	225	300
15 Business Park Drive and Redwood Drive	EBL	250	1175	1300	25 Gravenstein Hwy and NB US 101 Ramps	EBL			
	EBR	250	50	50		EBR			
	WBL					WBL			
	WBR					WBR			
	NBL	200	600	525		NBL			
	NBR					NBR	275	225	275
15 Business Park Drive and Redwood Drive	SBL	100	<25	<25	26 Stony Point Road and Millbrae Avenue	SBL			
	SBR	175	700	850		SBR			
	EBL	225	95	40		EBL			
	EBR					EBR			
	WBL					WBL			
	WBR					WBR	120	50	58
15 Business Park Drive and Redwood Drive	NBL	150	<25	<25	26 Stony Point Road and Millbrae Avenue	NBL	505	<25	<25
	NBR					NBR	120	<25	<25
	SBL					SBL	490	<25	<25
	SBR					SBR			

Alternative C Mitigation

Intersections with levels of service below established thresholds were investigated to determine the role of the Alternative C traffic in the projected operating conditions at those intersections. The evaluation disclosed that the following improvements as shown in **Table C4** are needed in the near-term (2008) and long-term (2020).

Table C5 summarizes the expected levels of service with the proposed mitigation. As mentioned previously, the signal control is listed as TS for a signalized intersection and TWSC for a two-way stop-controlled intersection. Two-way stop-controlled (TWSC) intersections maybe operate acceptably overall but only the worst approach is reported in the table. The overall level of service is reported for signalized intersections.

Figures C8 and C9 illustrate the mitigated lane geometry and traffic control.



Table C 4 – Alternative C Summary of Mitigations

Period	#	Intersection	Mitigation	Requires ROW?	Reason
2008	1	Stony Point Rd/ Wilfred Ave	<ul style="list-style-type: none"> Signalize Widen Wilfred to 3 lanes (Add WB left) ¹ Add NB right and change through-right to through 	No Yes Tribe land	Capacity Capacity Capacity
	2	Primrose Ave/ Wilfred Ave	<ul style="list-style-type: none"> Widen Wilfred to 3 lanes (Add EB left & WB left) ¹ 	Yes	Capacity
	3	Whistler Ave/ Wilfred Ave	<ul style="list-style-type: none"> Signalize Widen Wilfred to 3 lanes (Add EB right & WB left) ¹ Add 2 NB rights and change all shared to left-through Add WB left 	No Yes Tribe land Yes	Capacity Capacity Capacity Capacity
	4	Langer Ave/ Wilfred Ave	<ul style="list-style-type: none"> Widen Wilfred to 3 lanes (Add EB right & WB left) ¹ Add WB right and change through-right to through 	Yes Yes	Capacity Capacity
	5	Labath Ave/ Wilfred Ave	<ul style="list-style-type: none"> Signalize Widen Wilfred to 3 lanes (Add EB right & WB left) ¹ Add a second WB through lane Add NB left and change NB all shared to through-right 	No Yes Yes Yes	Capacity Capacity Capacity Capacity
	6	Dowdell Ave/ Wilfred Ave	<ul style="list-style-type: none"> Signalize Widen Wilfred to 3 lanes (Add EB right & WB left) ¹ 	No Yes	Capacity Capacity
	7	Redwood Dr/ Wilfred Ave	<ul style="list-style-type: none"> Add WB through Add WB left and change WB left-through to through Add EB through Add EB left and EB right and change EB all-shared to through-right Change phasing east-west to protected from split 	Yes Yes Yes Yes No	Capacity Capacity Capacity Capacity Capacity
	8	Redwood Dr/ Commerce Blvd	No mitigation necessary	-	-
	9	Wilfred Ave/ US-101 SB Ramps	<ul style="list-style-type: none"> Extend SB left turn bay to 500 feet 	Yes	Queue
	10	Golf Course Dr/ Commerce Blvd	<ul style="list-style-type: none"> Relocate the Commerce Blvd/Golf Course Dr intersection to the east and relocate the Roberts Lake Rd/Golf Course Dr intersection to the west closer to the railroad crossing. The two intersections on either side of the railroad crossing will operate as one intersection. The relocation will require the purchase of ROW on the south side of Golf Course Dr 	Yes	Capacity
	11	Golf Course Dr/ Roberts Lake Rd	<ul style="list-style-type: none"> Relocate the Commerce Blvd/Golf Course Dr intersection to the east and relocate the Roberts Lake Rd/Golf Course Dr intersection to the west closer to the railroad crossing. The two intersections on either side of the railroad crossing will operate as one intersection. The relocation will require the purchase of ROW on the south side of Golf Course Dr 	Yes	Capacity
	12	Commerce Blvd/ US-101 NB Ramps	<ul style="list-style-type: none"> Add NB loop off-ramp that drops traffic onto WB Wilfred Ave. Will require a short tunnel section to go under the NB on-ramp and Golf Course Road as well as demolition of the existing Chevron gas station. Will require removal of the section of Commerce Blvd between Golf Course Dr and Redwood Dr to allow for the construction of the loop off-ramp. May require a pump station. May obstruct access to the proposed SMART station from Commerce Blvd via Golf Course Dr - access will be provided from Commerce Blvd via Redwood Dr Change SB through to through-right. Will require a two lane on-ramp with one lane as an auxiliary lane between the Wilfred Avenue and Santa Rosa Avenue interchanges. May require additional bridge structure widening over Wilfred Avenue as well as over the Northwest Pacific Railroad tracks 	Yes Yes	Capacity Capacity
	13	Project Driveway/ Stony Point Rd	No mitigation necessary	-	-
	14	Business Park Dr/ Labath Ave	Alternative A intersection	-	-
	15	Business Park Dr/ Redwood Dr	No mitigation necessary	-	-
	16	Rohnert Park Expwy/ Stony Point Rd	<ul style="list-style-type: none"> Extend WB right turn bay to 450 feet 	Tribe land	Queue
	17	Rohnert Park Expwy/ Labath Ave	<ul style="list-style-type: none"> Extend NB right turn bay to 200 feet Extend SB left turn bay to 300 feet 	Yes Yes	Queue Queue
	18	Rohnert Park Expwy/ Redwood Dr	<ul style="list-style-type: none"> Optimize signal timing Extend EB left turn bay to 250 feet 	No No	Capacity Queue
	19	Rohnert Park Expwy/ US-101 SB Ramps	<ul style="list-style-type: none"> Extend SB left turn bay to 600 feet 	Yes	Queue
	20	Rohnert Park Expwy/ US-101 NB Ramps	<ul style="list-style-type: none"> Extend NB left turn bay to 350 feet 	Yes	Queue
	21	Rohnert Park Expwy/ Commerce Blvd	<ul style="list-style-type: none"> Optimize signal timing 	No	Queue
	22	Gravenstein Hwy/ Stony Point Rd	No mitigation necessary	-	-
	23	Gravenstein Hwy/ Redwood Dr	<ul style="list-style-type: none"> Extend SB left turn bay to 375 feet Optimize signal timing 	Yes No	Queue Queue
	24	Gravenstein Hwy/ US-101 SB Ramps	<ul style="list-style-type: none"> Optimize signal timing 	No	Queue
	25	Gravenstein Hwy/ US-101 NB Off-Ramp	No mitigation necessary	-	-
	26	Milbrae Ave/ Stony Point Rd	<ul style="list-style-type: none"> Signalize 	No	Capacity
	27	Milbrae Ave/ Primrose Ave	No mitigation necessary	-	-
	28	Milbrae Ave/ Whistler Ave	No mitigation necessary	-	-
	29	Milbrae Ave/ Langner Ave	No mitigation necessary	-	-
	30	Milbrae Ave/ Labath Ave	No mitigation necessary	-	-
	31	Milbrae Ave/ Dowdell Ave	No mitigation necessary	-	-

¹ In summary, widen Wilfred Ave to three lanes from Stony Point Rd to Redwood Dr



Period	#	Intersection	Mitigation	Requires ROW?	Reason
2020	1	Stony Point Rd/ Wilfred Ave	<ul style="list-style-type: none"> Signalize Widen Wilfred to 3 lanes (Add WB left) ¹ Add NB right and change through-right to through Extend WB right turn bay to 150 feet 	No Yes Tnbe land Yes	Capacity Capacity Capacity Queue
	2	Pnmrose Ave/ Wilfred Ave	<ul style="list-style-type: none"> Widen Wilfred to 3 lanes (Add WB left and EB left) ¹ Add a NB right and change all shared to left-through 	Yes Tnbe land	Capacity Capacity
	3	Whistler Ave/ Wilfred Ave	<ul style="list-style-type: none"> Signalize Widen Wilfred to 3 lanes (Add EB right & WB left) ¹ Add 2 NB rights and change all shared to left-through Add WB left 	No Yes Tnbe land Yes	Capacity Capacity Capacity Capacity
	4	Langer Ave/ Wilfred Ave	<ul style="list-style-type: none"> Widen Wilfred to 3 lanes (Add EB left) ¹ Add a SB right and change all shared to left-through 	Yes Yes	Capacity Capacity
	5	Labath Ave/ Wilfred Ave	<ul style="list-style-type: none"> Signalize Add NB right and NB left change NB all shared to through Add a SB left and change SB all shared to through-right 	No Yes Yes	Capacity Capacity Capacity
	6	Dowdell Ave/ Wilfred Ave	<ul style="list-style-type: none"> Signalize Add a second WB left turn Add 1 SB left turn bay and 1 SB right turn bay and change all shared to through Add 1 NB left turn bay and 1 NB right turn bay and change all shared to through-right 	No Yes Yes Yes	Capacity Capacity Capacity Capacity
	7	Redwood Dr/ Wilfred Ave	<ul style="list-style-type: none"> Add WB through Change NB through to left-through Add WB left and change WB left-through to through Change phasing east-west to protected from split 	Yes No Yes No	Capacity Capacity Capacity Capacity
	8	Redwood Dr/ Commerce Blvd	Modified Intersection (not analyzed)	-	-
	9	Wilfred Ave/ US-101 SB Ramps	<ul style="list-style-type: none"> Add EB right and change EB through-right to through Extend SB left turn bay to 500 feet 	Yes Yes	Capacity Queue
	10	Golf Course Dr/ Commerce Blvd	Relocate the Commerce Blvd/Golf Course Dr intersection to the east and relocate the Roberts Lake Rd/Golf Course Dr intersection to the west closer to the railroad crossing. The two intersections on either side of the railroad crossing will operate as one intersection. The relocation will require the purchase of ROW on the south side of Golf Course Dr.	Yes	Capacity
	11	Golf Course Dr/ Roberts Lake Rd	Relocate the Commerce Blvd/Golf Course Dr intersection to the east and relocate the Roberts Lake Rd/Golf Course Dr intersection to the west closer to the railroad crossing. The two intersections on either side of the railroad crossing will operate as one intersection. The relocation will require the purchase of ROW on the south side of Golf Course Dr.	Yes	Capacity
	12	Commerce Blvd/ US-101 NB Ramps	<ul style="list-style-type: none"> Add NB loop off-ramp that drops traffic onto WB Wilfred Ave. Will require a short tunnel section to go under the NB on-ramp and Golf Course Road as well as demolition of the existing Chevron gas station. May require a pump station. May obstruct access to the proposed SMART station from Commerce Blvd via Golf Course Dr - access will be provided from Commerce Blvd via Redwood Dr. Change SB through to through-right. Will require a two lane on-ramp with one lane as an auxiliary lane between the Wilfred Avenue and Santa Rosa Avenue interchanges. May require additional bridge structure widening over Wilfred Avenue as well as over the Northwest Pacific Railroad tracks. Optimize signal timing 	Yes Yes No	Capacity Capacity Capacity
	13	Project Driveway/ Stony Point Rd	No mitigation necessary	-	-
	14	Business Park Dr/ Labath Ave	Alternative A intersection	-	-
	15	Business Park Dr/ Redwood Dr	No mitigation necessary	-	-
	16	Rohnert Park Expwy/ Stony Point Rd	<ul style="list-style-type: none"> Extend WB right turn bay to 450 feet 	Tnbe land	Queue
	17	Rohnert Park Expwy/ Labath Ave	<ul style="list-style-type: none"> Extend NB right turn bay to 200 feet Extend SB left turn bay to 300 feet 	Yes Yes	Queue Queue
	18	Rohnert Park Expwy/ Redwood Dr	<ul style="list-style-type: none"> Optimize signal timing Extend EB left turn bay to 250 feet 	No No	Capacity Queue
	19	Rohnert Park Expwy/ US-101 SB Ramps	<ul style="list-style-type: none"> Extend SB left turn bay to 600 feet 	Yes	Queue
	20	Rohnert Park Expwy/ US-101 NB Ramps	<ul style="list-style-type: none"> Extend NB left turn bay to 350 feet 	Yes	Queue
	21	Rohnert Park Expwy/ Commerce Blvd	<ul style="list-style-type: none"> Optimize signal timing 	No	Queue
	22	Gravenstein Hwy/ Stony Point Rd	No mitigation necessary	-	-
	23	Gravenstein Hwy/ Redwood Dr	<ul style="list-style-type: none"> Extend SB left turn bay to 375 feet Optimize signal timing 	Yes No	Queue Queue
	24	Gravenstein Hwy/ US-101 SB Ramps	<ul style="list-style-type: none"> Optimize signal timing 	No	Queue
	25	Gravenstein Hwy/ US-101 NB Off-Ramp	No mitigation necessary	-	-
	26	Millbrae Ave/ Stony Point Rd	<ul style="list-style-type: none"> Signalize 	No	Capacity
	27	Millbrae Ave/ Pnmrose Ave	No mitigation necessary	-	-
	28	Millbrae Ave/ Whistler Ave	No mitigation necessary	-	-
	29	Millbrae Ave/ Langer Ave	No mitigation necessary	-	-
	30	Millbrae Ave/ Labath Ave	No mitigation necessary	-	-
	31	Millbrae Ave/ Dowdell Ave	No mitigation necessary	-	-

¹ In summary, widen Wilfred Ave to three lanes from Stony Point Rd to the Urban Growth Boundary



Table C 5 – Mitigated Intersection Levels of Service

	Intersection	Criteria	Signal Control	2005		2008						2020					
				Existing		Base (w/o Proj)		With Project		Mitigated		Base (w/o Proj)		With Project		Mitigated	
				LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
1	Stony Point Rd/ Wilfred Ave	D	TWSC	F	109.1	F	238.0	F	OVRFL	C	29.3	F	401.6	F	OVRFL	C	31.0
2	Primrose Ave/ Wilfred Ave	D	TWSC	A	9.4	B	11.3	C	24.4	C	24.4	B	12.4	D	29.0	D	28.0
3	Whistler Ave/ Wilfred Ave	D	TWSC	A	9.4	B	11.3	F	OVRFL	D	42.3	B	12.4	F	OVRFL	D	41.4
4	Langer Ave/Wilfred Ave	D	TWSC	A	9.4	B	11.3	F	132.1	F	130.3	B	12.4	F	185.5	F	184.5
5	Labath Ave/Wilfred Ave	D	TWSC	A	9.1	E	48.3	F	OVRFL	C	33.3	F	491.5	F	OVRFL	D	41.7
6	Dowdell Ave/Wilfred Ave	D	TWSC	A	9.1	F	333.5	F	OVRFL	D	37.2	F	OVRFL	F	OVRFL	D	53.7
7	Redwood Dr/Wilfred Ave	D	TS	C	28.1	D	37.1	F	197.5	C	34.8	F	87.9	F	319.6	D	50.8
8	Redwood Dr/ Commerce Blvd	C	TS	D	46.5	C	26.6	C	26.6	C	26.5	-	-	-	-	-	-
9	Wilfred Ave/ US-101 SB Ramps	D	TS	-	-	C	22.5	D	53.7	D	53.7	C	33.2	F	98.3	D	51.4
10	Golf Course Dr/ Commerce Blvd	D	TS	E	61.7	D	44.0	F	132.0	D	37.0	F	96.5	F	238.9	D	53.2
11	Golf Course Dr/ Roberts Lake Rd	C	TS	B	18.4	B	17.0	B	15.5	D	37.0	B	10.9	B	11.1	D	53.2
12	Commerce Blvd/ US-101 NB Ramps	D	TS	C	28.7	C	34.9	F	110.2	D	39.5	E	69.8	F	177.5	D	42.9
13	Project Driveway/ Stony Point Rd	D	TWSC	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0
14	Business Park Dr/ Labath Ave	D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	Business Park Dr/ Redwood Dr	D	TWSC	C	23.4	D	26.5	D	26.5	D	26.5	C	16.5	C	16.5	C	16.5
16	Rohnert Park Expwy/ Stony Point Rd	D	TS	C	25.2	C	24.0	D	36.8	D	36.8	C	22.1	C	31.4	C	31.4
17	Rohnert Park Expwy/ Labath Ave	C	TS	C	27.5	C	33.1	C	34.1	C	34.1	C	33.0	C	33.9	C	33.9
18	Rohnert Park Expwy/ Redwood Dr	C	TS	C	33.4	D	35.6	D	44.0	C	32.8	D	36.0	D	42.0	C	33.3
19	Rohnert Park Expwy/ US-101 SB Ramps	D	TS	C	23.2	C	23.2	C	21.5	C	24.8	C	24.5	C	24.7	C	24.7
20	Rohnert Park Expwy/ US-101 NB Ramps	D	TS	B	14.9	B	17.6	B	19.2	B	19.2	B	17.1	B	20.0	C	20.0
21	Rohnert Park Expwy/ Commerce Blvd	C	TS	C	31.5	C	33.9	C	33.9	C	30.7	C	34.9	C	34.9	C	33.3
22	Gravenstein Hwy/ Stony Point Rd	D	TS	C	34.7	C	31.5	D	39.3	D	39.3	D	39.9	D	42.2	D	42.2
23	Gravenstein Hwy/ Redwood Dr	D	TS	C	29.5	C	27.8	C	28.6	C	27.7	C	34.6	D	36.4	D	36.1
24	Gravenstein Hwy/ US-101 SB Ramps	D	TS	C	21.0	B	17.8	B	18.4	B	15.9	B	17.0	C	28.2	C	27.5
25	Gravenstein Hwy/ US-101 NB Off-Ramp	D	TS	B	16.2	B	13.5	C	21.1	C	21.1	B	18.7	C	23.0	C	23.0
26	Millbrae Ave/ Stony Point Rd	D	TWSC	E	38.3	E	38.2	F	57.8	C	21.6	F	70.6	F	144.6	C	22.3
27	Millbrae Ave/ Primrose Ave	D	TWSC	B	11.1	B	11.4	B	11.6	B	11.6	B	12.4	B	12.6	B	12.6
28	Millbrae Ave/ Whistler Ave	D	TWSC	B	11.3	B	11.5	B	11.5	B	11.5	B	12.4	B	12.6	B	12.6
29	Millbrae Ave/ Langner Ave	D	TWSC	A	9.6	A	9.9	A	9.9	A	9.9	B	11.2	B	11.2	B	11.2
30	Millbrae Ave/ Labath Ave	D	TWSC	B	10.8	B	11.2	B	11.2	B	11.2	B	13.5	B	13.5	B	13.5
31	Millbrae Ave/ Dowdell Ave	D	TWSC	B	11.2	B	11.3	B	11.3	B	11.3	B	11.6	B	11.6	B	11.6

Results indicate that the freeway will not meet standards with the project, even with the future construction of HOV lanes, ramp metering, and auxiliary lanes associated with the Wilfred interchange project. As mitigation the project should do the following which will result in the mitigated levels of service shown in **Table C6**:

- Adjust the ramp metering to account for the additional project traffic at the Wilfred Avenue interchange in the near-term (2008). Most metering adjustments can be minor and are not expected to have queuing effects on the local street network. However, the southbound on-ramp will require heavy metering to obtain an acceptable level of service for the freeway ramp merge area which may create a long queue backed up on the ramp.
- The project should contribute to the construction of auxiliary lanes between Rohnert Park Expressway and Gravenstein Highway (SR-116) in the long-term (2020).
- The project should contribute to the construction of the Wilfred Avenue interchange project, including HOV lanes, ramp metering, and auxiliary lanes in the near-term (2008).
- The project should contribute to the construction of an additional traffic lane in the southbound direction from Santa Rosa Avenue to Wilfred Avenue and from Gravenstein Highway (SR-116) to south of Gravenstein Highway (SR-116) as well as an additional traffic lane in the northbound direction from south of Gravenstein Highway (SR-116) to Gravenstein Highway (SR-116) in the long-term (2020).

Aside from roadway improvements to mitigate protect impacts, the casino and hotel should coordinate with the Green Music Center during outdoor events that will generate high traffic levels. During that period, traffic control services at the Rohnert Park interchange may be necessary. Therefore, the casino/hotel project should provide funding for special event traffic monitoring at the Rohnert Park Expressway interchange to identify conflicts during outdoor events generate high traffic levels. If conflicts occur, the project should provide traffic management coordination between the casino/hotel project and Green Music Center in consultation with CHP and Caltrans to assist in traffic control.

Because no fixed route service will be available at the project site, the casino/hotel should provide a shuttle that serves the two Rohnert Park transfer stations. The shuttle should run throughout the day or could be called out on demand.

The casino should also sponsor charter buses from farther away destinations such as Marin County and the south Bay. The buses could serve specific groups such as senior citizens or social clubs, while reducing the number of single occupancy vehicles to the site. Preferential carpool or vanpool spaces should also be provided at the project site to encourage ridesharing by patrons and employees.



Table C 6 – Alternative C Mitigated Freeway Level of Service Summary

US-101 Section/Ramp	Criteria		Existing		2008		2008 + Alt C		2008 + Alt C Mitigated		2020		2020 + Alt C		2020 + Alt C Mitigated		
	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	
Northbound																	
US-101 South of Gravenstein Highway (NB)	E	C	C	22.2	C	19.1	C	25.1	C	25.1	C	25.6	C	E	38.4	E	38.4
Gravenstein Highway NB Off-Ramp	E	D	C	30.8	C	27.4	D	31.8	D	31.8	D	34.1	D	F	41.8	D	29.3
Gravenstein Highway NB On-Ramp	E	D	D	34.5	D	29.5	D	33.4	D	33.4	D	36.1	E	F	43.1	E	39.3
US-101 Between Gravenstein Highway and Rohnert Park Expressway (NB)	E	D	C	28.1	C	23.5	D	28.8	D	28.8	D	32.3	D	F	-	E	39.3
Rohnert Park Expressway NB Off-Ramp	E	D	D	33.6	D	28.8	D	32.5	D	32.5	D	37.1	E	F	43.7	E	39.3
Rohnert Park Expressway NB On-Ramp (Loop Ramp)	E	D	C	32.1	C	21.8	D	31.4	D	31.4	C	23.2	C	F	41.8	E	38.6
Rohnert Park Expressway NB On-Ramp	E	D	C	32.5	C	22.1	D	30.4	D	30.4	D	29.0	E	F	41.8	E	38.6
US-101 Between Rohnert Park Expressway and Wilfred Avenue (NB)	E	D	C	28.9	C	22.1	D	30.4	D	30.4	D	29.0	E	F	38.6	E	38.6
Wilfred Avenue NB Off-Ramp	E	E	C	35.4	C	22.1	D	30.4	D	30.4	D	29.0	E	F	38.6	E	38.6
Wilfred Avenue NB On-Ramp	E	F	D	42.0	D	30.3	D	33.9	D	33.9	E	40.4	F	F	44.3	E	43.0
US-101 Between Wilfred Avenue and Santa Rosa Avenue (NB)	E	D	D	26.7	D	30.3	D	33.9	D	33.9	E	40.4	F	F	44.3	E	43.0
Santa Rosa Avenue NB Off-Ramp	E	E	D	37.2	D	30.3	D	33.9	D	33.9	E	40.4	F	F	44.3	E	43.0
US-101 North of Santa Rosa Avenue (NB)	E	C	C	20.3	C	22.0	C	23.8	C	23.8	D	29.7	D	D	32.6	D	32.6
Southbound																	
US-101 North of Santa Rosa Avenue (SB)	E	C	C	22.9	C	24.1	D	26.1	D	26.1	D	28.5	D	D	31.2	D	31.2
Santa Rosa Avenue SB On-Ramp	E	D	D	31.2	D	32.7	E	36.2	E	36.2	E	44.8	F	F	-	C	24.8
US-101 Between Santa Rosa Avenue and Wilfred Avenue (SB)	E	D	D	31.5	D	38.8	E	40.8	E	40.8	E	44.8	F	F	46.8	D	32.7
Wilfred Avenue SB Off-Ramp	E	E	C	38.0	C	33.4	F	46.5	E	46.5	E	39.9	F	F	50.7	E	43.0
US-101 Between Rohnert Park Expressway and Wilfred Avenue (SB)	E	D	D	33.7	D	33.4	F	46.5	E	46.5	E	39.9	F	F	50.7	E	43.0
Rohnert Park Expressway SB Off-Ramp	E	E	D	35.2	D	33.4	F	46.5	E	46.5	E	39.9	F	F	50.7	E	43.0
Rohnert Park Expressway SB On-Ramp	E	E	D	38.0	D	30.9	D	33.4	D	33.4	E	38.5	F	F	43.4	E	40.7
Rohnert Park Expressway SB On-Ramp (Loop Ramp)	E	E	C	36.0	C	30.9	D	32.8	D	32.8	F	37.5	F	F	43.3	E	40.7
US-101 Between Rohnert Park Expressway and Gravenstein Highway (SB)	E	D	C	35.1	C	22.3	D	27.1	D	27.1	E	36.6	F	-	-	E	40.7
Gravenstein Highway SB Off-Ramp	E	D	D	33.9	D	29.2	D	32.5	D	32.5	F	40.3	F	F	46.2	E	40.7
Gravenstein Highway SB On-Ramp	E	D	D	33.7	D	32.1	E	35.7	E	35.7	F	42.3	F	F	48.4	D	29.1
US-101 South of Gravenstein Highway (SB)	E	C	C	24.7	C	21.8	D	27.4	D	27.4	D	32.0	F	F	-	C	23.5



Mitigations to reduce the impact of the construction include the implementation of a construction traffic management plan for the duration of construction of the project and training for construction delivery vehicle drivers. Construction material importation should be scheduled outside of the areawide commute peak hours. Debris along the truck route caused by trucks should be monitored daily and the roadways should be cleaned as necessary.

To help ensure adequate public safety during construction, particularly near the project site, the tribe should provide flagging when necessary in consultation with CHP, Caltrans, and the County's Sheriff's Department to assist with traffic control.

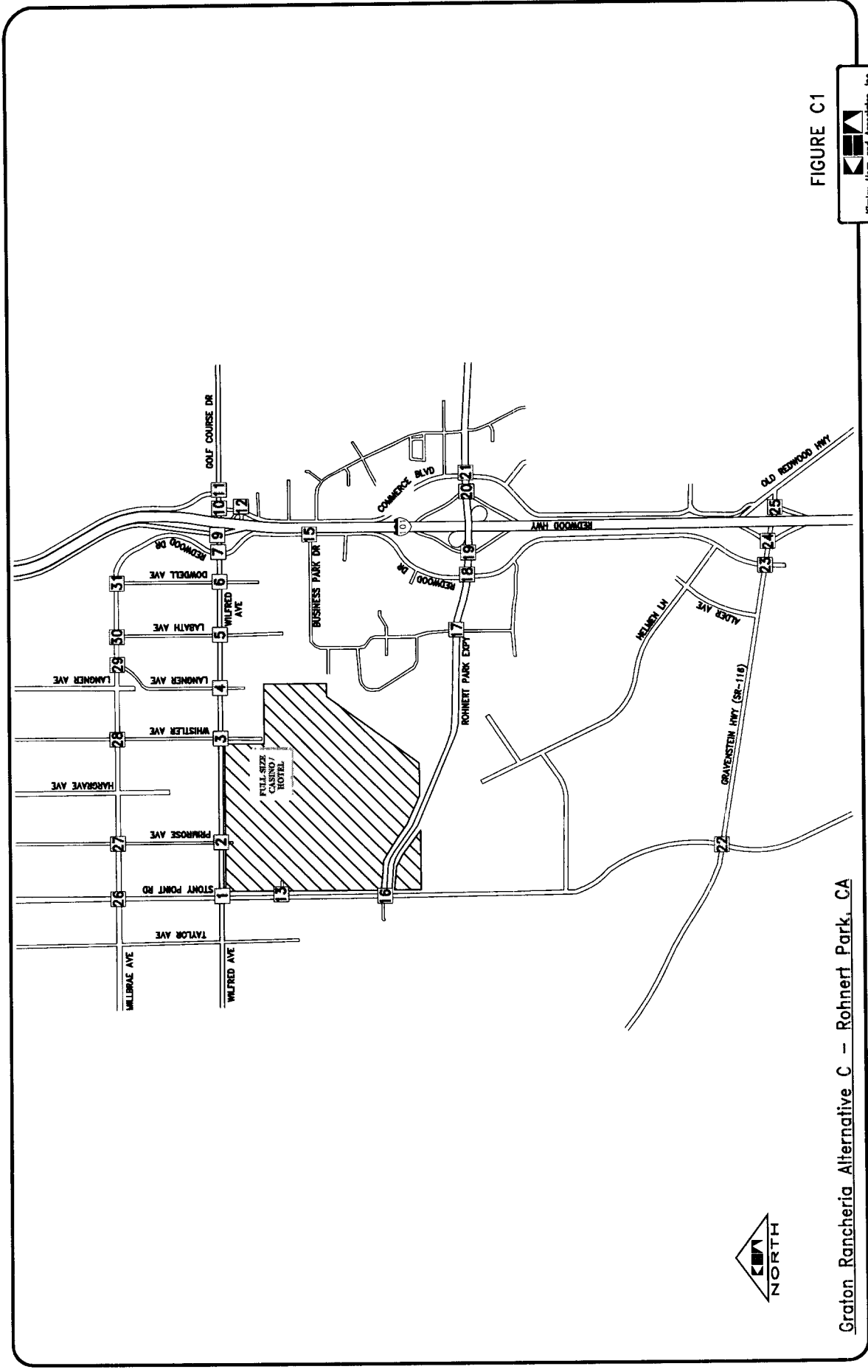
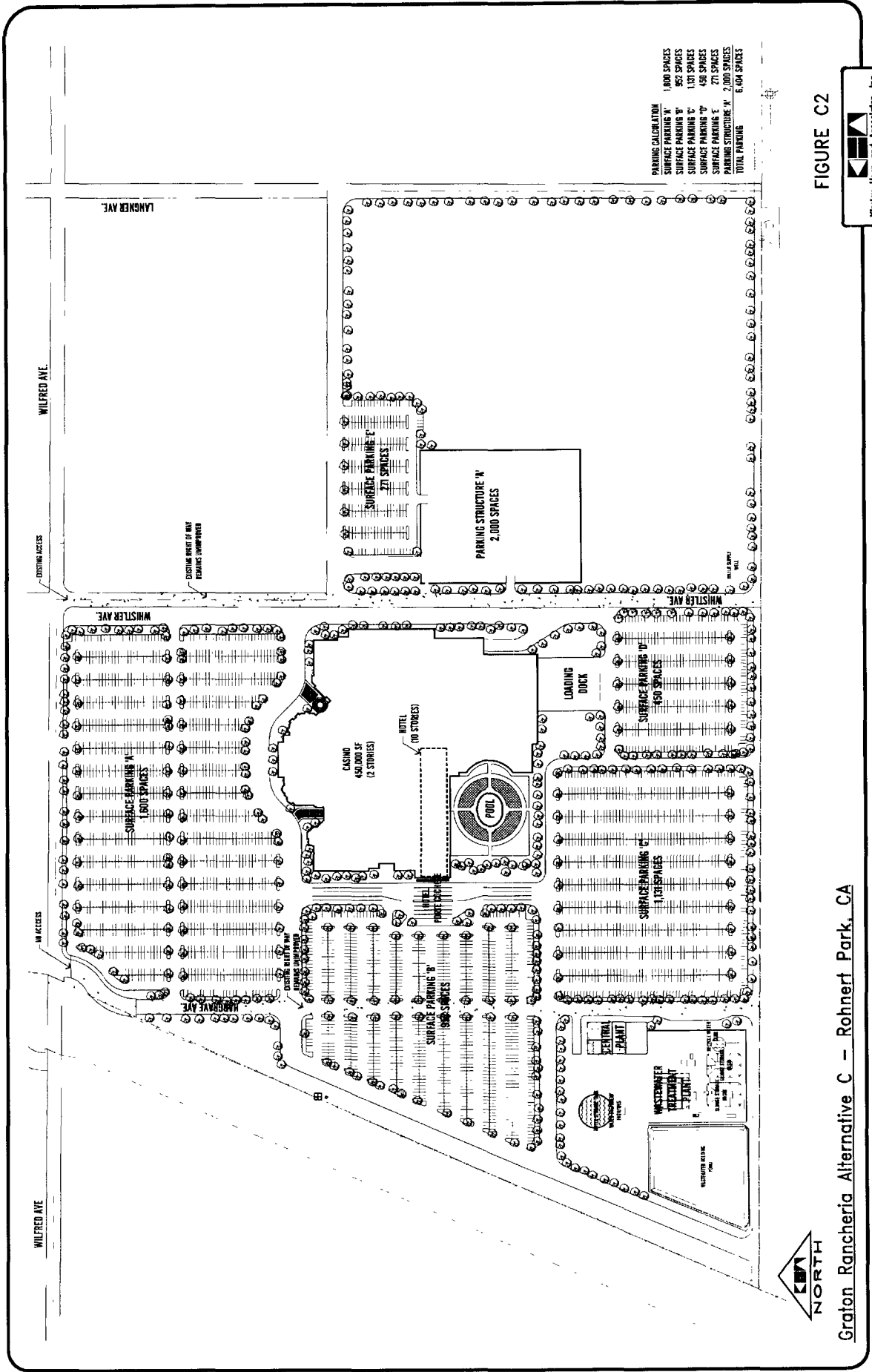


FIGURE C1



Graton Rancheria Alternative C - Rohnert Park, CA

PROJECT LOCATION



PARKING CALCULATION

SURFACE PARKING 'A'	1,800 SPACES
SURFACE PARKING 'B'	1,900 SPACES
SURFACE PARKING 'C'	1,100 SPACES
SURFACE PARKING 'D'	1,100 SPACES
SURFACE PARKING 'E'	271 SPACES
SURFACE PARKING 'F'	271 SPACES
PARKING STRUCTURE 'N'	2,000 SPACES
TOTAL PARKING	6,444 SPACES

FIGURE C2



Graton Rancheria Alternative C - Rohnert Park, CA

SITE PLAN

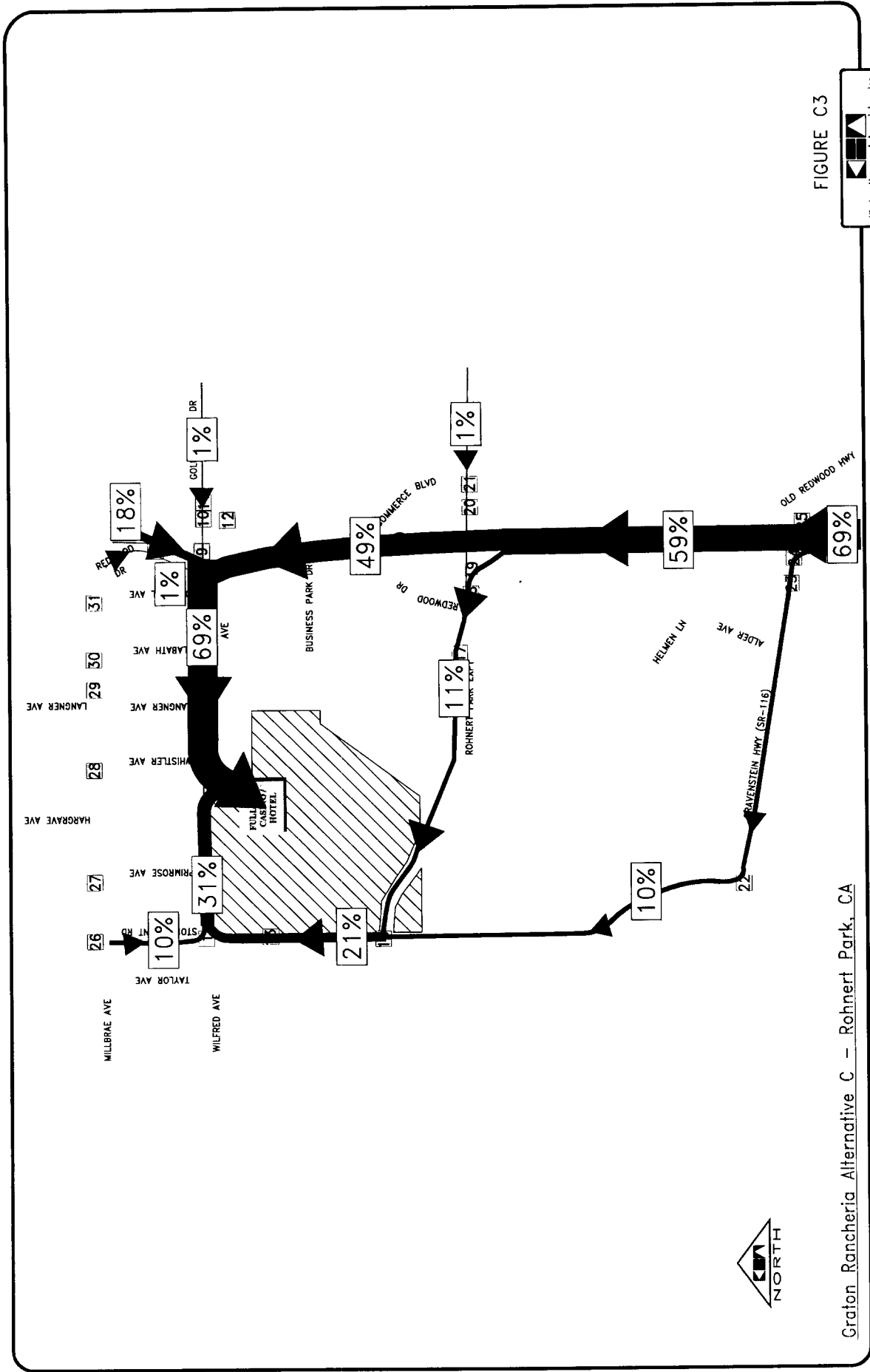


FIGURE C3



Graton Rancheria Alternative C - Rohnert Park, CA

TRIP DISTRIBUTION - IN

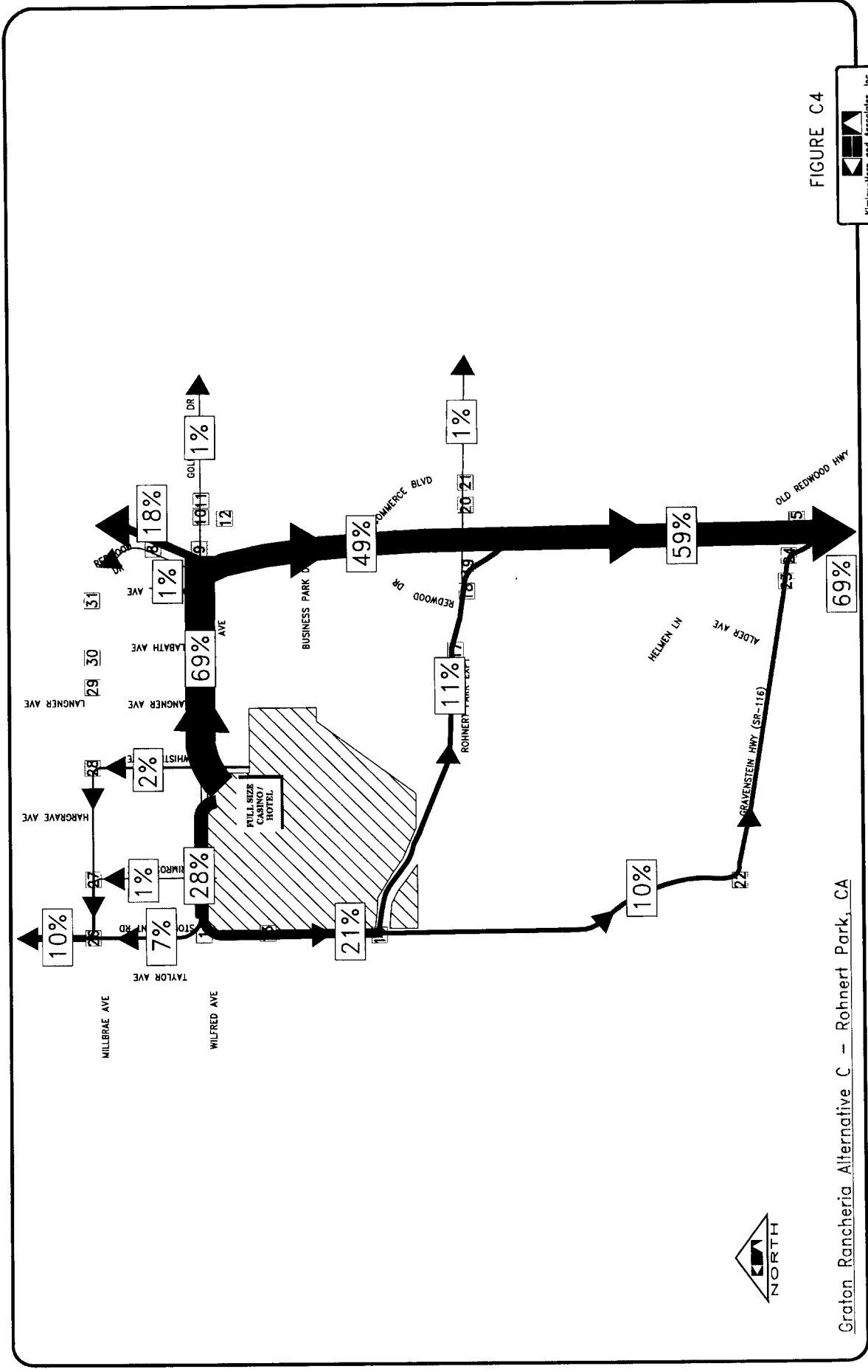


FIGURE C4



Graton Rancheria Alternative C - Rohnert Park, CA

TRIP DISTRIBUTION - OUT

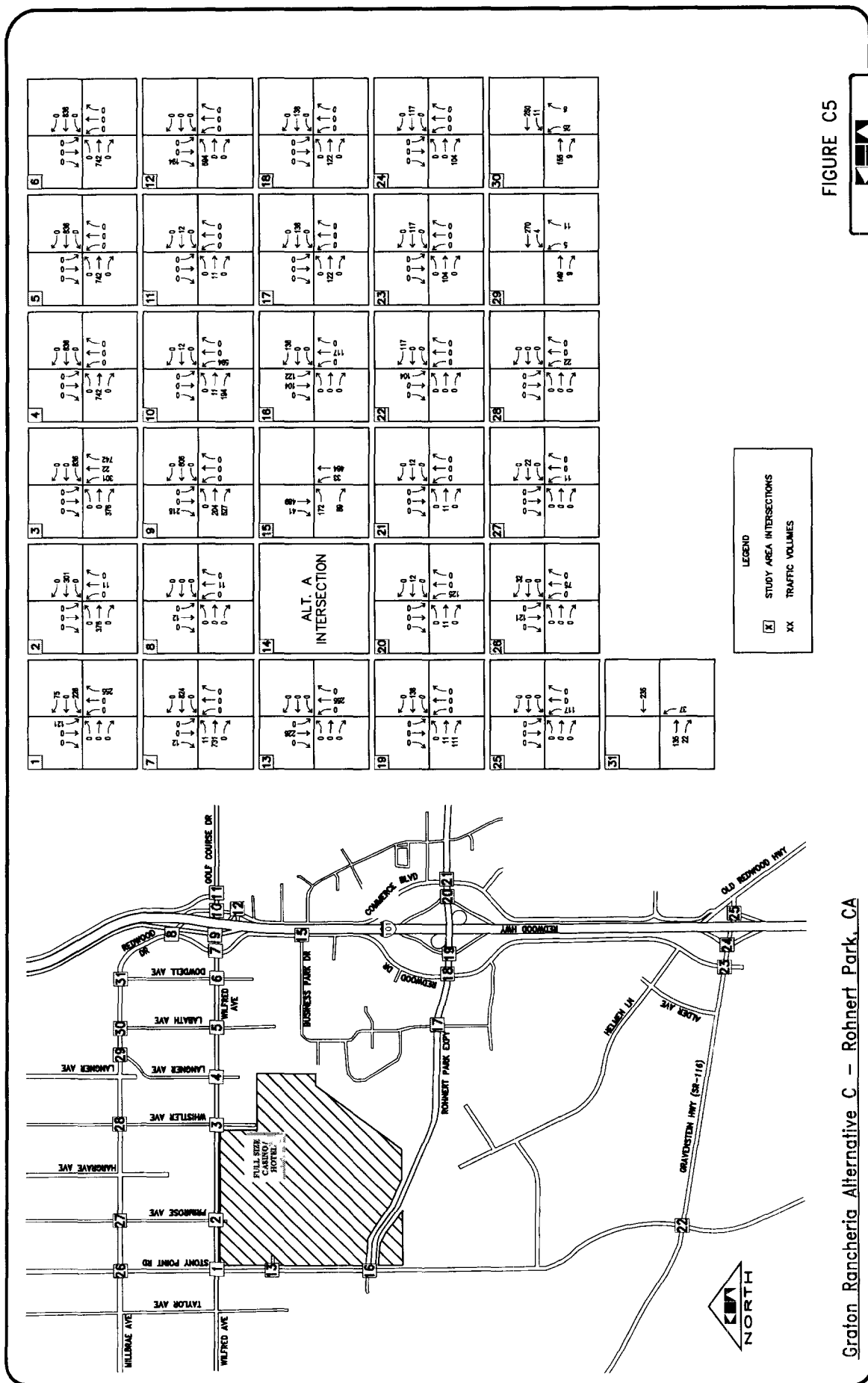


FIGURE C5

Kemper-Horn and Associates, Inc.

LEGEND
 X STUDY AREA INTERSECTIONS
 XX TRAFFIC VOLUMES

Graton Rancheria Alternative C - Rohnert Park, CA

PROJECT GENERATED PM TRAFFIC VOLUMES

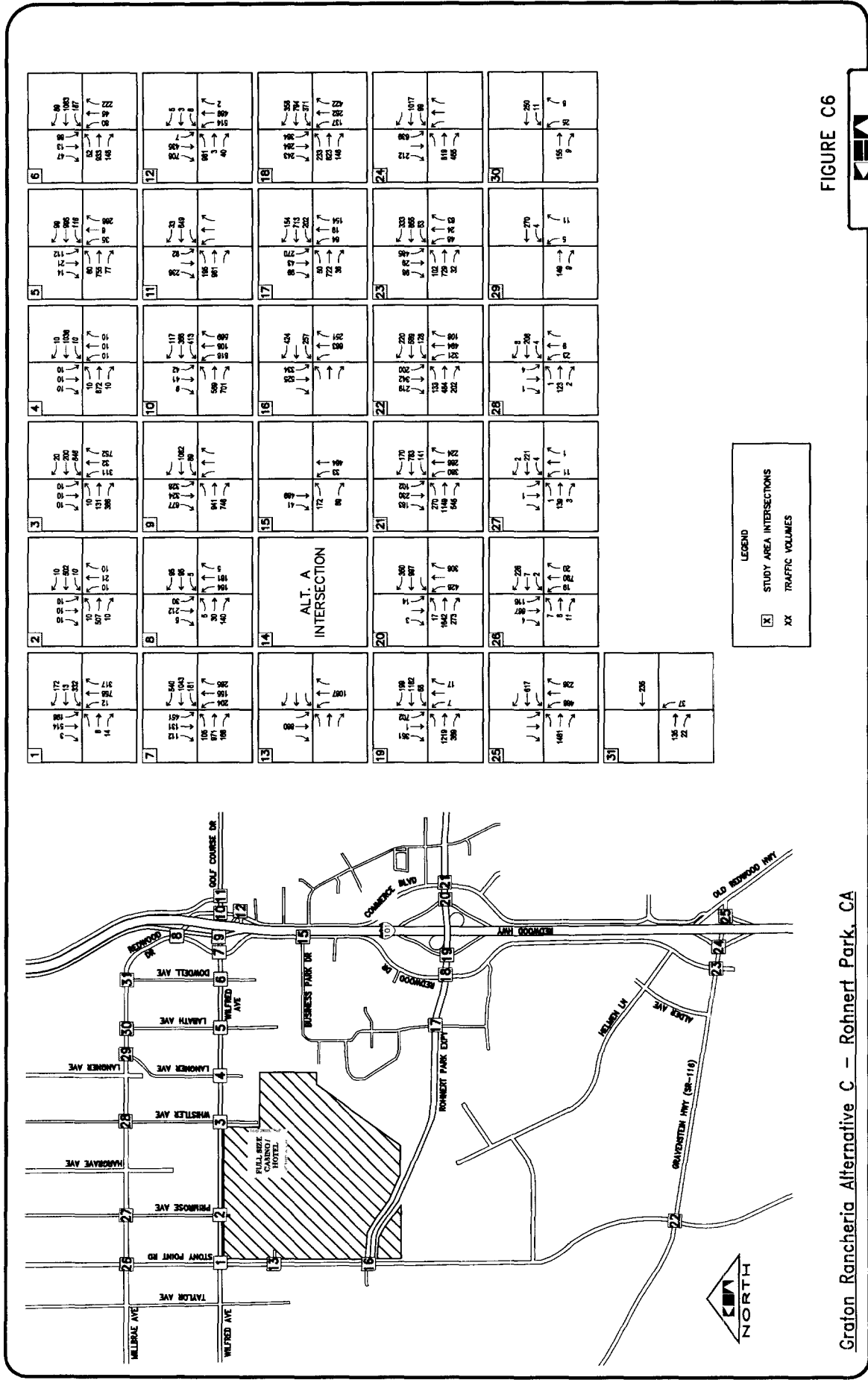
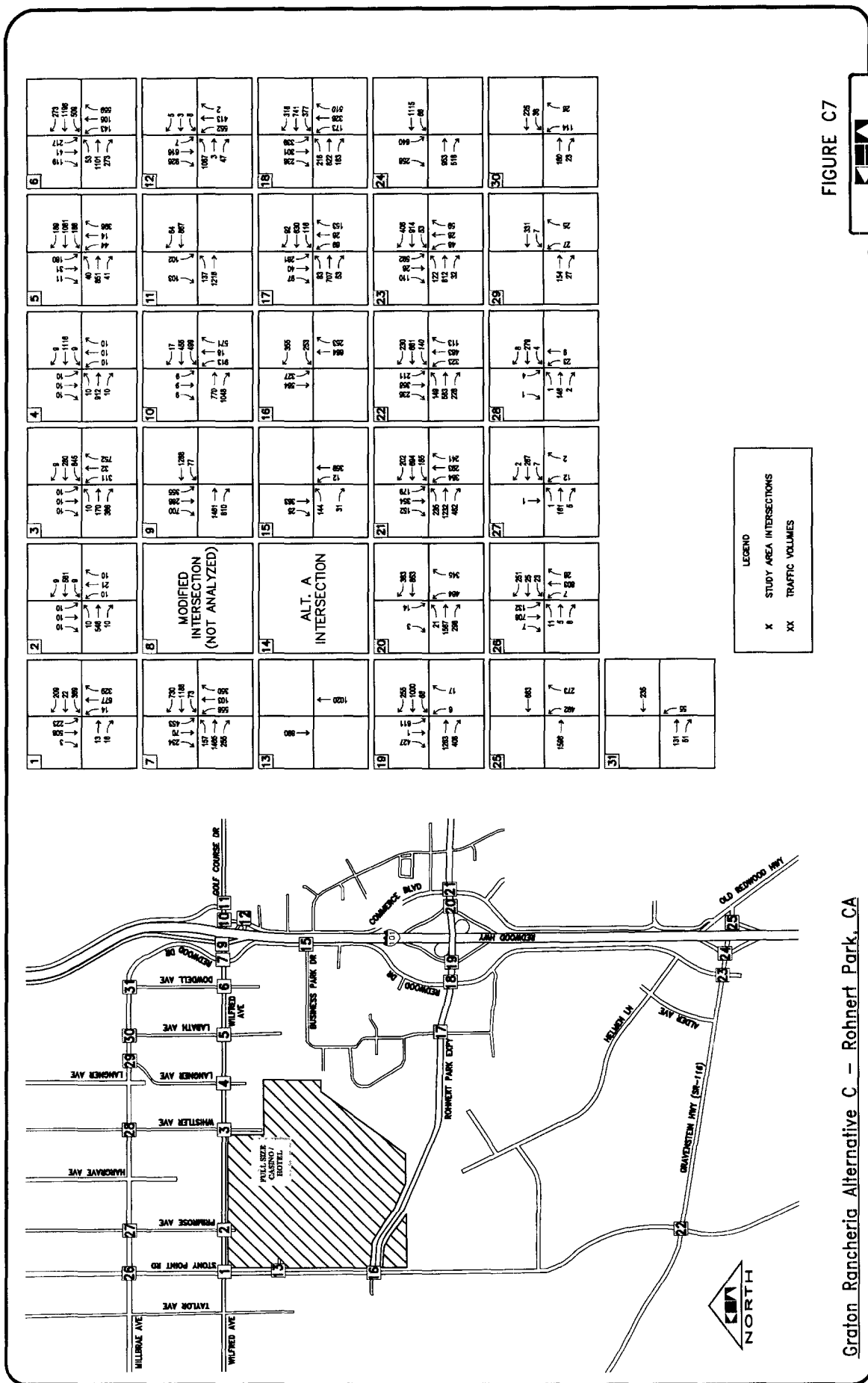


FIGURE C6

Kiewit-Horn and Associates, Inc.

Graton Rancheria Alternative C - Rohnert Park, CA

NEAR-TERM + PROJECT PM TRAFFIC VOLUMES



1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31					

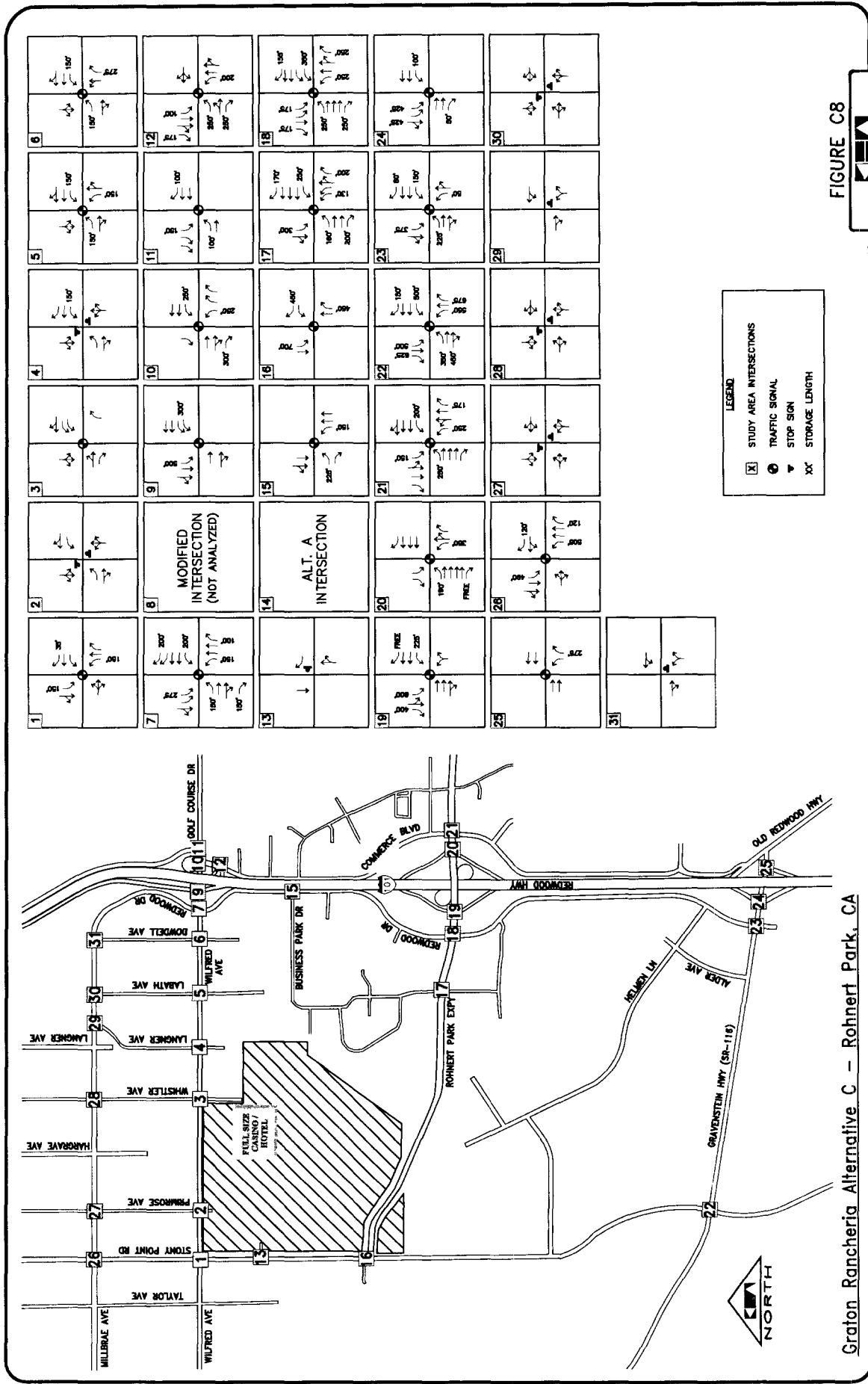
LEGEND
 X STUDY AREA INTERSECTIONS
 XX TRAFFIC VOLUMES

FIGURE C7



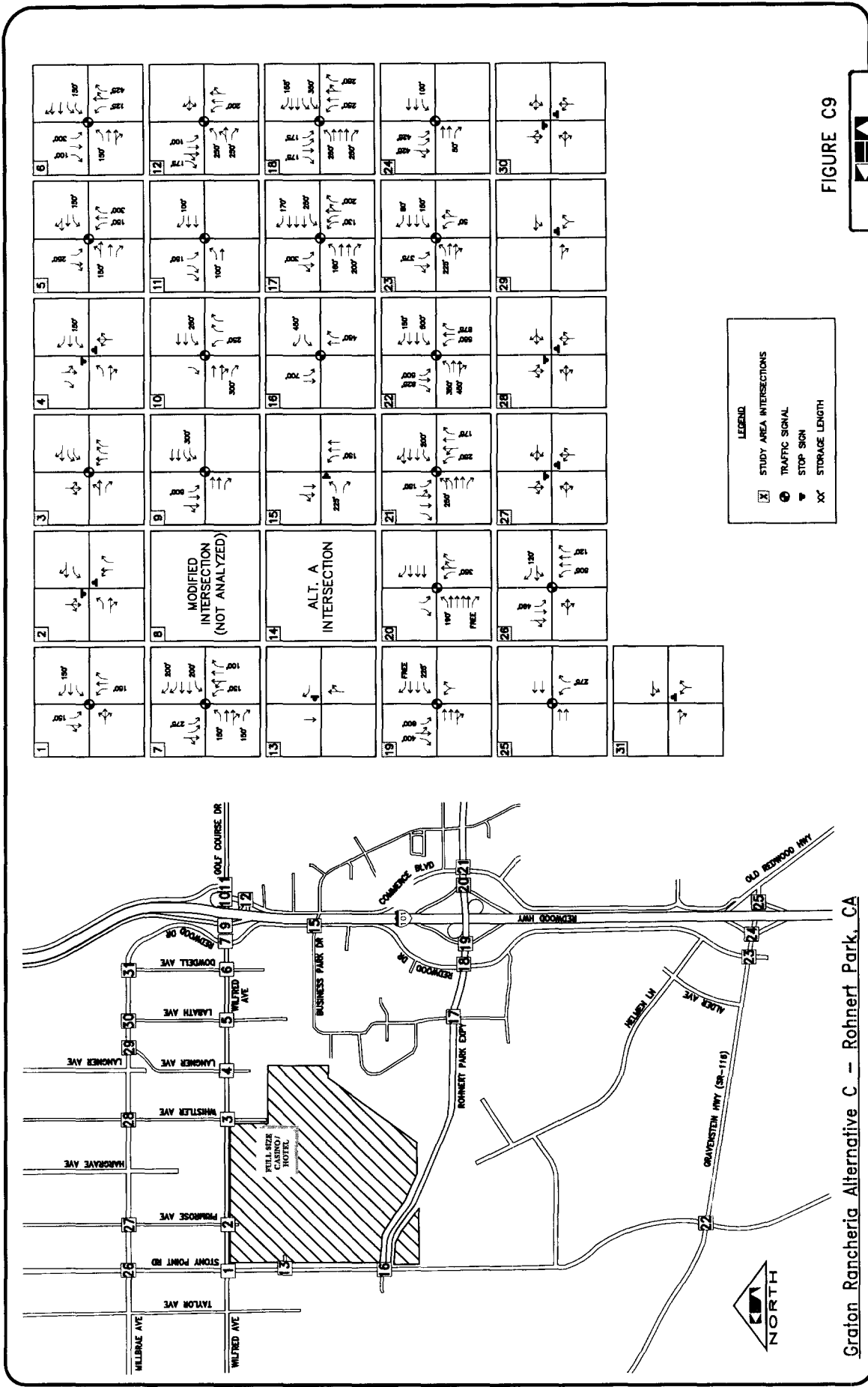
Graton Rancheria Alternative C - Rohnert Park, CA

LONG-TERM + PROJECT PM TRAFFIC VOLUMES



Graton Rancheria Alternative C - Rohnert Park, CA

NEAR-TERM MITIGATED LANE GEOMETRY AND TRAFFIC CONTROL



Graton Rancheria Alternative C - Rohnert Park, CA

LONG-TERM MITIGATED LANE GEOMETRY AND TRAFFIC CONTROL

FIGURE C9

Manley-Horn and Associates, Inc.

ALTERNATIVE D – NORTHWEST STONY POINT REDUCED INTENSITY OPTION

The Alternative D casino and hotel is proposed to be located as shown in **Figure D1**, which is bordered by Wilfred Avenue in the north, Rohnert Park Expressway in the south, Stony Point Road in the west, and Langner Avenue in the east.

Figure D2 shows the proposed layout of the casino and hotel facility. As seen in the figure, the buildings and other related facilities are located in the northwest corner of the site. The site layout includes a main building of approximately 315,100 square feet for a casino, restaurants, food court, event center, banquet facilities, lobby, pool, and other ancillary functions. In addition the project is planned to include up to 100 hotel rooms, primarily for casino guests.

A breakdown of square footage as it relates to traffic impacts is shown below:

- Casino and Entertainment areas – 293,250 s.f.
- Lobby/Bar/Back of House/Sundries – 14,750 s.f.
- Pool – 7,100 s.f.
- 315,100 s.f.

- Hotel Rooms – 77,000 s.f.

The site plan also shows supporting uses such as parking lots, parking structure, and wastewater treatment facilities. This layout is virtually the same as Alternative A except that the project has been reduced in size and intensity.

Site Access

The main project access is from the south side of Wilfred Avenue, where an existing driveway aligns with Primrose Avenue. This approach is assumed to operate as a full movement driveway with no turn limitations.

A second project access from Stony Point Road is located on this plan approximately 880 feet south of the Stony Point Road/Wilfred Avenue intersection. The location is at an existing driveway access; however, due to conflicts with the northbound turn bay at the Stony Point Road/Wilfred Avenue intersection, the access is assumed to be limited to right in/out operation.

Currently, neither access is signalized.

Trip Generation – Alternative D

Project trip generation for Alternative D is shown in **Table D1**. Additional trip generation calculations are contained in the **Appendix**. As seen in the table the project is expected to generate 949 new trips in the AM and 1,580 new trips in the PM peak hour. Although project trip generation was prepared for daily, AM, and PM periods, only the weekday PM traffic conditions were evaluated in this report because it represents the time period where the project will contribute to the greatest amount of congestion and potential mitigation. Other time periods that were considered included weekday AM, weekday late PM, and Saturday. On weekday late evenings and Saturday evenings the casino facility will generate more trips than during the 4-6 PM weekdays, but the background traffic is lower, making the overall number of vehicles on the road lower as well. Therefore, the PM peak represents the worst case period to evaluate.

Table D 1 – Alternative D Project Trip Generation

LAND USE	Trips						
	Daily	AM Peak Hour			PM Peak Hour		
	Total	Entering	Exiting	Total	Entering	Exiting	Total
Casino 315,100 s.f.	12,424	651	279	930	827	733	1,560
Hotel 100 Room*	272	12	7	19	11	9	20
Net New Vehicle Trips	12,696	663	286	949	838	742	1,580

*Trip rate is ITE Land Use Code 310 – Hotel. Rate reduced by 2/3 to account for internal capture to/from casino.

Project Trip Distribution and Assignment

Based on the factors discussed in the General Project Information section above it was determined that approximately 30% of the project traffic would be distributed to destinations north of the site, with the remaining 70% distributed south of the site. To be conservative, no project traffic was assumed to be generated or attracted in the immediate vicinity of the project site. The project traffic distribution is shown in **Figure D3** and **Figure D4**. **Figure D5** illustrates project traffic assigned to the study intersections based on the assumed trip distribution. As seen in **Figure D5**, most of the project traffic is expected to come from the freeway therefore it was assumed that most of the traffic would use Primrose Avenue because of its closer proximity to the freeway. As noted in the distribution, some traffic leaving the project site is expected to avoid congestion at Wilfred Avenue and Stony Point Road by using Millbrae Avenue.

Near-Term Plus Project Traffic Volumes

Near-term 2008 traffic volumes were combined with vehicle trips expected to be generated by the Alternative D casino and hotel project. **Figure D6** illustrates the combined near-term turning movement volumes at the study intersections.

Cumulative Plus Project Traffic Volumes

Long-term 2020 traffic volumes were combined with vehicle trips expected to be generated by the Alternative D casino and hotel project. **Figure D7** illustrates the combined long-term turning movement volumes at the study intersections.

Alternative D LOS Conditions and Impacts at Intersections

Traffic operations were evaluated under the following development conditions:

- Near-term conditions with Alternative D (year 2008)
- Long-term Cumulative conditions with Alternative D (year 2020)

Results of the analysis are presented in **Table D2**. (Results shown as bold in the table do not meet operational standards.) The signal control is listed as TS for a signalized intersection and TWSC for a two-way stop-controlled intersection. Two-way stop-controlled (TWSC) intersections maybe operate acceptably overall but only the worst approach is reported in the table. The overall level of service is reported for signalized intersections. Additional detail is provided in the **Appendix**. As shown in the results, the following intersections and approaches will fail to meet acceptable level of service thresholds based on established significance criteria and with the addition of project-related traffic.

2008 Results

- Stony Point Road/Wilfred Avenue
- Primrose Avenue/Wilfred Avenue
- Labath Avenue/Wilfred Avenue
- Dowdell Avenue/Wilfred Avenue
- Redwood Drive/Wilfred Avenue
- Golf Course Drive/Commerce Boulevard
- Commerce Bouelvard/US-101 NB Ramps
- Rohnert Park Expressway/Redwood Drive
- Millbrae Avenue/Stony Point Road

Table D 2 – Alternative D Levels of Service

	Intersection	Criteria	Signal Control	2005		2008				2020			
				Existing		Base (w/o Proj.)		With Project		Base (w/o Proj.)		With Project	
				LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
1	Stony Point Rd/ Wilfred Ave	D	TWSC	F	109.1	F	238.0	F	OVRFL	F	401.6	F	OVRFL
2	Primrose Ave/ Wilfred Ave	D	TWSC	A	9.4	B	11.3	F	864.8	B	12.4	F	OVRFL
3	Whistler Ave/ Wilfred Ave	D	TWSC	A	9.4	B	11.3	D	35.0	B	12.4	E	42.1
4	Langer Ave/Wilfred Ave	D	TWSC	A	9.4	B	11.3	D	34.5	B	12.4	E	42.1
5	Labath Ave/Wilfred Ave	D	TWSC	A	9.1	E	48.3	F	OVRFL	F	491.5	F	OVRFL
6	Dowdell Ave/Wilfred Ave	D	TWSC	A	9.1	F	333.5	F	OVRFL	F	OVRFL	F	OVRFL
7	Redwood Dr/Wilfred Ave	D	TS	C	28.1	D	37.1	F	92.7	F	87.9	F	205.4
8	Redwood Dr/ Commerce Blvd	C	TS	D	46.5	C	26.6	C	26.6	-	-	-	-
9	Wilfred Ave/ US-101 SB Ramps	D	TS	-	-	C	22.5	D	39.9	C	33.2	E	71.7
10	Golf Course Dr/ Commerce Blvd	D	TS	E	61.7	D	44.0	E	66.3	F	96.5	F	151.9
11	Golf Course Dr/ Roberts Lake Rd	C	TS	B	18.4	B	17.0	B	15.5	B	10.9	B	11.1
12	Commerce Blvd/ US-101 NB Ramps	D	TS	C	28.7	C	34.9	E	65.1	E	69.8	F	122.9
13	Project Driveway/ Stony Point Rd	D	TWSC	A	0.0	A	0.0	C	21.6	A	0.0	C	19.8
14	Business Park Dr/ Labath Ave	D	-	-	-	-	-	-	-	-	-	-	-
15	Business Park Dr/ Redwood Dr	D	TWSC	C	23.4	D	26.5	D	26.5	C	16.5	C	16.5
16	Rohnert Park Expwy/ Stony Point Rd	D	TS	C	25.2	C	24.0	D	38.0	C	22.1	C	32.5
17	Rohnert Park Expwy/ Labath Ave	C	TS	C	27.5	C	33.1	C	33.9	C	33.0	C	33.5
18	Rohnert Park Expwy/ Redwood Dr	C	TS	C	33.4	D	35.6	D	43.9	D	36.0	D	41.9
19	Rohnert Park Expwy/ US-101 SB Ramps	D	TS	C	23.2	C	23.2	C	21.5	C	24.5	C	24.8
20	Rohnert Park Expwy/ US-101 NB Ramps	D	TS	B	14.9	B	17.6	C	21.8	B	17.1	C	22.3
21	Rohnert Park Expwy/ Commerce Blvd	C	TS	C	31.5	C	33.9	C	33.9	C	34.9	C	34.9
22	Gravenstein Hwy/ Stony Point Rd	D	TS	C	34.7	C	31.5	D	38.6	D	39.9	D	41.4
23	Gravenstein Hwy/ Redwood Dr	D	TS	C	29.5	C	27.8	C	28.6	C	34.6	D	35.7
24	Gravenstein Hwy/ US-101 SB Ramps	D	TS	C	21.0	B	17.8	B	18.1	B	17.0	B	17.0
25	Gravenstein Hwy/ US-101 NB Off-Ramp	D	TS	B	16.2	B	13.5	B	19.9	B	18.7	C	21.6
26	Millbrae Ave/ Stony Point Rd	D	TWSC	E	38.3	E	38.2	F	50.4	F	70.6	F	112.5
27	Millbrae Ave/ Primrose Ave	D	TWSC	B	11.1	B	11.4	B	11.4	B	12.4	B	12.4
28	Millbrae Ave/ Whistler Ave	D	TWSC	B	11.3	B	11.5	B	11.5	B	12.4	B	12.4
29	Millbrae Ave/ Langner Ave	D	TWSC	A	9.6	A	9.9	A	9.9	B	11.2	B	11.2
30	Millbrae Ave/ Labath Ave	D	TWSC	B	10.8	B	11.2	B	11.2	B	13.5	B	13.5
31	Millbrae Ave/ Dowdell Ave	D	TWSC	B	11.2	B	11.3	B	11.3	B	11.6	B	11.6

2020 Results

- Stony Point Road/Wilfred Avenue
- Primrose Avenue/Wilfred Avenue
- Whistler Avenue/Wilfred Avenue
- Langner Avenue/Wilfred Avenue
- Labath Avenue/Wilfred Avenue
- Dowdell Avenue/Wilfred Avenue
- Redwood Drive/Wilfred Avenue
- Wilfred Avenue/US-101 SB Ramps
- Golf Course Drive/Commerce Boulevard
- Commerce Boulevard/US-101 NB Ramps
- Rohnert Park Expressway/Redwood Drive
- Millbrae Avenue/Stony Point Road

Alternative D Traffic Signal Warrant Analysis

Alternative D, near-term and long-term, traffic volumes at unsignalized study intersections were compared against peak hour warrant in the *2003 Manual on Uniform Traffic Control Devices (MUTCD)* and the *California Supplement*.

Results of the analysis showed that the following intersections will satisfy traffic signal Warrant #3 by the year 2008 and 2020.

- Stony Point Road/Wilfred Avenue (2008 and 2020)
- Primrose Avenue/Wilfred Avenue (2008 and 2020)
- Labath Avenue/Wilfred Avenue (2008 and 2020)
- Dowdell Avenue/Wilfred Avenue (2008 and 2020)
- Millbrae Avenue/Stony Point Road (2008 and 2020)

Other warrants such as for minimum vehicle volumes, interruption of continuous traffic, and traffic progression were not evaluated because they generally require higher traffic volumes to be satisfied. Accident history and school areas were also not evaluated based on the results of field observations, which noted that neither of these warrant thresholds was likely to be met. A copy of the analysis summary for Warrant #3 is included in the **Appendix**.

Alternative D LOS Conditions and Impacts on Freeway and Ramps

Project trips generated by the proposed Alternative D, reduced-intensity casino and hotel were added to the year 2008 and 2020 forecast freeway volumes.

Traffic analyses were completed to evaluate the operation of the study freeway segments and ramps in the year 2008 and 2020, with the addition on the casino and



hotel project. Freeway segment analyses were limited to the mix-use travel lanes which are expected to have significantly more congestion than the future HOV lanes.

Results of the analyses are presented in **Table D3**. (Results shown as bold in the table do not meet operational standards.) As shown in the table, project traffic will add to the background congestion of the freeway. Significant congestion is expected with the project; however the congestion is reduced as a result of the smaller casino and hotel.



Table D 3 – Alternative D Freeway Levels of Service

US-101 Section/Ramp	Criteria		Existing		2008		2008 + Alt D		2020		2020 + Alt D	
	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)
Northbound												
US-101 South of Gravenstein Highway (NB)	E	22.2	C	19.1	C	23.1	C	25.6	D	33.4		
Gravenstein Highway NB Off-Ramp	E	30.8	C	27.4	D	31.8	D	34.1	E	39.4		
Gravenstein Highway NB On-Ramp	E	34.5	D	29.5	D	33.4	E	36.1	F	40.9		
US-101 Between Gravenstein Highway and Rohnert Park Expressway (NB)	E	28.1	C	23.5	D	27.0	D	32.3	E	40.4		
Rohnert Park Expressway NB Off-Ramp	E	33.6	D	28.8	D	32.5	E	37.1	F	41.6		
Rohnert Park Expressway NB On-Ramp (Loop Ramp)	E	32.1	C	21.8	D	31.4	C	23.2	F	39.9		
Rohnert Park Expressway NB On-Ramp	E	32.5	C	22.1	C	26.8	D	29.0	D	34.7		
US-101 Between Rohnert Park Expressway and Wilfred Avenue (NB)	E	28.9	C	22.1	C	26.8	D	29.0	D	34.7		
Wilfred Avenue NB Off-Ramp	E	35.4	C	22.1	C	26.8	D	29.0	D	34.7		
Wilfred Avenue NB On-Ramp	E	42.0	D	30.3	D	32.8	E	40.4	F	43.1		
US-101 Between Wilfred Avenue and Santa Rosa Avenue (NB)	E	26.7	D	30.3	D	32.8	E	40.4	F	43.1		
Santa Rosa Avenue NB Off-Ramp	E	37.2	D	30.3	D	32.8	E	40.4	F	43.1		
US-101 North of Santa Rosa Avenue (NB)	E	20.3	C	22.0	C	23.2	D	29.7	D	31.7		
Southbound												
US-101 North of Santa Rosa Avenue (SB)	E	22.9	C	24.1	C	25.5	D	28.5	D	30.3		
Santa Rosa Avenue SB On-Ramp	E	31.2	D	32.7	D	31.0	F	-	F	-		
US-101 Between Santa Rosa Avenue and Wilfred Avenue (SB)	E	31.5	D	32.7	D	31.0	F	-	F	-		
Wilfred Avenue SB Off-Ramp	E	38.0	E	38.8	E	40.2	F	44.8	F	46.2		
Wilfred Avenue SB On-Ramp	E	33.7	D	33.4	F	43.3	E	39.9	F	47.1		
US-101 Between Rohnert Park Expressway and Wilfred Avenue (SB)	E	35.2	D	33.4	F	43.3	E	39.9	F	47.1		
Rohnert Park Expressway SB Off-Ramp	E	38.0	D	33.4	F	43.3	E	39.9	F	47.1		
Rohnert Park Expressway SB On-Ramp (Loop Ramp)	E	36.0	D	30.9	D	33.4	E	38.5	F	41.6		
Rohnert Park Expressway SB On-Ramp	E	35.1	D	30.1	D	32.8	F	37.5	F	40.8		
US-101 Between Rohnert Park Expressway and Gravenstein Highway (SB)	E	27.1	C	22.3	C	25.5	E	36.6	F	-		
Gravenstein Highway SB Off-Ramp	E	33.9	D	29.2	D	32.5	F	40.3	F	44.4		
Gravenstein Highway SB On-Ramp	E	33.7	D	32.1	E	35.7	F	42.3	F	46.6		
US-101 South of Gravenstein Highway (SB)	E	24.7	C	21.8	C	25.5	D	32.0	E	41.4		



Potential Effects on Intersection Safety

Traffic volumes generated by the project were reviewed in consideration of existing intersection collision history and the potential for increased accidents. According to collision data, accidents involving bicyclist and pedestrians are very low. Many intersections did not report any collisions of this type during the survey period. This suggests that bicycle and pedestrian volumes are relatively low and study intersections have minimal safety hazards for individuals biking or walking. Although the project will introduce increased traffic volumes at some intersections, bicyclists and pedestrians are expected to be able to travel through study intersections with similar levels of safety. Historically casinos do not attract a significant amount of bicycle and pedestrian traffic. . Therefore, the expected amount of pedestrian and bicycle traffic is nominal and a significant increase in bicycle and pedestrian accidents is unlikely.

The potential for increased collisions between motorized vehicles was also considered. Collision frequency and severity are a function of many complex factors that vary depending on the location and type of intersection or roadway segment. Factors include traffic control such as signals or stop signs, lane and shoulder widths, grades, driveway densities, roadside hazards or obstacles, presence of left and right turn lanes, sight distance, congestion, and others.

Because of the number and interrelationships of the variables, accurate crash prediction is difficult. However, the proposed casino and hotel project will increase roadway congestion, a factor which could result in an increase in traffic collisions if left unmitigated. Other factors are expected to remain unaffected.

As noted previously, the purpose of this study is to address the traffic and transportation effects of the proposed casino and hotel development. This includes mitigation improvements to restore traffic operations to levels within acceptable standards or to levels as good as or better than without the casino/hotel project. Any potential increases in accidents due to project-related traffic would be offset by the implementation of roadway improvements included as mitigation. Therefore, if mitigations are implemented as proposed in this report, no significant increase in daytime or nighttime collisions is expected.



Queuing Summary

As congestion increases it is common for traffic at signals and stop signs to form lines of stopped (or queued) vehicles. Queue lengths were determined for each lane and measure the distance that vehicles will backup in each direction approaching an intersection. The 95th percentile queue is calculated by using 95th percentile traffic to account for fluctuations in traffic and represents a condition where 95 percent of the time during the peak period, traffic volumes and related queuing will be at, or less, than determined by the analysis. Average queuing is generally less. Ninety-fifth percentile queuing was checked under the various future year development conditions and in consideration of the planned intersection and signal timing improvements. A typical vehicle length of 25 feet is used in the queuing analysis. A summary of the queuing results can be seen in **Table D4**. The results indicate dedicated turn lanes where queuing may exceed their storage limits. It should be noted that some variations in intersection queuing between scenarios is a result of planned intersection and signal timing improvements.

A lot of queuing impacts can be mitigated and are included in the mitigations section. There are some significant and unavoidable queuing impacts due to existing and/or proposed right-of-way at the following locations:

- Redwood Drive/Wilfred Avenue
- Redwood Drive/Rohnert Park Expressway
- Commerce Boulevard/Rohnert Park Expressway

Table D 4 – Alternative D Queuing Summary

Intersection	Turning Movement	Bay Length	Queue Length		Intersection	Turning Movement	Bay Length	Queue Length	
			2008	2020				2008	2020
1 Stony Point Road and Willfred Avenue	EBL				16 Stony Point Road and Rohnert Park Expy	EBL			
	EBR					EBR			
	WBL					WBL	500	525	475
	WBR	35	30	43		WBR	450	225	225
	NBL	150	<25	<25		NBL	700	325	300
	NBR	150	25	25		NBR	160	50	100
4 Langner Avenue and Willfred Avenue	SBL				EBR	200	50	50	
	SBR				WBL	250	225	125	
	EBL	150		<25	WBR	130	50	100	
	EBR				NBL	130	200	150	
	WBL				NBR	100	300	225	
	WBR				SBL	200	325	300	
5 Labath Avenue and Willfred Avenue	NBL				EBR	200	150	200	
	NBR				EBR	200	150	200	
	SBL				WBL	450	425	450	
	SBR				WBR	160	350	325	
	EBL	150		<25	NBL	250	175	225	
	EBR				NBR	250	500	550	
6 Dowdell Avenue and Willfred Avenue	WBL	150		<25	SBL	250	450	425	
	WBR				SBR	175	275	250	
	NBL				EBL	275	50	100	
	NBR				EBR				
	SBL				WBL	275	50	100	
	SBR				WBR				
7 Redwood Drive and Willfred Avenue	EBL	150	150		NBL				
	EBR	150	250	250	NBR				
	WBL				SBL	400	600	475	
	WBR				SBR	400	350	425	
	NBL	150	500	750	EBL	190	25	25	
	NBR	100	700	450	EBR				
8 Redwood Drive and Commerce Boulevard	SBL	275	625	625	WBL	250	300	300	
	SBR				EBR	240	450	425	
	EBL	75	25		WBL	200	175	225	
	EBR	75	175		WBR				
	WBL	100	25		NBL	250	375	300	
	WBR				NBR	175	275	300	
9 Willfred Avenue and SB US 101 Ramps	NBL	150	200		SBL	150	125	225	
	NBR	150	<25		SBR	150	200	200	
	SBL	200	50		EBL	250	175	200	
	SBR				EBR				
	EBL				WBL	500	175	200	
	EBR				WBR	150	200	200	
10 Golf Course Drive and Commerce Blvd	NBL				NBL	550	375	375	
	NBR				NBR	675	100	100	
	SBL	250	525	500	SBL	500	225	250	
	SBR				SBR	625	250	275	
	EBL				EBL	225	150	175	
	EBR				EBR				
11 Roberts Lake Drive and Golf Course Drive	WBL	150	925	625	WBL	150	75	75	
	WBR				WBR	80	350	425	
	NBL	150	1025	700	NBL	50	50	50	
	NBR				NBR				
	SBL				SBL	225	475	550	
	SBR				SBR				
12 Commerce Blvd and NB US 101 Ramps	EBL	80	200	375	EBL				
	EBR				EBR	50	350	375	
	WBL				WBL	100	125	100	
	WBR				WBR				
	NBL				NBL				
	NBR				NBR				
15 Business Park Drive and Redwood Drive	SBL	200	125	200	SBL	425	650	675	
	SBR				SBR	425	225	275	
	EBL	250	600	925	EBL				
	EBR	250	50	50	EBR				
	WBL				WBL				
	WBR				WBR				
23 Redwood Road and Gravenstein Hwy	NBL	200	575	525	NBL				
	NBR				NBR	275	225	275	
	SBL	100	<25	<25	SBL				
	SBR	175	625	750	SBR				
	EBL	225	95	40	EBL				
	EBR				EBR				
24 Gravenstein Hwy and SB US 101 Ramps	WBL				WBL	120	43	50	
	WBR				WBR	505	<25	<25	
	NBL	150	<25	<25	NBL	120	<25	<25	
	NBR				SBL	490	<25	<25	
	SBL				SBR				
	SBR				SBR				
25 Gravenstein Hwy and NB US 101 Ramps	EBL				EBL				
	EBR				EBR				
	WBL				WBL				
	WBR				WBR				
	NBL				NBL				
	NBR				NBR				
26 Stony Point Road and Millbrae Avenue	SBL				SBL				
	SBR				SBR				
	EBL				EBL				
	EBR				EBR				
	WBL				WBL				
	WBR				WBR				

Alternative D Mitigation

Intersections with levels of service below established thresholds were investigated to determine the role of the Alternative D traffic in the projected operating conditions at those intersections. The evaluation disclosed that the following improvements as shown in **Table D5** are needed in the near-term (2008) and long-term (2020).

The basis of the Alternative D mitigations is the assumption that intersection #13, the Project Driveway at Stony Point Road, should be relocated further south along Stony Point Road and be signalized so that it can function as a full movement access. This change permits more project traffic to conveniently arrive and exit from the site and use the Rohnert Park Expressway interchange, thus relieving some the traffic pressure through the Wilfred Avenue interchange.

In the event that intersection #13 cannot be relocated and signalized as discussed above, additional mitigation improvements will be needed, particularly at intersections surrounding the Wilfred Avenue interchange.

Table D6 summarizes the expected levels of service with the proposed mitigation. As mentioned previously, the signal control is listed as TS for a signalized intersection and TWSC for a two-way stop-controlled intersection. Two-way stop-controlled (TWSC) intersections maybe operate acceptably overall but only the worst approach is reported in the table. The overall level of service is reported for signalized intersections.

Figures D8 and D9 illustrate the mitigated lane geometry and traffic control.

A single asterisk in the table denotes an intersection that operates at an acceptable level of service and does not require mitigation, but a mitigated level of service and delay are provided for reference as a result of the mitigation to signalize the Project Driveway/ Stony Point Road which changes traffic patterns at some intersections. A double asterisk indicates an intersection where the delay increases as a result of the mitigation to signalize the Project Driveway/Stony Point Road intersection.



Table D 5 – Alternative D Summary of Mitigations

Period	#	Intersection	Mitigation	Requires ROW?	Reason
2008	1	Stony Point Rd/ Wilfred Ave	<ul style="list-style-type: none"> Signalize 	No	Capacity
	2	Pnmrose Ave/ Wilfred Ave	<ul style="list-style-type: none"> Signalize 	No	Capacity
	3	Whistler Ave/ Wilfred Ave	No mitigation necessary	-	-
	4	Langer Ave/ Wilfred Ave	No mitigation necessary	-	-
	5	Labath Ave/ Wilfred Ave	<ul style="list-style-type: none"> Signalize Add NB right and change NB all shared to left-through Add SB left and change SB all shared to through-right 	No Yes Yes	Capacity Capacity Capacity
	6	Dowdell Ave/ Wilfred Ave	<ul style="list-style-type: none"> Signalize Add WB left (drop lane) and change all shared to through-right 	No Yes	Capacity Capacity
	7	Redwood Dr/ Wilfred Ave	<ul style="list-style-type: none"> Add WB through Add EB through-right and change all-shared to through-left Add WB left and change WB left-through to through Change phasing east-west to protected from split 	Yes Yes Yes No	Capacity Capacity Capacity Capacity
	8	Redwood Dr/ Commerce Blvd	No mitigation necessary	-	-
	9	Wilfred Ave/ US-101 SB Ramps	<ul style="list-style-type: none"> Extend SB left turn bay to 500 feet 	Yes	Queue
	10	Golf Course Dr/ Commerce Blvd	<ul style="list-style-type: none"> Relocate the Commerce Blvd/Golf Course Dr intersection to the east and relocate the Roberts Lake Rd/Golf Course Dr intersection to the west closer to the railroad crossing. The two intersections on either side of the railroad crossing will operate as one intersection. The relocation will require the purchase of ROW on the south side of Golf Course Dr 	Yes	Capacity
	11	Golf Course Dr/ Roberts Lake Rd	<ul style="list-style-type: none"> Relocate the Commerce Blvd/Golf Course Dr intersection to the east and relocate the Roberts Lake Rd/Golf Course Dr intersection to the west closer to the railroad crossing. The two intersections on either side of the railroad crossing will operate as one intersection. The relocation will require the purchase of ROW on the south side of Golf Course Dr 	Yes	Capacity
	12	Commerce Blvd/ US-101 NB Ramps	<ul style="list-style-type: none"> Add NB loop off-ramp that drops traffic onto WB Wilfred Ave. Will require a short tunnel section to go under the NB on-ramp and Golf Course Road as well as demolition of the existing Chevron gas station. Will require removal of the section of Commerce Blvd between Golf Course Dr and Redwood Dr to allow for the construction of the loop off-ramp. May require a pump station. May obstruct access to the proposed SMART station from Commerce Blvd via Golf Course Dr - access will be provided from Commerce Blvd via Redwood Dr Change SB through to through-right. Will require a two lane on-ramp with one lane as an auxiliary lane between the Wilfred Avenue and Santa Rosa Avenue interchanges. May require additional bridge structure widening over Wilfred Avenue as well as over the Northwest Pacific Railroad tracks 	Yes Yes	Capacity Capacity
	13	Project Driveway/ Stony Point Rd	<ul style="list-style-type: none"> Signalize Add NB right and change NB through-right to through Add WB left out of project driveway 	No Trnbe land Trnbe land	Capacity Capacity Capacity
	14	Business Park Dr/ Labath Ave	Alternative A intersection	-	-
	15	Business Park Dr/ Redwood Dr	No mitigation necessary	-	-
	16	Rohnert Park Expwy/ Stony Point Rd	<ul style="list-style-type: none"> Extend WB right turn bay to 500 feet 	Trnbe land	Queue
	17	Rohnert Park Expwy/ Labath Ave	<ul style="list-style-type: none"> Extend NB right turn bay to 200 feet Extend SB left turn bay to 300 feet 	Yes Yes	Queue Queue
	18	Rohnert Park Expwy/ Redwood Dr	<ul style="list-style-type: none"> Optimize signal timing Extend EB left turn bay to 250 feet 	No No	Capacity Queue
	19	Rohnert Park Expwy/ US-101 SB Ramps	<ul style="list-style-type: none"> Extend SB left turn bay to 550 feet 	Yes	Queue
	20	Rohnert Park Expwy/ US-101 NB Ramps	<ul style="list-style-type: none"> Extend NB left turn bay to 400 feet 	Yes	Queue
	21	Rohnert Park Expwy/ Commerce Blvd	No mitigation necessary	-	-
	22	Gravenstein Hwy/ Stony Point Rd	No mitigation necessary	-	-
	23	Gravenstein Hwy/ Redwood Dr	<ul style="list-style-type: none"> Optimize signal timing Extend SB left turn bay to 375 feet 	No Yes	Queue Queue
	24	Gravenstein Hwy/ US-101 SB Ramps	<ul style="list-style-type: none"> Optimize signal timing 	No	Queue
	25	Gravenstein Hwy/ US-101 NB Off-Ramp	No mitigation necessary	-	-
	26	Millbrae Ave/ Stony Point Rd	<ul style="list-style-type: none"> Signalize 	No	Capacity
	27	Millbrae Ave/ Pnmrose Ave	No mitigation necessary	-	-
	28	Millbrae Ave/ Whistler Ave	No mitigation necessary	-	-
	29	Millbrae Ave/ Langner Ave	No mitigation necessary	-	-
	30	Millbrae Ave/ Labath Ave	No mitigation necessary	-	-
	31	Millbrae Ave/ Dowdell Ave	No mitigation necessary	-	-



Period	#	Intersection	Mitigation	Requires ROW?	Reason
2020	1	Stony Point Rd/ Wilfred Ave	• Signalize	No	Capacity
	2	Primrose Ave/ Wilfred Ave	• Signalize	No	Capacity
	3	Whistler Ave/ Wilfred Ave	No mitigation necessary	-	-
	4	Langer Ave/ Wilfred Ave	No mitigation necessary	-	-
	5	Labath Ave/ Wilfred Ave	• Signalize • Add NB right and change NB all shared to through-left • Add SB left and change SB all shared to through-right	No Yes Yes	Capacity Capacity Capacity
	6	Dowdell Ave/ Wilfred Ave	• Signalize • Add 2nd WB left (drop lane) • Add a SB left and change SB all shared to through-right • Add a NB left and 2 NB rights and change all shared to through	No Yes Yes Yes	Capacity Capacity Capacity Capacity
	7	Redwood Dr/ Wilfred Ave	• Add WB through • Add WB left and change WB left-through to through • Change phasing east-west to protected from split	Yes Yes No	Capacity Capacity Capacity
	8	Redwood Dr/ Commerce Blvd	Modified Intersection (not analyzed)		-
	9	Wilfred Ave/ US-101 SB Ramps	• Add EB right and change EB through-right to through • Extend SB left turn bay to 500 feet	Yes Yes	Capacity Queue
	10	Golf Course Dr/ Commerce Blvd	• Relocate the Commerce Blvd/Golf Course Dr intersection to the east and relocate the Roberts Lake Rd/Golf Course Dr intersection to the west closer to the railroad crossing. The two intersections on either side of the railroad crossing will operate as one intersection. The relocation will require the purchase of ROW on the south side of Golf Course Dr	Yes	Capacity
	11	Golf Course Dr/ Roberts Lake Rd	• Relocate the Commerce Blvd/Golf Course Dr intersection to the east and relocate the Roberts Lake Rd/Golf Course Dr intersection to the west closer to the railroad crossing. The two intersections on either side of the railroad crossing will operate as one intersection. The relocation will require the purchase of ROW on the south side of Golf Course Dr	Yes	Capacity
	12	Commerce Blvd/ US-101 NB Ramps	• Add NB loop off-ramp that drops traffic onto WB Wilfred Ave. Will require a short tunnel section to go under the NB on-ramp and Golf Course Road as well as demolition of the existing Chevron gas station. May require a pump station. May obstruct access to the proposed SMART station from Commerce Blvd via Golf Course Dr - access will be provided from Commerce Blvd via Redwood Dr • Change SB through to through-right. Will require a two lane on-ramp with one lane as an auxiliary lane between the Wilfred Avenue and Santa Rosa Avenue interchanges. May require additional bridge structure widening over Wilfred Avenue as well as over the Northwest Pacific Railroad tracks	Yes Yes	Capacity Capacity
	13	Project Driveway/ Stony Point Rd	• Signalize • Add NB right and change NB through-right to through • Add WB left out of project driveway	No Tribe land Tribe land	Capacity Capacity Capacity
	14	Business Park Dr/ Labath Ave	Alternative A intersection	-	-
	15	Business Park Dr/ Redwood Dr	No mitigation necessary	-	-
	16	Rohnert Park Expwy/ Stony Point Rd	• Extend WB right turn bay to 500 feet	Tribe land	Queue
	17	Rohnert Park Expwy/ Labath Ave	• Extend SB left turn bay to 300 feet	Yes	Queue
	18	Rohnert Park Expwy/ Redwood Dr	• Optimize signal timing • Extend EB left turn bay to 250 feet	No No	Capacity Queue
	19	Rohnert Park Expwy/ US-101 SB Ramps	• Extend SB left turn bay to 550 feet	Yes	Queue
	20	Rohnert Park Expwy/ US-101 NB Ramps	• Extend NB left turn bay to 400 feet	Yes	Queue
	21	Rohnert Park Expwy/ Commerce Blvd	No mitigation necessary	-	-
	22	Gravenstein Hwy/ Stony Point Rd	No mitigation necessary	-	-
	23	Gravenstein Hwy/ Redwood Dr	• Optimize signal timing • Extend SB left turn bay to 375 feet	No Yes	Queue Queue
	24	Gravenstein Hwy/ US-101 SB Ramps	• Optimize signal timing	No	Queue
	25	Gravenstein Hwy/ US-101 NB Off-Ramp	No mitigation necessary	-	-
	26	Millbrae Ave/ Stony Point Rd	• Signalize	No	Capacity
	27	Millbrae Ave/ Primrose Ave	No mitigation necessary	-	-
	28	Millbrae Ave/ Whistler Ave	No mitigation necessary	-	-
	29	Millbrae Ave/ Langner Ave	No mitigation necessary	-	-
	30	Millbrae Ave/ Labath Ave	No mitigation necessary	-	-
	31	Millbrae Ave/ Dowdell Ave	No mitigation necessary	-	-

Table D 6 – Alternative D Mitigated Intersection Levels of Service

	Intersection	Criteria	Signal Control	2005		2008				2020							
				Existing		Base (w/o Proj)		With Project		Mitigated		Base (w/o Proj)		With Project		Mitigated	
				LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
1	Stony Point Rd/ Wilfred Ave	D	TWSC	F	109.1	F	238.0	F	OVRFL	C	23.4	F	401.6	F	OVRFL	C	23.9
2	Primrose Ave/ Wilfred Ave	D	TWSC	A	9.4	B	11.3	F	864.8	D	46.7	B	12.4	F	OVRFL	D	39.9
3	Whistler Ave/ Wilfred Ave	D	TWSC	A	9.4	B	11.3	D	35.0	D	27.3	B	12.4	E	42.1	D	32.2*
4	Langer Ave/Wilfred Ave	D	TWSC	A	9.4	B	11.3	D	34.5	D	27.0	B	12.4	E	42.1	D	32.2*
5	Labath Ave/Wilfred Ave	D	TWSC	A	9.1	E	48.3	F	850.0	C	27.7	F	491.5	F	OVRFL	D	36.9
6	Dowdell Ave/Wilfred Ave	D	TWSC	A	9.1	F	333.5	F	OVRFL	D	52.1	F	OVRFL	F	OVRFL	D	47.0
7	Redwood Dr/Wilfred Ave	D	TS	C	28.1	D	37.1	F	92.7	D	44.6	F	87.9	F	205.4	D	41.7
8	Redwood Dr/ Commerce Blvd	C	TS	D	46.5	C	26.6	C	26.6	C	26.6	-	-	-	-	-	-
9	Wilfred Ave/ US-101 SB Ramps	D	TS	-	-	C	22.5	D	39.9	D	38.5	C	33.2	E	71.7	D	38.6
10	Golf Course Dr/ Commerce Blvd	D	TS	E	61.7	D	44.0	E	66.3	D	36.7	F	96.5	F	151.9	D	50.8
11	Golf Course Dr/ Roberts Lake Rd	C	TS	B	18.4	B	17.0	B	15.5	D	36.7	B	10.9	B	11.1	D	50.8
12	Commerce Blvd/ US-101 NB Ramps	D	TS	C	28.7	C	34.9	E	65.1	C	27.1	E	69.8	F	122.9	C	32.9
13	Project Driveway/ Stony Point Rd	D	TWSC	A	0.0	A	0.0	C	21.6	B	10.6	A	0.0	C	19.8	A	9.6
14	Business Park Dr/ Labath Ave	D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	Business Park Dr/ Redwood Dr	D	TWSC	C	23.4	D	26.5	D	26.5	D	26.5	C	16.5	C	16.5	C	16.5
16	Rohnert Park Expwy/ Stony Point Rd	D	TS	C	25.2	C	24.0	D	38.0	D	43.8	C	22.1	C	32.5	D	36.1
17	Rohnert Park Expwy/ Labath Ave	C	TS	C	27.5	C	33.1	C	33.9	C	33.9	C	33.0	C	33.5	C	33.5
18	Rohnert Park Expwy/ Redwood Dr	C	TS	C	33.4	D	35.6	D	43.9	C	33.2	D	36.0	D	41.9	C	33.7
19	Rohnert Park Expwy/ US-101 SB Ramps	D	TS	C	23.2	C	23.2	C	21.5	C	21.5	C	24.5	C	24.8	C	24.8
20	Rohnert Park Expwy/ US-101 NB Ramps	D	TS	B	14.9	B	17.6	C	21.8	C	21.8	B	17.1	C	22.3	C	22.3
21	Rohnert Park Expwy/ Commerce Blvd	C	TS	C	31.5	C	33.9	C	33.9	C	29.7*	C	34.9	C	34.9	C	34.9
22	Gravenstein Hwy/ Stony Point Rd	D	TS	C	34.7	C	31.5	D	38.6	D	40.9**	D	39.9	D	41.4	D	43.9**
23	Gravenstein Hwy/ Redwood Dr	D	TS	C	29.5	C	27.8	C	28.6	C	24.9	C	34.6	D	35.7	D	36.7
24	Gravenstein Hwy/ US-101 SB Ramps	D	TS	C	21.0	B	17.8	B	18.1	C	22.7	B	17.0	B	17.0	C	29.2
25	Gravenstein Hwy/ US-101 NB Off-Ramp	D	TS	B	16.2	B	13.5	B	19.9	C	22.9**	B	18.7	C	21.6	C	25.4**
26	Millbrae Ave/ Stony Point Rd	D	TWSC	E	38.3	E	38.2	F	50.4	C	21.1	F	70.6	F	112.5	C	21.8
27	Millbrae Ave/ Primrose Ave	D	TWSC	B	11.1	B	11.4	B	11.4	B	11.4	B	12.4	B	12.4	B	12.4
28	Millbrae Ave/ Whistler Ave	D	TWSC	B	11.3	B	11.5	B	11.5	B	11.5	B	12.4	B	12.4	B	12.4
29	Millbrae Ave/ Langner Ave	D	TWSC	A	9.6	A	9.9	A	9.9	A	9.9	B	11.2	B	11.2	B	11.2
30	Millbrae Ave/ Labath Ave	D	TWSC	B	10.8	B	11.2	B	11.2	B	11.2	B	13.5	B	13.5	B	13.5
31	Millbrae Ave/ Dowdell Ave	D	TWSC	B	11.2	B	11.3	B	11.3	B	11.3	B	11.6	B	11.6	B	11.6

Results indicate that the freeway will not meet standards with the project, even with the future construction of HOV lanes, ramp metering, and auxiliary lanes associated with the Wilfred interchange project. As mitigation the project should do the following which will result in the mitigated levels of service shown in **Table D7**:

- Adjust the ramp metering to account for the additional project traffic at the Wilfred Avenue interchange in the near-term (2008). Most metering adjustments can be minor and are not expected to have queuing effects on the local street network. However, the southbound on-ramp will require heavy metering to obtain an acceptable level of service for the freeway ramp merge area which may create a long queue backed up on the ramp.
- The project should contribute to the construction of auxiliary lanes between Rohnert Park Expressway and Gravenstein Highway (SR-116) in the long-term (2020).
- The project should contribute to the construction of the Wilfred Avenue interchange project, including HOV lanes, ramp metering, and auxiliary lanes in the near-term (2008).
- The project should contribute to the construction of an additional traffic lane in the southbound direction from Santa Rosa Avenue to Wilfred Avenue and from Gravenstein Highway (SR-116) to south of Gravenstein Highway (SR-116) as well as an additional traffic lane in the northbound direction from Wilfred Avenue to Santa Rosa Avenue in the long-term (2020).

Aside from roadway improvements to mitigate protect impacts, the casino and hotel should coordinate with the Green Music Center during outdoor events that will generate high traffic levels. During that period, traffic control services at the Rohnert Park interchange may be necessary. Therefore, the casino/hotel project should provide funding for special event traffic monitoring at the Rohnert Park Expressway interchange to identify conflicts during outdoor events generate high traffic levels. If conflicts occur, the project should provide traffic management coordination between the casino/hotel project and Green Music Center in consultation with CHP and Caltrans to assist in traffic control.

Because no fixed route service will be available at the project site, the casino/hotel should provide a shuttle that serves the two Rohnert Park transfer stations. The shuttle should run throughout the day or could be called out on demand.

The casino should also sponsor charter buses from farther away destinations such as Marin County and the south Bay. The buses could serve specific groups such as senior citizens or social clubs, while reducing the number of single occupancy vehicles to the site. Preferential carpool or vanpool spaces should also be provided at the project site to encourage ridesharing by patrons and employees.

Table D 7 – Alternative D Mitigated Freeway Level of Service Summary

US-101 Section/Ramp	Criteria		Existing		2008		2008 + Alt D		2008 + Alt D Mitigated		2020		2020 + Alt D		2020 + Alt D Mitigated	
	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)
Northbound																
US-101 South of Gravenstein Highway (NB)	E	22.2	C	19.1	C	23.1	C	23.1	C	23.1	C	25.6	D	33.4	D	33.4
Gravenstein Highway NB Off-Ramp	E	30.8	C	27.4	D	31.8	D	31.8	D	31.8	D	34.1	E	39.4	E	39.4
Gravenstein Highway NB On-Ramp	E	34.5	D	29.5	D	33.4	D	33.4	D	33.4	E	36.1	F	40.9	E	39.1
US-101 Between Gravenstein Highway and Rohnert Park Expressway (NB)	E	28.1	C	23.5	C	27.0	D	27.0	D	27.0	D	32.3	E	39.1	E	39.1
Rohnert Park Expressway NB Off-Ramp	E	33.6	D	28.8	D	32.5	D	32.5	D	32.5	E	37.1	F	41.6	E	39.1
Rohnert Park Expressway NB On-Ramp (Loop Ramp)	E	32.1	C	21.8	C	31.4	D	31.4	D	31.4	C	23.2	F	39.9	D	34.7
Rohnert Park Expressway NB On-Ramp	E	32.5	C	22.1	C	26.8	C	26.8	C	26.8	D	29.0	D	34.7	D	34.7
US-101 Between Rohnert Park Expressway and Wilfred Avenue (NB)	E	28.9	C	22.1	C	26.8	C	26.8	C	26.8	D	29.0	D	34.7	D	34.7
Wilfred Avenue NB Off-Ramp	E	35.4	C	22.1	C	26.8	C	26.8	C	26.8	D	29.0	D	34.7	D	34.7
Wilfred Avenue NB On-Ramp	E	42.0	D	30.3	D	32.8	D	32.8	D	32.8	E	40.4	F	43.1	D	29.7
US-101 Between Wilfred Avenue and Santa Rosa Avenue (NB)	E	26.7	D	30.3	D	32.8	D	32.8	D	32.8	E	40.4	F	43.1	D	29.7
Santa Rosa Avenue NB Off-Ramp	E	37.2	D	30.3	D	32.8	D	32.8	D	32.8	E	40.4	F	43.1	D	29.7
US-101 North of Santa Rosa Avenue (NB)	E	20.3	C	22.0	C	23.2	C	23.2	C	23.2	D	29.7	D	31.7	D	31.7
Southbound																
US-101 North of Santa Rosa Avenue (SB)	E	22.9	C	24.1	C	25.5	C	25.5	C	25.5	D	28.5	D	30.3	D	30.3
Santa Rosa Avenue SB On-Ramp	E	31.2	D	32.7	D	31.0	D	31.0	D	31.0	F	-	F	-	C	24.4
US-101 Between Santa Rosa Avenue and Wilfred Avenue (SB)	E	38.0	E	38.8	E	40.2	E	40.2	E	40.2	F	44.8	F	46.2	D	32.2
Wilfred Avenue SB Off-Ramp	E	33.7	D	33.4	F	43.3	D	43.3	D	43.3	E	39.9	F	47.1	E	43.0
Wilfred Avenue SB On-Ramp	E	35.2	D	33.4	F	43.3	D	43.3	D	43.3	E	39.9	F	47.1	E	43.0
US-101 Between Rohnert Park Expressway and Wilfred Avenue (SB)	E	38.0	D	33.4	F	43.3	D	43.3	D	43.3	E	39.9	F	47.1	E	43.0
Rohnert Park Expressway SB Off-Ramp	E	36.0	D	30.9	D	33.4	D	33.4	D	33.4	E	38.5	F	41.6	E	38.1
Rohnert Park Expressway SB On-Ramp (Loop Ramp)	E	35.1	D	30.1	D	32.8	D	32.8	D	32.8	F	37.5	F	40.8	E	38.1
Rohnert Park Expressway SB On-Ramp	E	27.1	C	22.3	C	25.5	C	25.5	C	25.5	E	36.6	F	-	E	38.1
US-101 Between Rohnert Park Expressway and Gravenstein Highway (SB)	E	33.9	D	29.2	D	32.5	D	32.5	D	32.5	F	40.3	F	44.4	E	38.1
Gravenstein Highway SB Off-Ramp	E	33.7	D	32.1	E	35.7	E	35.7	E	35.7	F	42.3	F	46.5	D	28.2
Gravenstein Highway SB On-Ramp	E	24.7	C	21.8	C	25.5	C	25.5	C	25.5	D	32.0	E	41.4	E	41.4



Mitigations to reduce the impact of the construction include the implementation of a construction traffic management plan for the duration of construction of the project and training for construction delivery vehicle drivers. Construction material importation should be scheduled outside of the areawide commute peak hours. Debris along the truck route caused by trucks should be monitored daily and the roadways should be cleaned as necessary.

To help ensure adequate public safety during construction, particularly near the project site, the tribe should provide flagging when necessary in consultation with CHP, Caltrans, and the County's Sheriff's Department to assist with traffic control.

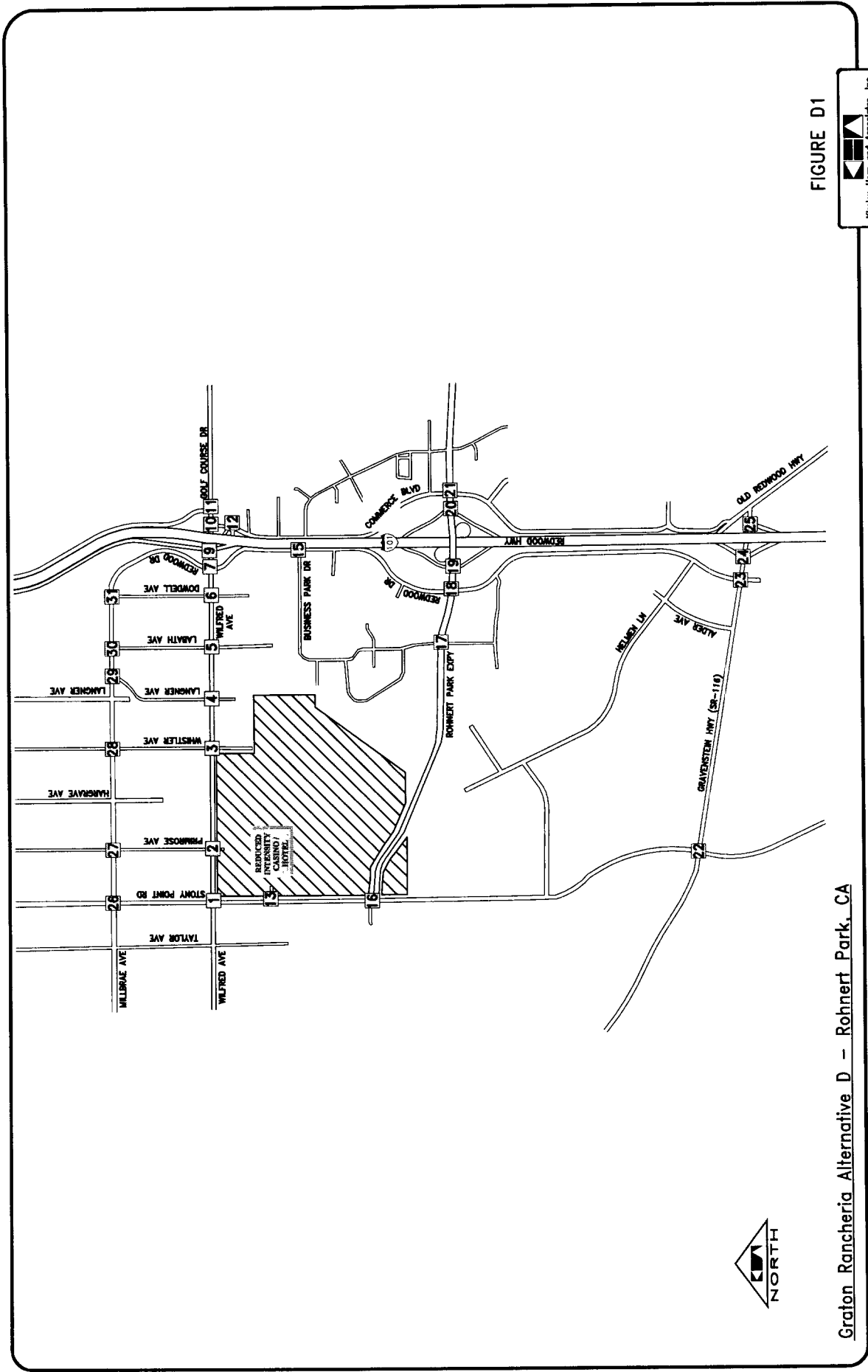


FIGURE D1



Graton Rancheria Alternative D - Rohnert Park, CA

PROJECT LOCATION

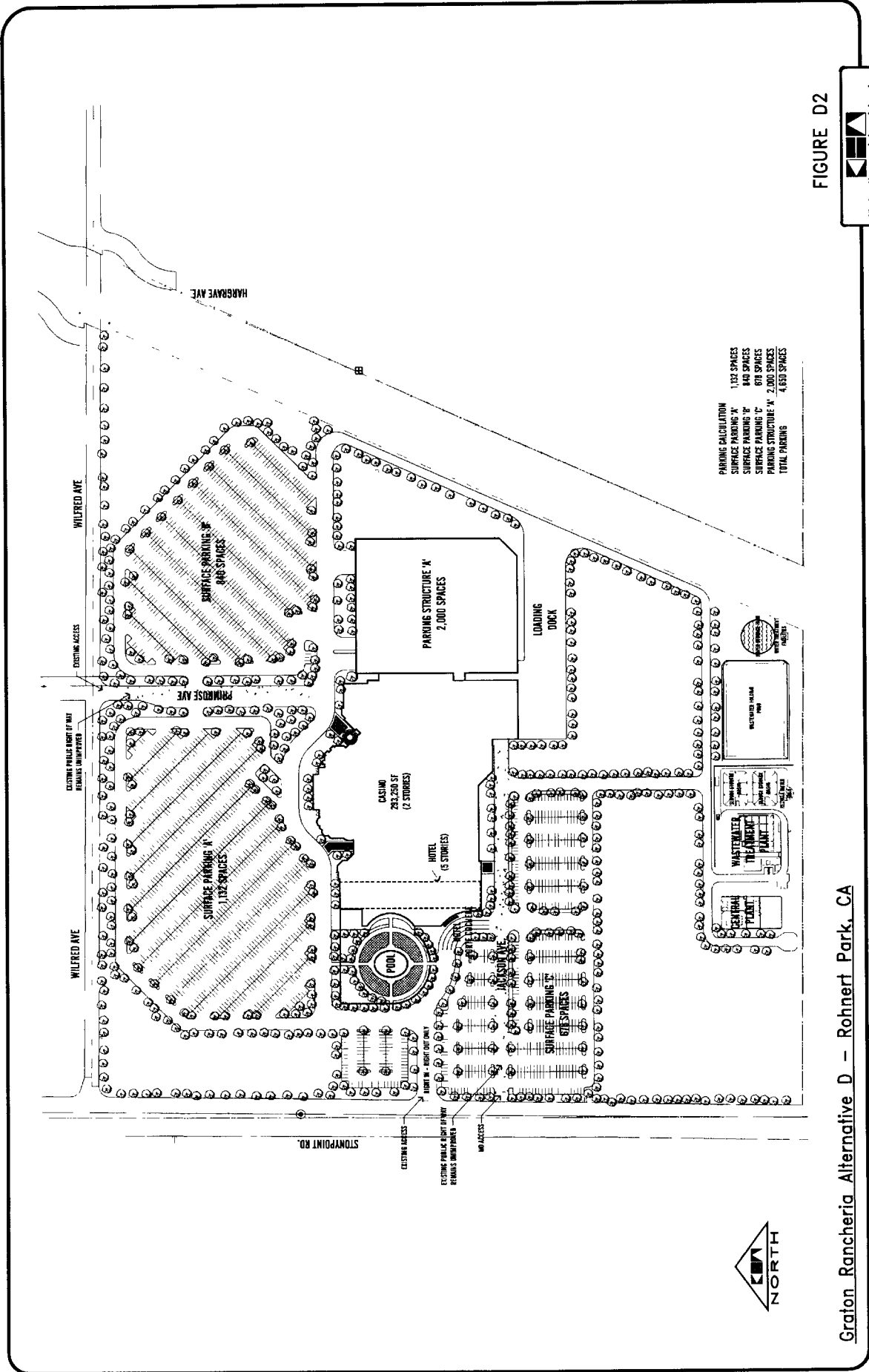


FIGURE D2



Graton Rancheria Alternative D - Rohnert Park, CA

SITE PLAN

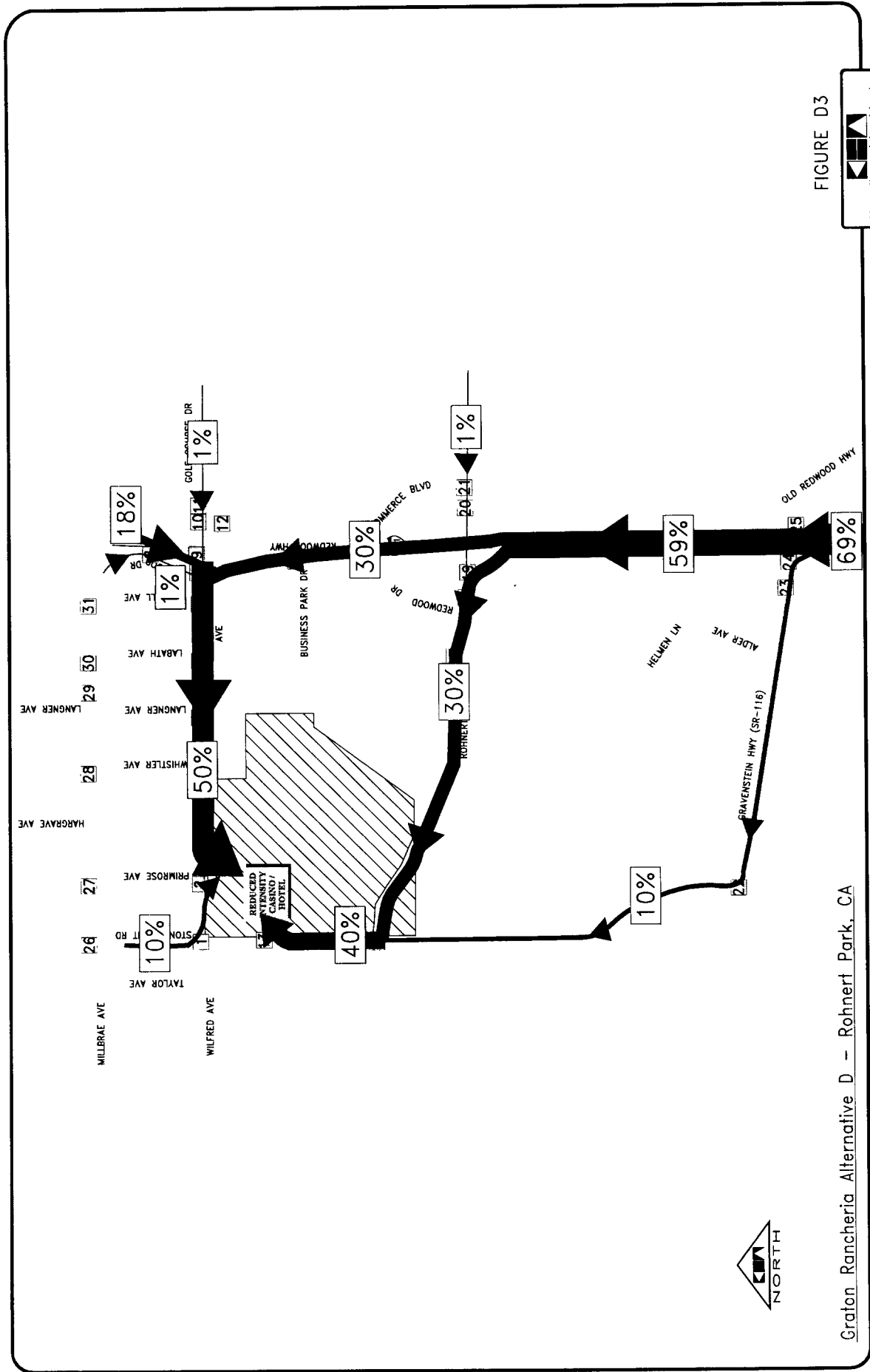


FIGURE D3



Graton Rancheria Alternative D - Rohnert Park, CA

TRIP DISTRIBUTION - IN



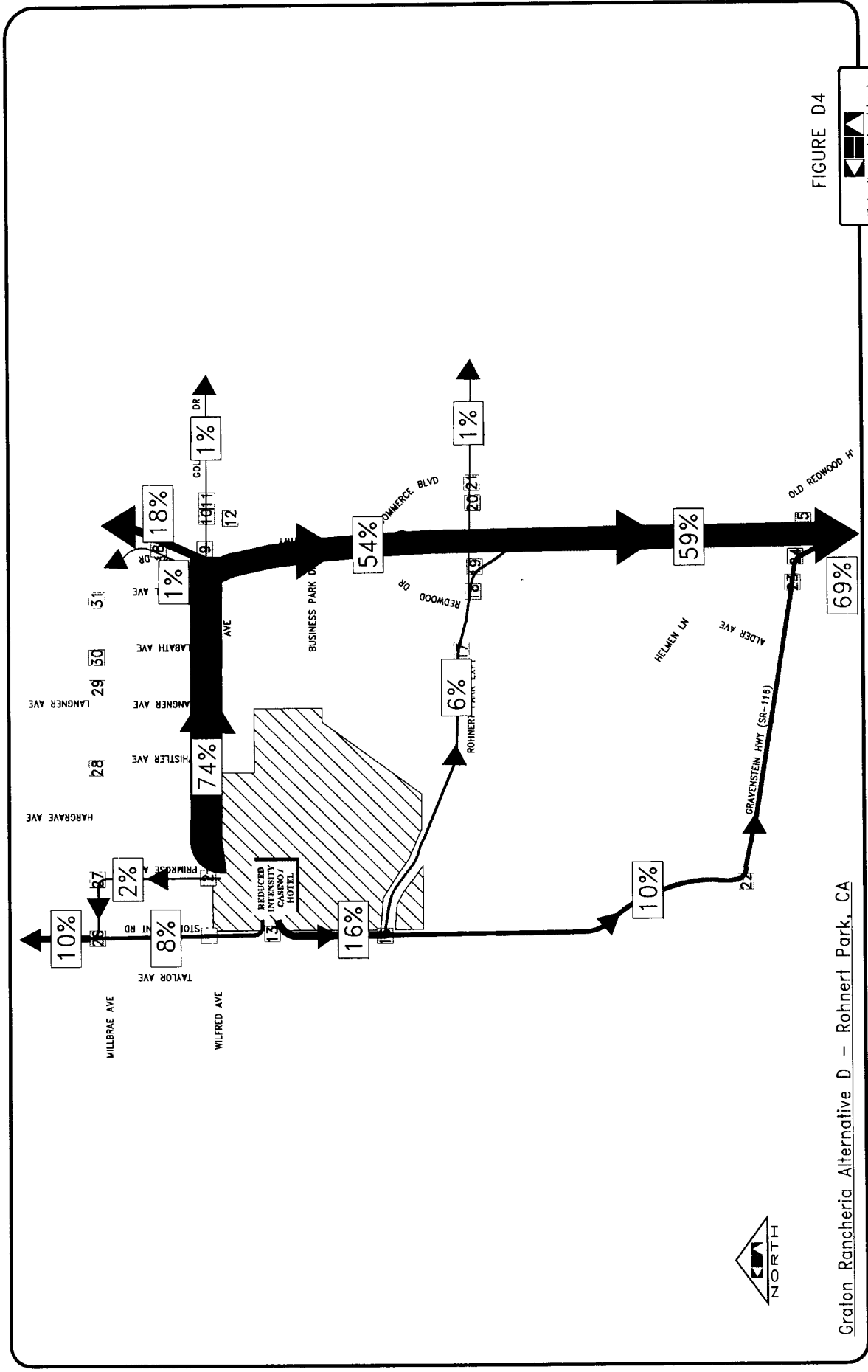
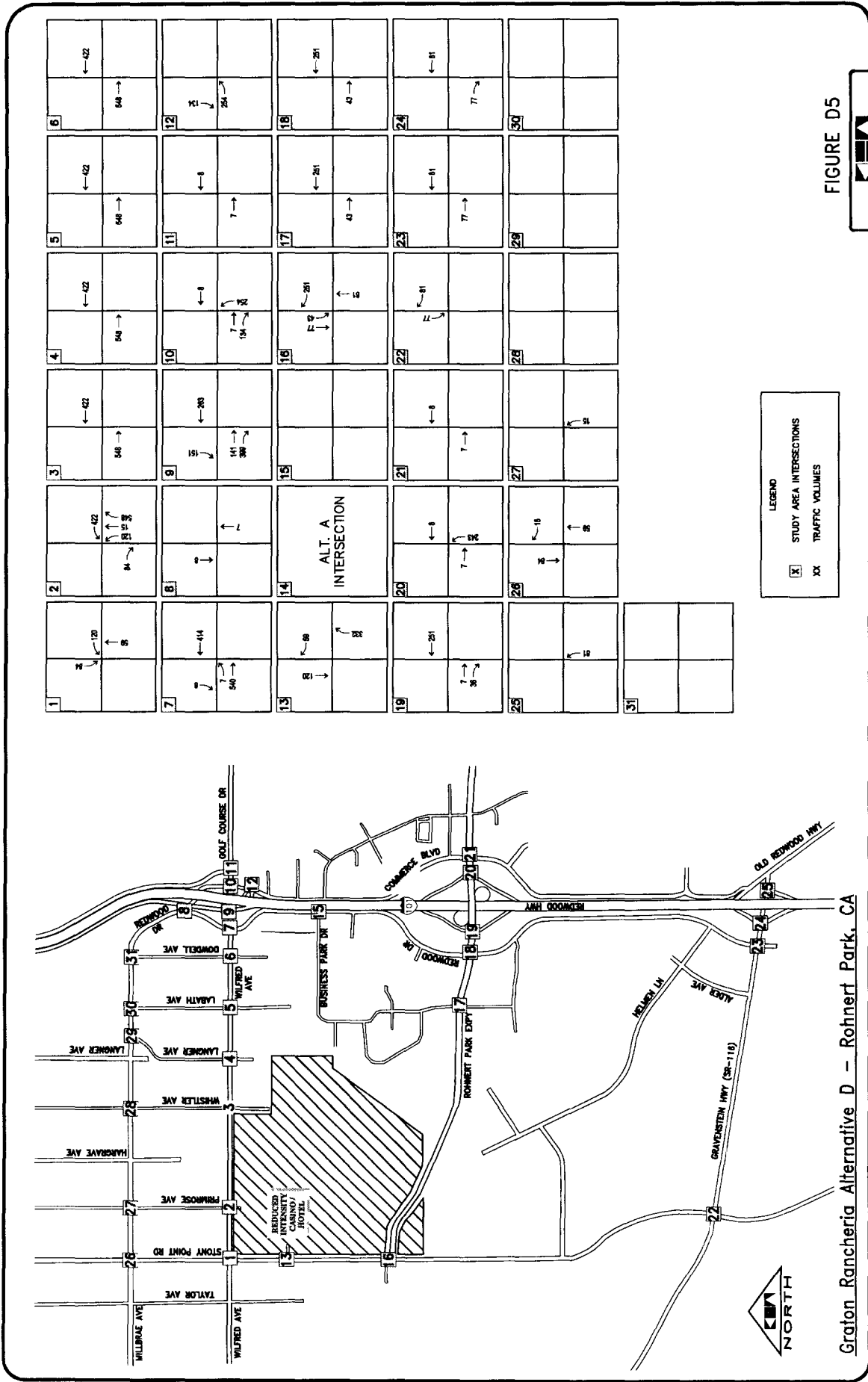


FIGURE D4



Graton Rancheria Alternative D - Rohnert Park, CA

TRIP DISTRIBUTION - OUT



Graton Rancheria Alternative D - Rohnert Park, CA

PROJECT GENERATED PM TRAFFIC VOLUMES

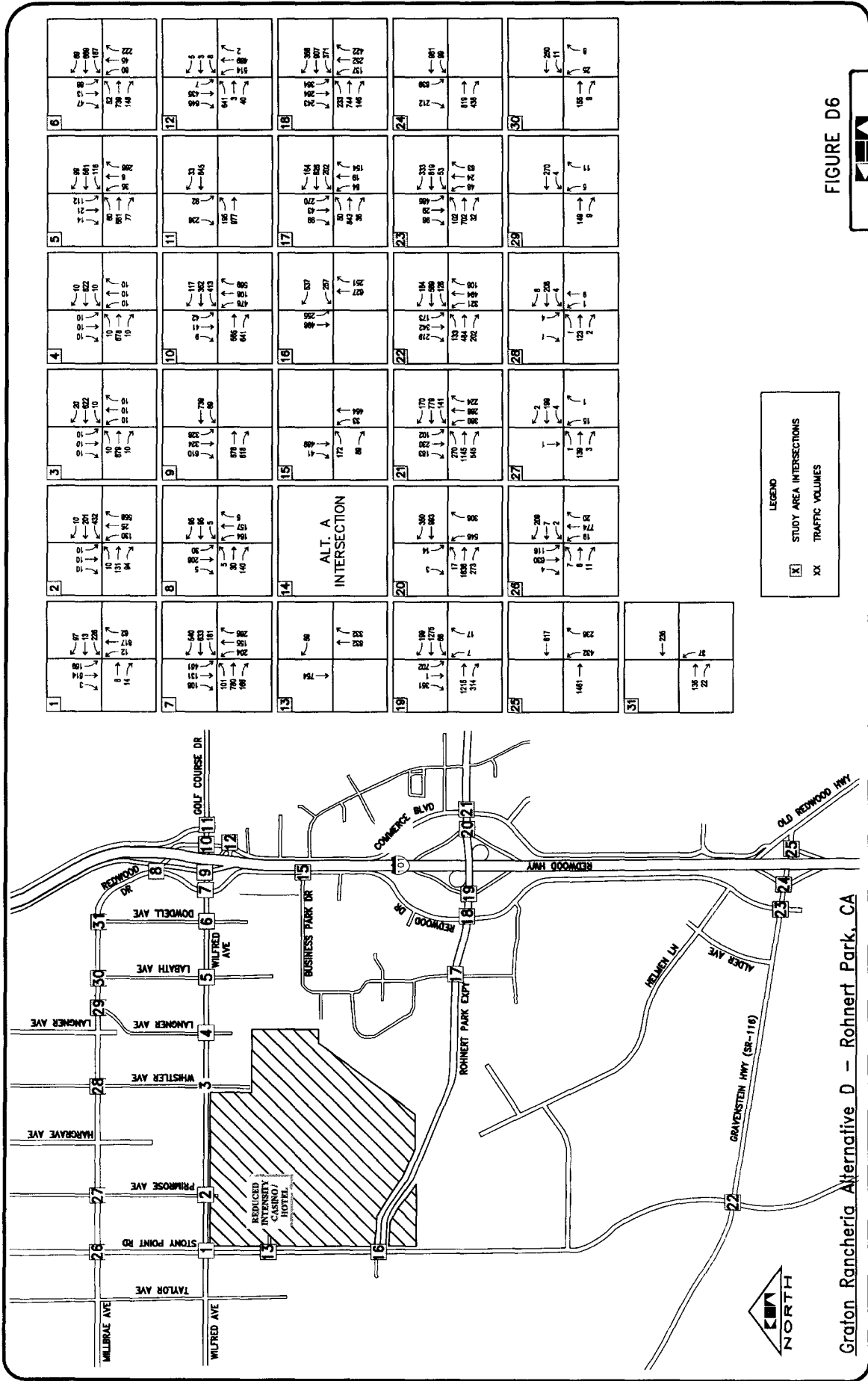


FIGURE D6



Graton Rancheria Alternative D - Rohnert Park, CA

NEAR-TERM + PROJECT PM TRAFFIC VOLUMES

LEGEND
 [X] STUDY AREA INTERSECTIONS
 [XX] TRAFFIC VOLUMES

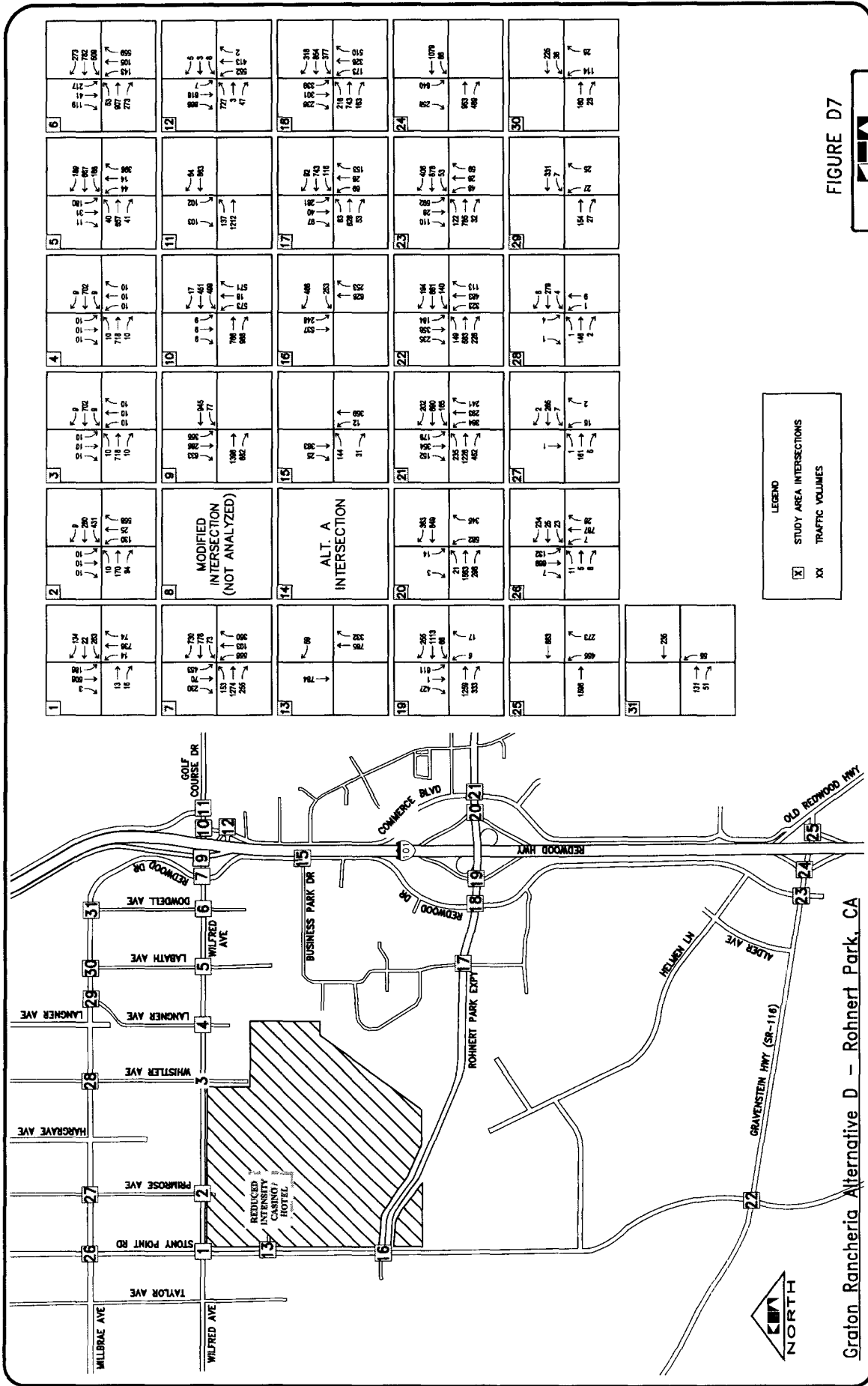


FIGURE D7

Minneapolis and Associates, Inc.

LEGEND
 X STUDY AREA INTERSECTIONS
 XX TRAFFIC VOLUMES

Graton Rancheria Alternative D - Rohnert Park, CA

LONG-TERM CUMULATIVE + PROJECT PM TRAFFIC VOLUMES

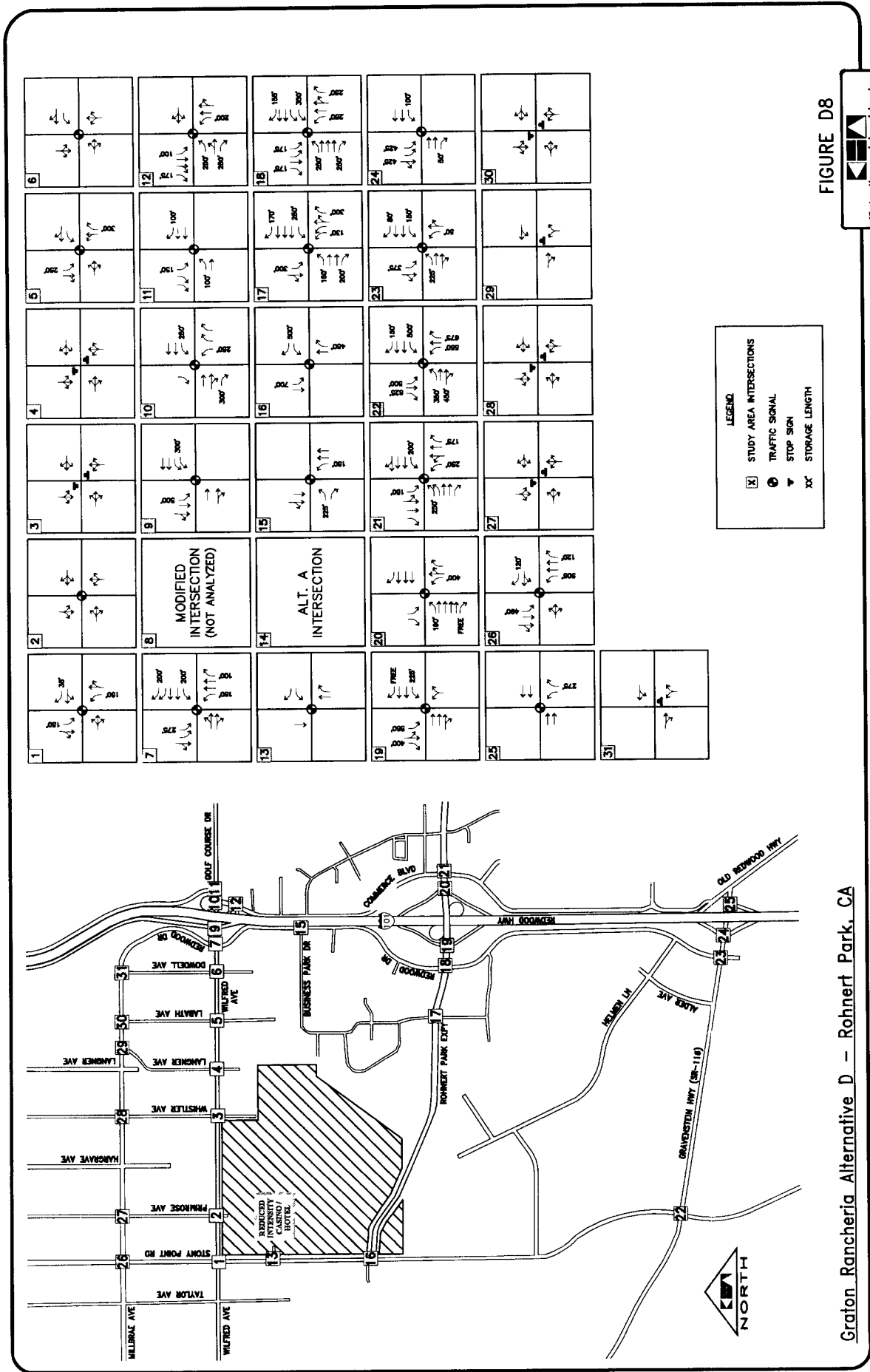
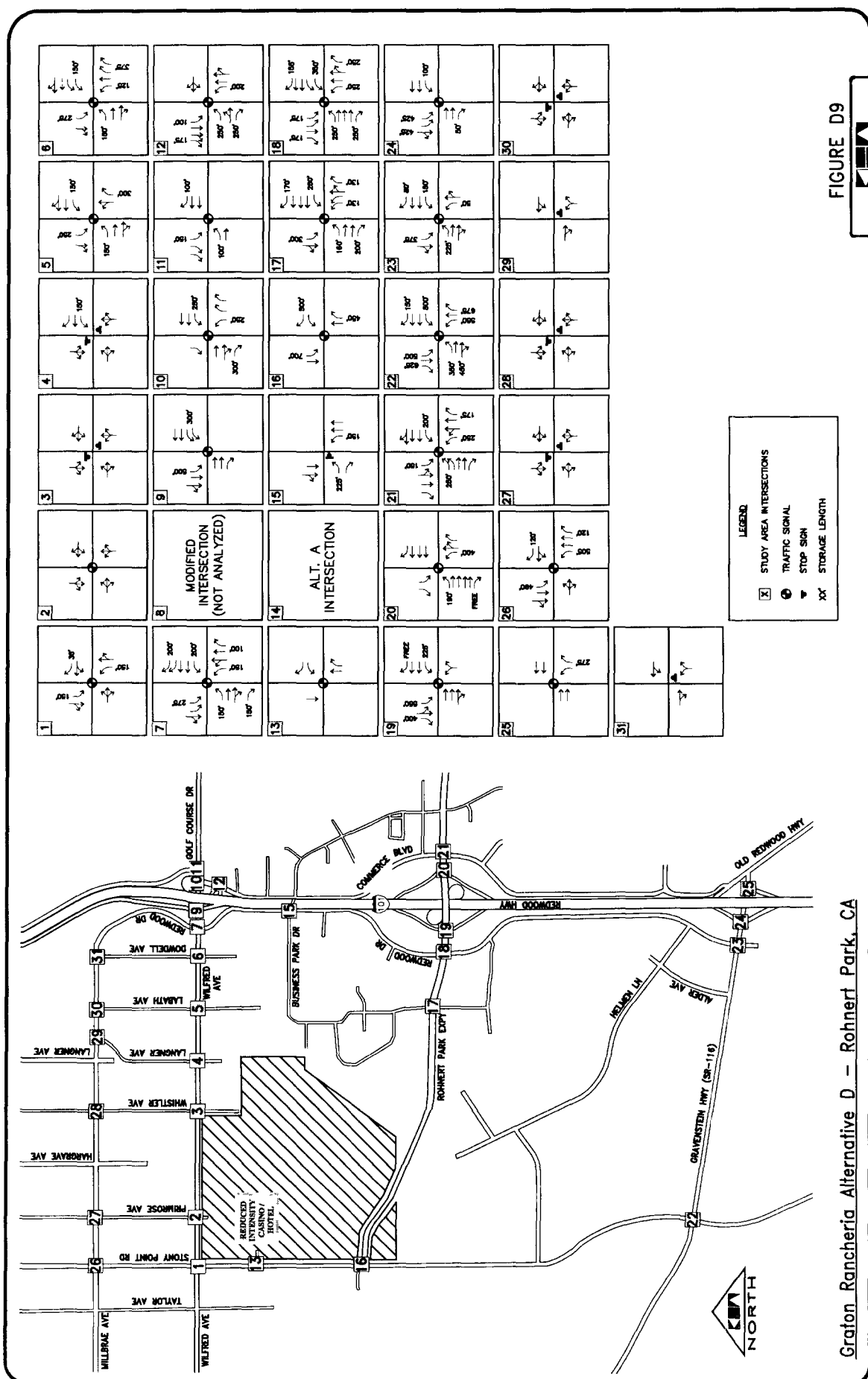


FIGURE D8

Graton Rancheria Alternative D - Rohnert Park, CA

NEAR-TERM MITIGATED LANE GEOMETRY AND TRAFFIC CONTROL

MINLEY-HORN and Associates, Inc.



Graton Rancheria Alternative D - Rohnert Park, CA

LONG-TERM MITIGATED LANE GEOMETRY AND TRAFFIC CONTROL

ALTERNATIVE E – NORTHWEST STONY POINT BUSINESS PARK OPTION

The Alternative E business park option is proposed to be located as shown in **Figure E1**, which is bordered by Wilfred Avenue in the north, Rohnert Park Expressway in the south, Stony Point Road in the west, and Langner Avenue in the east.

Figure E2 shows the proposed layout of six buildings and other related facilities located in the northwest corner of the site. The site layout includes approximately 400,000 square feet for light industrial uses and 100,000 square feet for commercial uses. The site plan also shows supporting uses such as parking lots and wastewater treatment facilities.

Site Access

The main project access is from the south side of Wilfred Avenue, where an existing driveway aligns with Primrose Avenue. This approach is assumed to operate as a full movement driveway with no turn limitations.

A second project access from Stony Point Road is located on this plan approximately 880 feet south of the Stony Point Road/Wilfred Avenue intersection. The location is at an existing driveway access; however, due to conflicts with the northbound turn bay at the Stony Point Road/Wilfred Avenue intersection, the access is assumed to be limited to right in/out operation.

Neither access is currently signalized.

Trip Generation – Alternative E

Trip generation was based on rates contained in the Institute of Transportation Engineer's publication *Trip Generation, 7th Edition*. This manual is a standard reference used by jurisdictions throughout the country and is based on actual trip generation studies at numerous locations in areas of various populations.

Project trip generation for Alternative E is shown in **Table E1**. Additional trip generation calculations are contained in the **Appendix**. Because the project includes light industrial land uses, it is expected to include truck trips. However, no information in ITE *Trip Generation* was available regarding typical truck percentages for Land Use Code 110. Therefore, it was assumed that the trucks associated with the light industrial component of the project would be 10 percent of the total project traffic during the peak hour at the site. It should be noted that depending on the intersection location, the

overall truck percentage is lower as project truck trips mix with other background traffic. Thus, the percentage of truck traffic diminishes away from the project site.

Sometimes developments attract trips that are already on the road that stop as they pass by the site. These are not new vehicle trips but are considered to be pass-by trips. Thus, a portion of the commercial trips will be attracted from Stony Point Road and Wilfred Avenue as they pass from their origin to their ultimate destination.

A pass-by reduction was applied to the project trip generation to determine the net new trips expected to be produced by the industrial and commercial center. Pass-by factors were derived from the Institute of Transportation Engineers *Trip Generation Handbook*. It should be noted that pass-by trips do not typically occur with industrial uses; therefore, pass-by rates were only applied to the commercial uses.

As seen in the table the project is expected to generate 471 new trips in the AM and 621 new trips in the PM peak hour. Although project trip generation was prepared for daily, AM, and PM periods, only the weekday PM traffic conditions were evaluated in this report because it represents the time period where the project will contribute to the greatest amount of congestion and potential mitigation. In addition, only PM peak hour future year traffic forecast data was available from the City of Rohnert Park to complete a cumulative traffic analysis of the proposed industrial and commercial development.

Table E 1 – Alternative E Project Trip Generation

LAND USE	Trips						
	Daily	AM Peak Hour			PM Peak Hour		
	Total	Entering	Exiting	Total	Entering	Exiting	Total
Light Industrial 400,000 s.f.	2,788	324	44	368	47	345	392
Commercial 100,000 s.f.	4,294	63	40	103	180	195	375
Subtotal	7,082	387	84	471	227	540	767
Commercial Pass-by Reduction	N/A	N/A	N/A	N/A	-70	-76	-146
Net New Vehicle Trips	7,082	387	84	471	157	464	621

Project Trip Distribution and Assignment

Based on the factors discussed in the General Project Information section above it was determined that approximately 30% of the project traffic would be distributed to destinations north of the site, with 20% directed to the Rohnert Park area, and the remaining 50% distributed south of the site. The project traffic distribution is shown in **Figure E3** and **Figure E4**. **Figure E5** illustrates project traffic assigned to the study

intersections based on the assumed trip distribution. As seen in **Figure E5**, most of the project traffic is expected to come from the freeway therefore it was assumed that the majority of traffic would use Primrose Avenue because of its closer proximity to the freeway. As noted in the distribution, some traffic leaving the project site is expected to avoid congestion at Wilfred Avenue and Stony Point Road by using Millbrae Avenue.

Near-Term Plus Project Traffic Volumes

Near-term 2008 traffic volumes were combined with vehicle trips expected to be generated by the industrial and commercial project. **Figure E6** illustrates the combined near-term turning movement volumes at the study intersections.

Long -Term Plus Project Traffic Volumes

Long-term 2020 traffic volumes were combined with vehicle trips expected to be generated by the industrial and commercial project. **Figure E7** illustrates the combined long-term turning movement volumes at the study intersections.

Alternative E LOS Conditions and Impacts at Intersections

Traffic operations were evaluated under the following development conditions:

- Near-term conditions with Alternative E (year 2008)
- Long-term Cumulative conditions with Alternative E (year 2020)

Results of the analysis are presented in **Table E2**. (Results shown as bold in the table do not meet operational standards.) The signal control is listed as TS for a signalized intersection and TWSC for a two-way stop-controlled intersection. Two-way stop-controlled (TWSC) intersections maybe operate acceptably overall but only the worst approach is reported in the table. The overall level of service is reported for signalized intersections. Additional detail is provided in the **Appendix**. As shown in the results, the following intersections and approaches will fail to meet acceptable level of service thresholds based on established significance criteria and with the addition of project-related traffic.

2008 Results

- Stony Point Road/Wilfred Avenue
- Labath Avenue/Wilfred Avenue
- Dowdell Avenue/Wilfred Avenue
- Redwood Drive/Wilfred Avenue
- Rohnert Park Expressway/Redwood Drive
- Millbrae Avenue/Stony Point Road

Table E 2 – Alternative E Levels of Service

	Intersection	Criteria	Signal Control	2005		2008				2020			
				Existing		Base (w/o Proj.)		With Project		Base (w/o Proj.)		With Project	
				LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
1	Stony Point Rd/ Wilfred Ave	D	TWSC	F	109.1	F	238.0	F	967.9	F	401.6	F	OVRFL
2	Primrose Ave/ Wilfred Ave	D	TWSC	A	9.4	B	11.3	D	26.2	B	12.4	E	38.8
3	Whistler Ave/ Wilfred Ave	D	TWSC	A	9.4	B	11.3	C	16.1	B	12.4	C	18.1
4	Langer Ave/Wilfred Ave	D	TWSC	A	9.4	B	11.3	C	16.0	B	12.4	C	18.1
5	Labath Ave/Wilfred Ave	D	TWSC	A	9.1	E	48.3	F	OVRFL	F	491.5	F	690.8
6	Dowdell Ave/Wilfred Ave	D	TWSC	A	9.1	F	333.5	F	OVRFL	F	OVRFL	F	OVRFL
7	Redwood Dr/Wilfred Ave	D	TS	C	28.1	D	37.1	F	117.4	F	87.9	F	364.3
8	Redwood Dr/ Commerce Blvd	C	TS	D	46.5	C	26.6	C	26.6	-	-	-	-
9	Wilfred Ave/ US-101 SB Ramps	D	TS	-	-	C	22.5	C	32.5	C	33.2	D	39.9
10	Golf Course Dr/ Commerce Blvd	D	TS	E	61.7	D	44.0	D	51.0	F	96.5	F	113.8
11	Golf Course Dr/ Roberts Lake Rd	C	TS	B	18.4	B	17.0	B	18.7	B	10.9	B	10.9
12	Commerce Blvd/ US-101 NB Ramps	D	TS	C	28.7	C	34.9	D	43.4	E	69.8	F	89.0
13	Project Driveway/ Stony Point Rd	D	TWSC	A	0.0	A	0.0	C	17.1	A	0.0	C	15.9
14	Business Park Dr/ Labath Ave	D	-	-	-	-	-	-	-	-	-	-	-
15	Business Park Dr/ Redwood Dr	D	TWSC	C	23.4	D	26.5	D	26.5	C	16.5	C	16.5
16	Rohnert Park Expwy/ Stony Point Rd	D	TS	C	25.2	C	24.0	C	27.1	C	22.1	C	24.8
17	Rohnert Park Expwy/ Labath Ave	C	TS	C	27.5	C	33.1	C	33.6	C	33.0	C	33.4
18	Rohnert Park Expwy/ Redwood Dr	C	TS	C	33.4	D	35.6	D	44.4	D	36.0	D	42.1
19	Rohnert Park Expwy/ US-101 SB Ramps	D	TS	C	23.2	C	23.2	C	24.6	C	24.5	C	24.6
20	Rohnert Park Expwy/ US-101 NB Ramps	D	TS	B	14.9	B	17.6	B	16.5	B	17.1	B	17.7
21	Rohnert Park Expwy/ Commerce Blvd	C	TS	C	31.5	C	33.9	C	34.0	C	34.9	D	35.1
22	Gravenstein Hwy/ Stony Point Rd	D	TS	C	34.7	C	31.5	D	38.0	D	39.9	D	40.8
23	Gravenstein Hwy/ Redwood Dr	D	TS	C	29.5	C	27.8	C	33.0	C	34.6	D	38.0
24	Gravenstein Hwy/ US-101 SB Ramps	D	TS	C	21.0	B	17.8	C	21.0	B	17.0	C	20.2
25	Gravenstein Hwy/ US-101 NB Off-Ramp	D	TS	B	16.2	B	13.5	B	17.8	B	18.7	B	19.3
26	Millbrae Ave/ Stony Point Rd	D	TWSC	E	38.3	E	38.2	E	42.2	F	70.6	F	388.8
27	Millbrae Ave/ Primrose Ave	D	TWSC	B	11.1	B	11.4	B	11.4	B	12.4	B	12.4
28	Millbrae Ave/ Whistler Ave	D	TWSC	B	11.3	B	11.5	B	11.5	B	12.4	B	12.4
29	Millbrae Ave/ Langner Ave	D	TWSC	A	9.6	A	9.9	A	9.9	B	11.2	B	11.2
30	Millbrae Ave/ Labath Ave	D	TWSC	B	10.8	B	11.2	B	11.2	B	13.5	B	13.5
31	Millbrae Ave/ Dowdell Ave	D	TWSC	B	11.2	B	11.3	B	11.3	B	11.6	B	11.6

2020 Results

- Stony Point Road/Wilfred Avenue
- Primrose Avenue/Wilfred Avenue
- Labath Avenue/Wilfred Avenue
- Dowdell Avenue/Wilfred Avenue
- Redwood Drive/Wilfred Avenue
- Golf Course Drive/Commerce Boulevard
- Commerce Boulevard/US 101-NB Ramps
- Rohnert Park Expressway/Redwood Drive
- Millbrae Avenue/Stony Point Road

Alternative E Traffic Signal Warrant Analysis

Alternative E, near-term and long-term, traffic volumes at unsignalized study intersections were compared against peak hour warrant in the *2003 Manual on Uniform Traffic Control Devices (MUTCD)* and the *California Supplement*.

Results of the analysis showed that the following intersections will satisfy traffic signal Warrant #3 by the year 2008 and 2020.

- Stony Point Road/Wilfred Avenue (2008 and 2020)
- Primrose Avenue/Wilfred Avenue (2008 and 2020)
- Labath Avenue/Wilfred Avenue (2008 and 2020)
- Dowdell Avenue/Wilfred Avenue (2008 and 2020)
- Millbrae Avenue/Stony Point Road (2008 and 2020)

Other warrants such as for minimum vehicle volumes, interruption of continuous traffic, and traffic progression were not evaluated because they generally require higher traffic volumes to be satisfied. Accident history and school areas were also not evaluated based on the results of field observations, which noted that neither of these warrant thresholds was likely to be met. A copy of the analysis summary for Warrant #3 is included in the **Appendix**.

Alternative E LOS Conditions and Impacts on Freeway and Ramps

Project trips generated by the proposed Alternative E industrial and commercial development were added to the year 2008 and 2020 forecast freeway volumes.

Traffic analyses were completed to evaluate the operation of the study freeway segments and ramps in the year 2008 and 2020, with the addition on the industrial and commercial uses. Freeway segment analyses were limited to the mix-use travel lanes which are expected to have significantly more congestion than the future HOV lanes.



Results of the analyses are presented in **Table E3**. (Results shown as bold in the table do not meet operational standards.) As shown in the table, project traffic will add to the background congestion of the freeway. Significant congestion is expected with the project; however the congestion is reduced as a result of the different land use.

Potential Conflicts with Special Event Traffic

Potential conflicts with special event traffic from nearby performing arts venues will not occur under this Alternative due to the arrival and departure patterns associated with this type of land use. Periods of heavy traffic for the business park will not coincide with those of the performance venues.



Table E 3 – Alternative E Freeway Levels of Service

US-101 Section/Ramp	Criteria		Existing		2008		2008 + Alt E		2020		2020 + Alt E		
	LOS	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)
Northbound													
US-101 South of Gravenstein Highway (NB)	E	C	22.2	C	19.1	C	19.6	C	25.6	D	26.4	D	26.4
Gravenstein Highway NB Off-Ramp	E	D	30.8	C	27.4	C	28.0	D	34.1	D	34.8	D	34.8
Gravenstein Highway NB On-Ramp	E	D	34.5	D	29.5	D	30.0	E	36.1	E	36.7	E	36.7
US-101 Between Gravenstein Highway and Rohnert Park Expressway (NB)	E	D	28.1	C	23.5	C	23.9	D	32.3	D	37.6	D	37.6
Rohnert Park Expressway NB Off-Ramp	E	D	33.6	D	28.8	D	29.3	E	37.1	E	37.6	E	37.6
Rohnert Park Expressway NB On-Ramp (Loop Ramp)	E	D	32.1	C	21.8	D	34.0	C	23.2	E	36.2	E	36.2
Rohnert Park Expressway NB On-Ramp	E	D	32.5	C	22.1	C	22.5	D	29.0	D	29.5	D	29.5
US-101 Between Wilfred Avenue and Wilfred Avenue (NB)	E	D	28.9	C	22.1	C	22.5	D	29.0	D	29.5	D	29.5
Wilfred Avenue NB Off-Ramp	E	E	35.4	C	22.1	C	22.5	D	29.0	D	29.5	D	29.5
Wilfred Avenue NB On-Ramp	E	F	42.0	D	30.3	D	31.9	E	40.4	E	42.1	E	42.1
US-101 Between Wilfred Avenue and Santa Rosa Avenue (NB)	E	D	26.7	D	30.3	D	31.9	E	40.4	E	42.1	E	42.1
Santa Rosa Avenue NB Off-Ramp	E	E	37.2	D	30.3	D	31.9	E	40.4	E	42.1	E	42.1
US-101 North of Santa Rosa Avenue (NB)	E	C	20.3	C	22.0	C	22.8	D	29.7	F	47.7	F	47.7
Southbound													
US-101 North of Santa Rosa Avenue (SB)	E	C	22.9	C	24.1	C	24.4	D	28.5	D	28.8	D	28.8
Santa Rosa Avenue SB On-Ramp	E	D	31.2	D	32.7	D	33.1	F	-	F	-	F	-
US-101 Between Santa Rosa Avenue and Wilfred Avenue (SB)	E	D	31.5	D	32.7	D	33.1	F	-	F	-	F	-
Wilfred Avenue SB Off-Ramp	E	E	38.0	E	38.8	E	39.1	F	44.8	F	45.1	F	45.1
Wilfred Avenue SB On-Ramp	E	D	33.7	D	33.4	E	38.5	E	39.9	F	43.3	F	43.3
US-101 Between Rohnert Park Expressway and Wilfred Avenue (SB)	E	E	35.2	D	33.4	E	38.5	E	39.9	F	43.3	F	43.3
Rohnert Park Expressway SB Off-Ramp	E	E	38.0	D	33.4	E	38.5	E	39.9	F	43.3	F	43.3
Rohnert Park Expressway SB On-Ramp (Loop Ramp)	E	E	36.0	D	30.9	D	32.0	E	38.5	F	39.9	F	39.9
Rohnert Park Expressway SB On-Ramp	E	E	35.1	D	30.1	D	31.4	F	37.5	F	39.0	F	39.0
US-101 Between Rohnert Park Expressway and Gravenstein Highway (SB)	E	D	27.1	C	22.3	C	23.6	E	36.6	E	40.4	E	40.4
Gravenstein Highway SB Off-Ramp	E	D	33.9	D	29.2	D	30.6	F	40.3	F	42.0	F	42.0
Gravenstein Highway SB On-Ramp	E	D	33.7	D	32.1	D	33.7	F	42.3	F	44.2	F	44.2
US-101 South of Gravenstein Highway (SB)	E	C	24.7	C	21.8	C	23.4	D	32.0	E	35.6	E	35.6

Potential Effects on Intersection Safety

Traffic volumes generated by the project were reviewed in consideration of existing intersection collision history and the potential for increased accidents. According to collision data, accidents involving bicyclist and pedestrians are very low. Many intersections did not report any collisions of this type during the survey period. This suggests that bicycle and pedestrian volumes are relatively low and study intersections have minimal safety hazards for individuals biking or walking. Although the project will introduce increased traffic volumes at some intersections, bicyclists and pedestrians are expected to be able to travel through study intersections with similar levels of safety. Historically casinos do not attract a significant amount of bicycle and pedestrian traffic. . Therefore, the expected amount of pedestrian and bicycle traffic is nominal and a significant increase in bicycle and pedestrian accidents is unlikely.

The potential for increased collisions between motorized vehicles was also considered. Collision frequency and severity are a function of many complex factors that vary depending on the location and type of intersection or roadway segment. Factors include traffic control such as signals or stop signs, lane and shoulder widths, grades, driveway densities, roadside hazards or obstacles, presence of left and right turn lanes, sight distance, congestion, and others.

Because of the number and interrelationships of the variables, accurate crash prediction is difficult. However, the proposed casino and hotel project will increase roadway congestion, a factor which could result in an increase in traffic collisions if left unmitigated. Other factors are expected to remain unaffected.

As noted previously, the purpose of this study is to address the traffic and transportation effects of the proposed casino and hotel development. This includes mitigation improvements to restore traffic operations to levels within acceptable standards or to levels as good as or better than without the casino/hotel project. Any potential increases in accidents due to project-related traffic would be offset by the implementation of roadway improvements included as mitigation. Therefore, if mitigations are implemented as proposed in this report, no significant increase in daytime or nighttime collisions is expected.

Potential Effects on Transit

The effect of the industrial/commercial uses on the proposed Sonoma-Marín Area Rail Transit (SMART) was also evaluated. It was determined that because the SMART system will operate during the AM and PM commute hours, some project employees may use the service, if a shuttle is provided between the SMART station and the project. The exact number is unknown but is not anticipated to be greater than for conventional transit. Therefore, the impact of this alternative on the SMART system is determined to be less than significant.

Queuing Summary

As congestion increases it is common for traffic at signals and stop signs to form lines of stopped (or queued) vehicles. Queue lengths were determined for each lane and measure the distance that vehicles will backup in each direction approaching an intersection. The 95th percentile queue is calculated by using 95th percentile traffic to account for fluctuations in traffic and represents a condition where 95 percent of the time during the peak period, traffic volumes and related queuing will be at, or less, than determined by the analysis. Average queuing is generally less. Ninety-fifth percentile queuing was checked under the various future year development conditions and in consideration of the planned intersection and signal timing improvements. A typical vehicle length of 25 feet is used in the queuing analysis. A summary of the queuing results can be seen in **Table E4**. The results indicate dedicated turn lanes where queuing may exceed their storage limits. It should be noted that some variations in intersection queuing between scenarios is a result of planned intersection and signal timing improvements.

Most queuing impacts can be mitigated and are included in the mitigations section. There are some significant and unavoidable queuing impacts due to existing and/or proposed right-of-way at the following location:

- Redwood Drive/Wilfred Avenue

Table E 4 – Alternative E Queuing Summary

Intersection	Turning Movement	Bay Length	Queue Length		Intersection	Turning Movement	Bay Length	Queue Length	
			2008	2020				2008	2020
1 Stony Point Road and Wilfred Avenue	EBL				16 Stony Point Road and Rohnert Park Expy	EBL			
	EBR					EBR			
	WBL					WBL			
	WBR	35	30	40		WBR	500	275	225
	NBL	150	<25	<25		NBL			
	NBR					NBR	450	150	125
4 Langner Avenue and Wilfred Avenue	SBL	150	<25	<25	SBL	700	250	250	
	SBR				SBR				
	EBL				EBL	160	25	50	
	EBR				EBR	200	25	25	
	WBL	150		<25	WBL	250	150	75	
	WBR				WBR				
5 Labath Avenue and Wilfred Avenue	NBL				17 Labath Avenue and Rohnert Park Expy	NBL	130	25	25
	NBR					NBR	130	75	75
	SBL					SBL	100	225	150
	SBR					SBR			
	EBL	150		<25		EBL	200	475	400
	EBR					EBR	200	100	125
6 Dowdell Avenue and Wilfred Avenue	WBL	150		175	18 Redwood Drive and Rohnert Park Expy	WBL	450	150	150
	WBR					WBR	160	250	225
	NBL					NBL	250	125	150
	NBR					NBR	250	175	225
	SBL					SBL	250	175	150
	SBR					SBR	175	200	175
7 Redwood Drive and Wilfred Avenue	EBL	150		<25	19 SB US 101 Ramps and Rohnert Park Expy	EBL			
	EBR					EBR			
	WBL	150		175		WBL	275	200	300
	WBR					WBR			
	NBL					NBL			
	NBR					NBR			
8 Redwood Drive and Commerce Boulevard	SBL				20 NB US 101 Ramps and Rohnert Park Expy	SBL	400	325	225
	SBR					SBR	400	250	350
	EBL					EBL	190	225	200
	EBR					EBR			
	WBL					WBL			
	WBR					WBR			
9 Wilfred Avenue and SB US 101 Ramps	NBL	150	525	1350	21 Commerce Blvd and Rohnert Park Expy	NBL	225	200	225
	NBR	100	750	600		NBR			
	SBL	275	650	425		SBL			
	SBR					SBR			
	EBL	75	25			EBL	250	100	100
	EBR	75	175			EBR	240	375	350
10 Golf Course Drive and Commerce Blvd	WBL	100	25		22 Stony Point Road and Gravenstein Hwy	WBL	200	150	175
	WBR					WBR			
	NBL	150	200			NBL	250	175	150
	NBR	150	<25			NBR	175	225	225
	SBL	200	50			SBL	150	75	200
	SBR					SBR	150	175	175
11 Roberts Lake Drive and Golf Course Drive	EBL				23 Redwood Road and Gravenstein Hwy	EBL	250	150	150
	EBR					EBR			
	WBL	300	175	100		WBL	500	150	175
	WBR					WBR	150	75	75
	NBL					NBL	550	300	325
	NBR					NBR	675	50	75
12 Commerce Blvd and NB US 101 Ramps	SBL	250	525	400	24 Gravenstein Hwy and SB US 101 Ramps	SBL	500	150	175
	SBR					SBR	625	175	175
	EBL					EBL	225	125	125
	EBR					EBR			
	WBL	150	800	800		WBL	150	75	75
	WBR					WBR	80	275	300
13 Business Park Drive and Redwood Drive	NBL	150	425	375	25 Gravenstein Hwy and NB US 101 Ramps	NBL	50	50	50
	NBR					NBR			
	SBL					SBL	225	375	400
	SBR					SBR			
	EBL	80	125	275		EBL			
	EBR					EBR	50	250	225
14 Stony Point Road and Millbrae Avenue	WBL				26 Stony Point Road and Millbrae Avenue	WBL			
	WBR					WBR	120	40	100
	NBL					NBL	505	<25	<25
	NBR					NBR	120	<25	<25
	SBL	200	75	125		SBL	490	<25	<25
	SBR					SBR			
15 Commerce Blvd and NB US 101 Ramps	EBL	250	325	375	27 Gravenstein Hwy and NB US 101 Ramps	EBL			
	EBR	250	25	50		EBR			
	WBL					WBL			
	WBR					WBR			
	NBL	200	550	550		NBL			
	NBR					NBR	275	175	175
16 Stony Point Road and Millbrae Avenue	SBL	100	<25	<25	28 Gravenstein Hwy and NB US 101 Ramps	SBL			
	SBR	175	575	950		SBR			
	EBL	225	95	40		EBL			
	EBR					EBR			
	WBL					WBL			
	WBR					WBR			

Alternative E Mitigation

Intersections with levels of service below established thresholds were investigated to determine the role of the Alternative E traffic in the projected operating conditions at those intersections. The evaluation disclosed that the following improvements as shown in **Table E5** are needed in the near-term (2008) and long-term (2020).

The basis of the Alternative E mitigations is the assumption that intersection #13, the Project Driveway at Stony Point Road, should be relocated further south along Stony Point Road and be signalized so that it can function as a full movement access. This change permits more project traffic to conveniently arrive and exit from the site and use the Rohnert Park Expressway interchange, thus relieving some the traffic pressure through the Wilfred Avenue interchange.

In the event that intersection #13 cannot be relocated and signalized as discussed above, additional mitigation improvements will be needed, particularly at intersections surrounding the Wilfred Avenue interchange.

Table E6 summarizes the expected levels of service with the proposed mitigation. As mentioned previously, the signal control is listed as TS for a signalized intersection and TWSC for a two-way stop-controlled intersection. Two-way stop-controlled (TWSC) intersections may operate acceptably overall but only the worst approach is reported in the table. The overall level of service is reported for signalized intersections.

Figures E8 and E9 illustrate the mitigated lane geometry and traffic control.

A single asterisk in the table denotes an intersection that operates at an acceptable level of service and does not require mitigation, but a mitigated level of service and delay are provided for reference as a result of the mitigation to signalize the Project Driveway/ Stony Point Road which changes traffic patterns at some intersections. A double asterisk indicates an intersection where the delay increases as a result of the mitigation to signalize the Project Driveway/Stony Point Road intersection.

Table E 5 – Alternative E Summary of Mitigations

Period	#	Intersection	Mitigation	Requires ROW?	Reason
2008	1	Stony Point Rd/ Wilfred Ave	• Signalize	No	Capacity
	2	Primrose Ave/ Wilfred Ave	No mitigation necessary	-	-
	3	Whistler Ave/ Wilfred Ave	No mitigation necessary	-	-
	4	Langer Ave/ Wilfred Ave	No mitigation necessary	-	-
	5	Labath Ave/ Wilfred Ave	• Signalize	No	Capacity
	6	Dowdell Ave/ Wilfred Ave	• Signalize	No	Capacity
	7	Redwood Dr/ Wilfred Ave	• Add EB right and change EB through-right to through • Add WB left and change WB left-through to through • Change phasing east-west to protected & permitted from split	Yes Yes No	Capacity Capacity Capacity
	8	Redwood Dr/ Commerce Blvd	No mitigation necessary	-	-
	9	Wilfred Ave/ US-101 SB Ramps	• Extend SB left turn bay to 400 feet	Yes	Capacity
	10	Golf Course Dr/ Commerce Blvd	• Relocate the Commerce Blvd/Golf Course Dr intersection to the east and relocate the Roberts Lake Rd/Golf Course Dr intersection to the west closer to the railroad crossing. The two intersections on either side of the railroad crossing will operate as one intersection. The relocation will require the purchase of ROW on the south side of Golf Course Dr.	Yes	Capacity
	11	Golf Course Dr/ Roberts Lake Rd	• Relocate the Commerce Blvd/Golf Course Dr intersection to the east and relocate the Roberts Lake Rd/Golf Course Dr intersection to the west closer to the railroad crossing. The two intersections on either side of the railroad crossing will operate as one intersection. The relocation will require the purchase of ROW on the south side of Golf Course Dr.	Yes	Capacity
	12	Commerce Blvd/ US-101 NB Ramps	• Change SB through to through-right. Will require a two lane on-ramp with one lane as an auxiliary lane between the Wilfred Avenue and Santa Rosa Avenue interchanges. May require additional bridge structure widening over Wilfred Avenue as well as over the Northwest Pacific Railroad tracks.	Yes	Queue
	13	Project Driveway/ Stony Point Rd	• Signalize • Add NB right and change NB through-right to through • Add WB left out of project driveway	No Tribe land Tribe land	Capacity Capacity Capacity
	14	Business Park Dr/ Labath Ave	Alternative A intersection	-	-
	15	Business Park Dr/ Redwood Dr	No mitigation necessary	-	-
	16	Rohnert Park Expwy/ Stony Point Rd	• Extend WB right turn bay to 275 feet	Tribe land	Queue
	17	Rohnert Park Expwy/ Labath Ave	• Extend SB left turn bay to 250 feet	Yes	Queue
	18	Rohnert Park Expwy/ Redwood Dr	• Optimize signal timing	No	Capacity
	19	Rohnert Park Expwy/ US-101 SB Ramps	No mitigation necessary	-	-
	20	Rohnert Park Expwy/ US-101 NB Ramps	No mitigation necessary	-	-
	21	Rohnert Park Expwy/ Commerce Blvd	No mitigation necessary	-	-
	22	Gravenstein Hwy/ Stony Point Rd	No mitigation necessary	-	-
	23	Gravenstein Hwy/ Redwood Dr	• Optimize signal timing • Extend SB left turn bay to 375 feet	No Yes	Queue Queue
	24	Gravenstein Hwy/ US-101 SB Ramps	No mitigation necessary	-	-
	25	Gravenstein Hwy/ US-101 NB Off-Ramp	No mitigation necessary	-	-
	26	Millbrae Ave/ Stony Point Rd	• Signalize	No	Capacity
	27	Millbrae Ave/ Primrose Ave	No mitigation necessary	-	-
	28	Millbrae Ave/ Whistler Ave	No mitigation necessary	-	-
	29	Millbrae Ave/ Langner Ave	No mitigation necessary	-	-
	30	Millbrae Ave/ Labath Ave	No mitigation necessary	-	-
	31	Millbrae Ave/ Dowdell Ave	No mitigation necessary	-	-



Period	#	Intersection	Mitigation	Requires ROW?	Reason
2020	1	Stony Point Rd/ Wilfred Ave	• Signalize	No	Capacity
	2	Primrose Ave/ Wilfred Ave	• Signalize	No	Capacity
	3	Whistler Ave/ Wilfred Ave	No mitigation necessary	-	-
	4	Langer Ave/ Wilfred Ave	No mitigation necessary	-	-
	5	Labath Ave/ Wilfred Ave	• Signalize • Add NB right and change NB all shared to through-left • Add a SB left and change SB all shared to through-right	No Yes Yes	Capacity Capacity Capacity
	6	Dowdell Ave/ Wilfred Ave	• Signalize • Add SB left and change SB all shared to through-right • Add WB left • Add 2 NB rights and change NB all shared to through-left	No Yes Yes Yes	Capacity Capacity Capacity Capacity
	7	Redwood Dr/ Wilfred Ave	• Add WB through • Add WB left and change WB left-through to through • Change phasing east-west to protected from split	Yes Yes No	Capacity Capacity Capacity
	8	Redwood Dr/ Commerce Blvd	Modified Intersection (not analyzed)	-	-
	9	Wilfred Ave/ US-101 SB Ramps	• Extend SB left turn bay to 400 feet	Yes	Capacity
	10	Golf Course Dr/ Commerce Blvd	• Relocate the Commerce Blvd/Golf Course Dr intersection to the east and relocate the Roberts Lake Rd/Golf Course Dr intersection to the west closer to the railroad crossing. The two intersections on either side of the railroad crossing will operate as one intersection. The relocation will require the purchase of ROW on the south side of Golf Course Dr	Yes	Capacity
	11	Golf Course Dr/ Roberts Lake Rd	• Relocate the Commerce Blvd/Golf Course Dr intersection to the east and relocate the Roberts Lake Rd/Golf Course Dr intersection to the west closer to the railroad crossing. The two intersections on either side of the railroad crossing will operate as one intersection. The relocation will require the purchase of ROW on the south side of Golf Course Dr	Yes	Capacity
	12	Commerce Blvd/ US-101 NB Ramps	• Add NB loop off-ramp that drops traffic onto WB Wilfred Ave. Will require a short tunnel section to go under the NB on-ramp and Golf Course Road as well as demolition of the existing Chevron gas station. May require a pump station. May obstruct access to the proposed SMART station from Commerce Blvd via Golf Course Dr - access will be provided from Commerce Blvd via Redwood Dr • Change SB through to through-right. Will require a two lane on-ramp with one lane as an auxiliary lane between the Wilfred Avenue and Santa Rosa Avenue interchanges. May require additional bridge structure widening over Wilfred Avenue as well as over the Northwest Pacific Railroad tracks	Yes Yes	Capacity Queue
	13	Project Driveway/ Stony Point Rd	• Signalize • Add NB right and change NB through-right to through • Add WB left out of project driveway	No Tribe land Tribe land	Capacity Capacity Capacity
	14	Business Park Dr/ Labath Ave	Alternative A intersection	-	-
	15	Business Park Dr/ Redwood Dr	No mitigation necessary	-	-
	16	Rohnert Park Expwy/ Stony Point Rd	• Extend WB right turn bay to 275 feet	Tribe land	Queue
	17	Rohnert Park Expwy/ Labath Ave	• Extend SB left turn bay to 250 feet	Yes	Queue
	18	Rohnert Park Expwy/ Redwood Dr	• Optimize signal timing	No	Capacity
	19	Rohnert Park Expwy/ US-101 SB Ramps	No mitigation necessary	-	-
	20	Rohnert Park Expwy/ US-101 NB Ramps	No mitigation necessary	-	-
	21	Rohnert Park Expwy/ Commerce Blvd	• Modify signal timing to include an EB right turn overlap phase	No	Capacity
	22	Gravenstein Hwy/ Stony Point Rd	No mitigation necessary	-	-
	23	Gravenstein Hwy/ Redwood Dr	• Extend SB left turn bay to 375 feet	Yes	Queue
	24	Gravenstein Hwy/ US-101 SB Ramps	No mitigation necessary	-	-
	25	Gravenstein Hwy/ US-101 NB Off-Ramp	No mitigation necessary	-	-
	26	Millbrae Ave/ Stony Point Rd	• Signalize	No	Capacity
	27	Millbrae Ave/ Primrose Ave	No mitigation necessary	-	-
	28	Millbrae Ave/ Whistler Ave	No mitigation necessary	-	-
	29	Millbrae Ave/ Langner Ave	No mitigation necessary	-	-
	30	Millbrae Ave/ Labath Ave	No mitigation necessary	-	-
	31	Millbrae Ave/ Dowdell Ave	No mitigation necessary	-	-

Table E 6 – Alternative E Mitigated Intersection Levels of Service

	Intersection	Criteria	Signal Control	2005		2008						2020					
				Existing		Base (w/o Proj)		With Project		Mitigated		Base (w/o Proj)		With Project		Mitigated	
				LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
1	Stony Point Rd/ Wilfred Ave	D	TWSC	F	109.1	F	238.0	F	967.9	B	166	F	401.6	F	OVRFL	C	20.5
2	Primrose Ave/ Wilfred Ave	D	TWSC	A	9.4	B	11.3	D	26.2	C	17.1	B	12.4	E	38.8	B	18.2
3	Whistler Ave/ Wilfred Ave	D	TWSC	A	9.4	B	11.3	C	16.1	C	16.1	B	12.4	C	18.1	C	18.1
4	Langer Ave/Wilfred Ave	D	TWSC	A	9.4	B	11.3	C	16.0	C	16.0	B	12.4	C	18.1	C	18.1
5	Labath Ave/Wilfred Ave	D	TWSC	A	9.1	E	48.3	F	OVRFL	B	17.9	F	491.5	F	690.8	D	35.5
6	Dowdell Ave/Wilfred Ave	D	TWSC	A	9.1	F	333.5	F	OVRFL	C	24.4	F	OVRFL	F	OVRFL	D	39.1
7	Redwood Dr/Wilfred Ave	D	TS	C	28.1	D	37.1	F	117.4	D	47.8	F	87.9	F	364.3	D	51.3
8	Redwood Dr/ Commerce Blvd	C	TS	D	46.5	C	26.6	C	26.6	C	26.6	-	-	-	-	-	-
9	Wilfred Ave/ US-101 SB Ramps	D	TS	-	-	C	22.5	C	32.5	C	32.2	C	33.2	D	39.9	D	38.9
10	Golf Course Dr/ Commerce Blvd	D	TS	E	61.7	D	44.0	D	51.0	D	37.1	F	96.5	F	113.8	D	48.1
11	Golf Course Dr/ Roberts Lake Rd	C	TS	B	18.4	B	17.0	B	18.7	D	37.1	B	10.9	B	10.9	D	49.1
12	Commerce Blvd/ US-101 NB Ramps	D	TS	C	28.7	C	34.9	D	43.4	C	29.8	E	69.8	F	89.0	C	31.7
13	Project Driveway/ Stony Point Rd	D	TWSC	A	0.0	A	0.0	C	17.1	A	6.8	A	0.0	C	15.9	A	6.8
14	Business Park Dr/ Labath Ave	D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	Business Park Dr/ Redwood Dr	D	TWSC	C	23.4	D	26.5	D	26.5	D	26.5	C	16.5	C	16.5	C	16.5
16	Rohnert Park Expwy/ Stony Point Rd	D	TS	C	25.2	C	24.0	C	27.1	C	26.8	C	22.1	C	24.8	C	24.5
17	Rohnert Park Expwy/ Labath Ave	C	TS	C	27.5	C	33.1	C	33.6	C	33.5	C	33.0	C	33.4	C	33.3
18	Rohnert Park Expwy/ Redwood Dr	C	TS	C	33.4	D	35.6	D	44.4	C	32.4	D	36.0	D	42.1	C	32.8
19	Rohnert Park Expwy/ US-101 SB Ramps	D	TS	C	23.2	C	23.2	C	24.6	C	24.4	C	24.5	C	24.6	C	24.4
20	Rohnert Park Expwy/ US-101 NB Ramps	D	TS	B	14.9	B	17.6	B	16.5	B	16.5	B	17.1	B	17.7	B	17.7
21	Rohnert Park Expwy/ Commerce Blvd	C	TS	C	31.5	C	33.9	C	34.0	C	34.0	C	34.9	D	35.1	C	33.5
22	Gravenstein Hwy/ Stony Point Rd	D	TS	C	34.7	C	31.5	D	38.0	D	38.0	D	39.9	D	40.8	D	40.8
23	Gravenstein Hwy/ Redwood Dr	D	TS	C	29.5	C	27.8	C	33.0	C	31.9	C	34.6	D	38.0	D	38.0
24	Gravenstein Hwy/ US-101 SB Ramps	D	TS	C	21.0	B	17.8	C	21.0	C	21.0	B	17.0	C	20.2	C	20.2
25	Gravenstein Hwy/ US-101 NB Off-Ramp	D	TS	B	16.2	B	13.5	B	17.8	B	17.8	B	18.7	B	19.3	B	19.3
26	Millbrae Ave/ Stony Point Rd	D	TWSC	E	38.3	E	38.2	E	42.2	C	21.3	F	70.6	F	388.8	C	21.9
27	Millbrae Ave/ Primrose Ave	D	TWSC	B	11.1	B	11.4	B	11.4	B	11.4	B	12.4	B	12.4	B	12.4
28	Millbrae Ave/ Whistler Ave	D	TWSC	B	11.3	B	11.5	B	11.5	B	11.5	B	12.4	B	12.4	B	12.4
29	Millbrae Ave/ Langner Ave	D	TWSC	A	9.6	A	9.9	A	9.9	A	9.9	B	11.2	B	11.2	B	11.2
30	Millbrae Ave/ Labath Ave	D	TWSC	B	10.8	B	11.2	B	11.2	B	11.2	B	13.5	B	13.5	B	13.5
31	Millbrae Ave/ Dowdell Ave	D	TWSC	B	11.2	B	11.3	B	11.3	B	11.3	B	11.6	B	11.6	B	11.6

Results indicate that the freeway will not meet standards with the project, even with the future construction of HOV lanes, ramp metering, and auxiliary lanes associated with the Wilfred interchange project. As mitigation the project should do the following which will result in the mitigated levels of service shown in **Table E7**:

- Adjust the ramp metering to account for the additional project traffic at the Wilfred Avenue interchange in the long-term (2020). Most metering adjustments can be minor and are not expected to have queuing effects on the local street network. However, the southbound on-ramp will require heavy metering to obtain an acceptable level of service for the freeway ramp merge area which may create a long queue backed up on the ramp.
- The project should contribute to the construction of auxiliary lanes between Rohnert Park Expressway and Gravenstein Highway (SR-116) in the long-term (2020).
- The project should contribute to the construction of the Wilfred Avenue interchange project, including HOV lanes, ramp metering, and auxiliary lanes in the near-term (2008).
- The project should contribute to the construction of an additional traffic lane in the southbound direction from Santa Rosa Avenue to Wilfred Avenue and from Gravenstein Highway (SR-116) to south of Gravenstein Highway (SR-116) in the long-term (2020).

Aside from roadway improvements to mitigate protect impacts, the industrial/commercial project should provide a shuttle that serves the two Rohnert Park transfer stations and the SMART rail station. The shuttle should run throughout the day.

Preferential carpool or vanpool spaces should also be provided at the project site to encourage ridesharing by employees.

Mitigations to reduce the impact of the construction include the implementation of a construction traffic management plan for the duration of construction of the project and training for construction delivery vehicle drivers. Construction material importation should be scheduled outside of the areawide commute peak hours. Debris along the truck route caused by trucks should be monitored daily and the roadways should be cleaned as necessary.

To help ensure adequate public safety during construction, particularly near the project site, the tribe should provide flagging when necessary in consultation with CHP, Caltrans, and the County's Sheriff's Department to assist with traffic control.



Table E 7 – Mitigated Freeway Level of Service Summary

US-101 Section/Ramp	Criteria		Existing		2008		2008 + Alt E		2020		2020 + Alt E		2020 + Alt E Mitigated	
	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)
Northbound														
US-101 South of Gravenstein Highway (NB)	E	C	C	19.1	C	19.6	C	25.6	D	26.4	D	26.4	D	26.4
Gravenstein Highway NB Off-Ramp	E	D	C	27.4	C	28.0	D	34.1	D	34.8	D	34.8	D	34.8
Gravenstein Highway NB On-Ramp	E	D	D	29.5	D	30.0	E	36.1	E	36.7	D	33.3	D	33.3
US-101 Between Gravenstein Highway and Rohnert Park Expressway (NB)	E	D	C	23.5	C	23.9	D	32.3	D	37.6	D	33.3	D	33.3
Rohnert Park Expressway NB Off-Ramp	E	D	D	28.8	D	29.3	E	37.1	E	37.6	D	33.3	D	33.3
Rohnert Park Expressway NB On-Ramp (Loop Ramp)	E	D	C	32.1	C	34.0	C	23.2	E	36.2	E	36.2	E	36.2
Rohnert Park Expressway NB On-Ramp	E	D	C	22.1	C	22.5	D	29.0	D	29.5	D	29.5	D	29.5
US-101 Between Rohnert Park Expressway and Wilfred Avenue (NB)	E	D	C	22.1	C	22.5	D	29.0	D	29.5	D	29.5	D	29.5
Wilfred Avenue NB Off-Ramp	E	E	C	22.1	C	22.5	D	29.0	D	29.5	D	29.5	D	29.5
Wilfred Avenue NB On-Ramp	E	F	D	30.3	D	31.9	E	40.4	E	42.1	E	42.1	E	42.1
US-101 Between Wilfred Avenue and Santa Rosa Avenue (NB)	E	D	D	30.3	D	31.9	E	40.4	E	42.1	E	42.1	E	42.1
Santa Rosa Avenue NB Off-Ramp	E	E	D	37.2	D	31.9	E	40.4	E	42.1	E	42.1	E	42.1
US-101 North of Santa Rosa Avenue (NB)	E	C	C	22.0	C	22.8	D	29.7	D	31.0	D	31.0	D	31.0
Southbound														
US-101 North of Santa Rosa Avenue (SB)	E	C	C	24.1	C	24.4	D	28.5	D	28.8	D	28.8	D	28.8
Santa Rosa Avenue SB On-Ramp	E	D	D	31.2	D	32.7	D	33.1	F	-	C	23.6	C	23.6
US-101 Between Santa Rosa Avenue and Wilfred Avenue (SB)	E	E	E	38.0	E	38.8	E	39.1	F	44.8	F	45.1	D	64.0
Wilfred Avenue SB Off-Ramp	E	E	D	33.7	D	33.4	E	38.5	E	39.9	F	43.3	E	42.7
Wilfred Avenue SB On-Ramp	E	E	D	33.4	D	33.4	E	38.5	E	39.9	F	43.3	E	42.7
US-101 Between Rohnert Park Expressway and Wilfred Avenue (SB)	E	E	E	38.0	D	33.4	E	38.5	E	39.9	F	43.3	E	42.7
Rohnert Park Expressway SB Off-Ramp	E	E	D	36.0	D	30.9	D	32.0	E	38.5	F	39.9	E	36.2
Rohnert Park Expressway SB On-Ramp (Loop Ramp)	E	E	D	35.1	D	30.1	D	31.4	F	37.5	F	39.0	E	36.2
Rohnert Park Expressway SB On-Ramp	E	D	C	27.1	C	22.3	C	23.6	E	36.6	E	40.4	E	36.2
US-101 Between Rohnert Park Expressway and Gravenstein Highway (SB)	E	D	D	33.9	D	29.2	D	30.6	F	40.3	F	42.0	E	36.2
Gravenstein Highway SB Off-Ramp	E	D	D	33.7	D	32.1	D	33.7	F	42.3	F	44.2	C	26.9
Gravenstein Highway SB On-Ramp	E	C	C	24.7	C	21.8	C	23.4	D	32.0	E	35.6	E	35.6
US-101 South of Gravenstein Highway (SB)	E	C	C	24.7	C	21.8	C	23.4	D	32.0	E	35.6	E	35.6

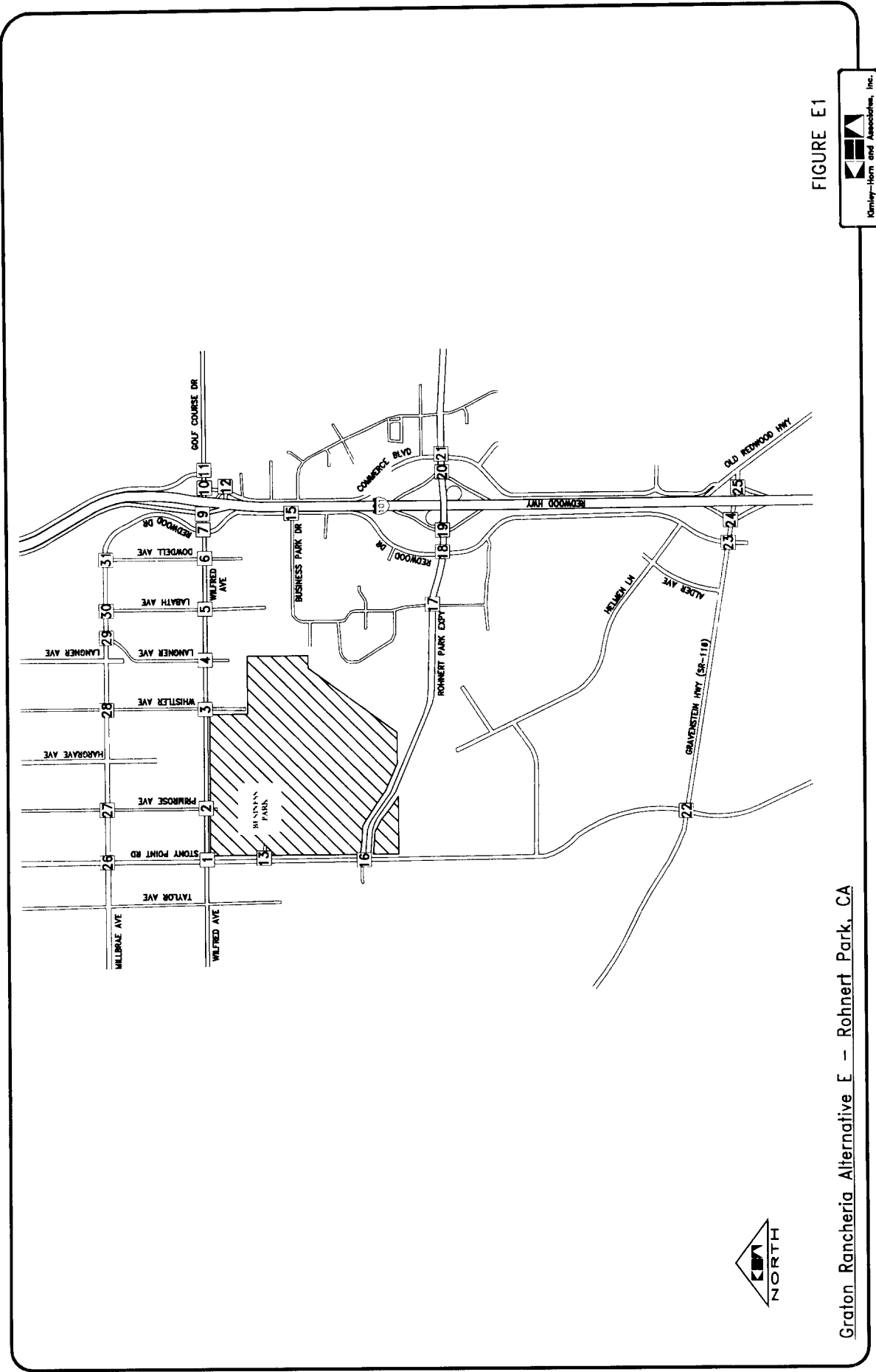


FIGURE E1

Graton Rancheria Alternative E - Rohnert Park, CA

PROJECT LOCATION



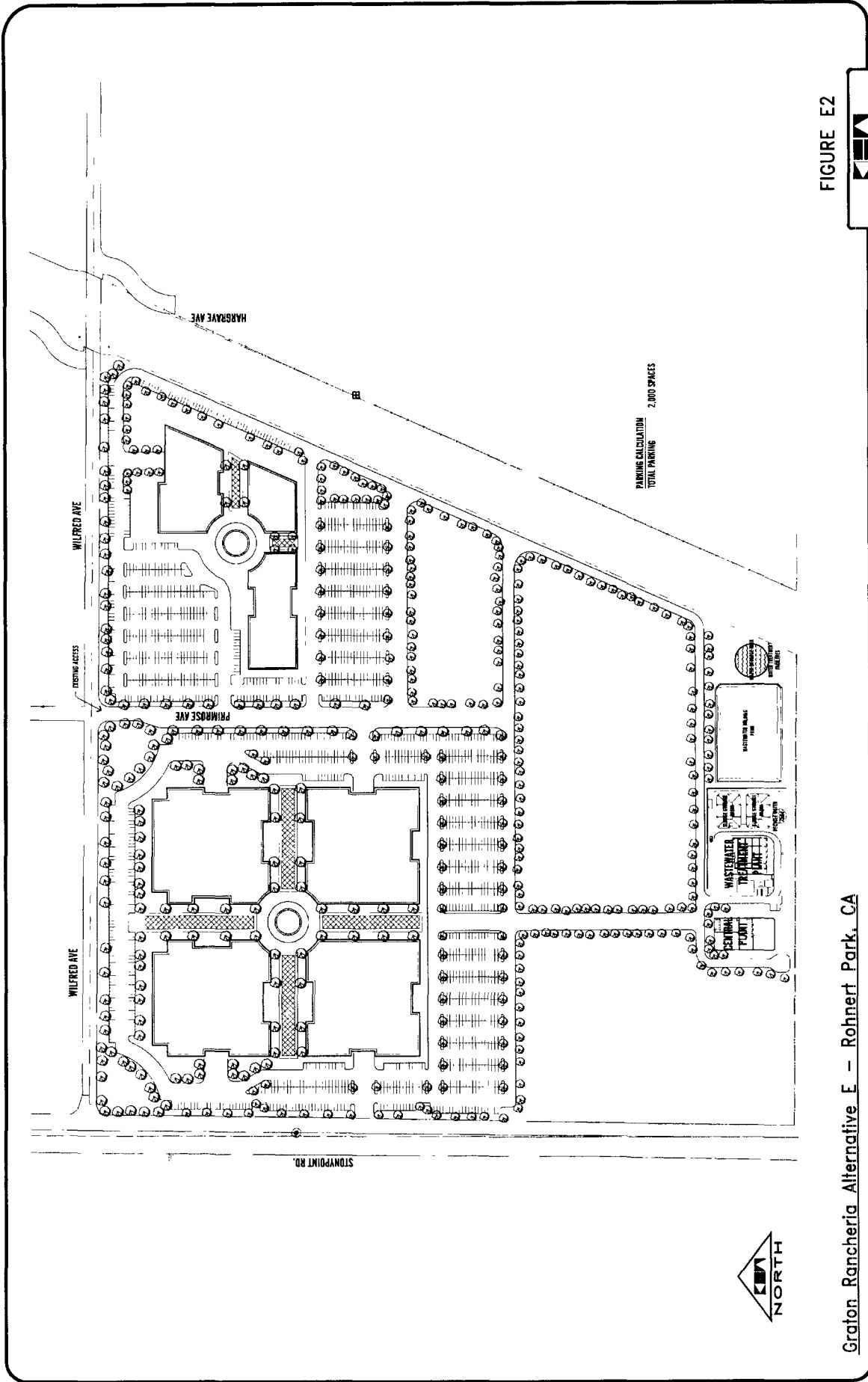


FIGURE E2



Grafton Rancheria Alternative E - Rohnert Park, CA

SITE PLAN

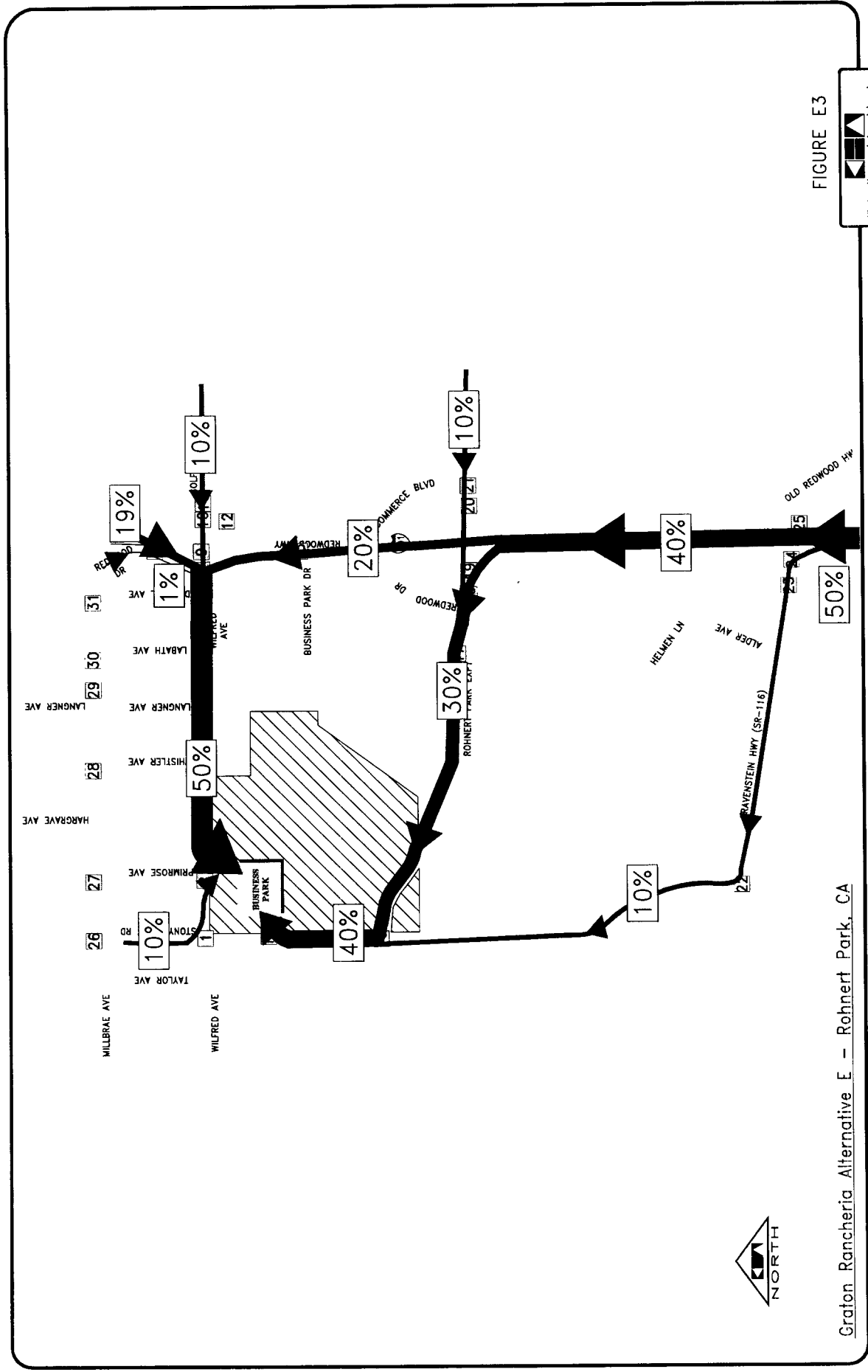


FIGURE E3



Graton Rancheria Alternative E - Rohnert Park, CA

TRIP DISTRIBUTION - IN

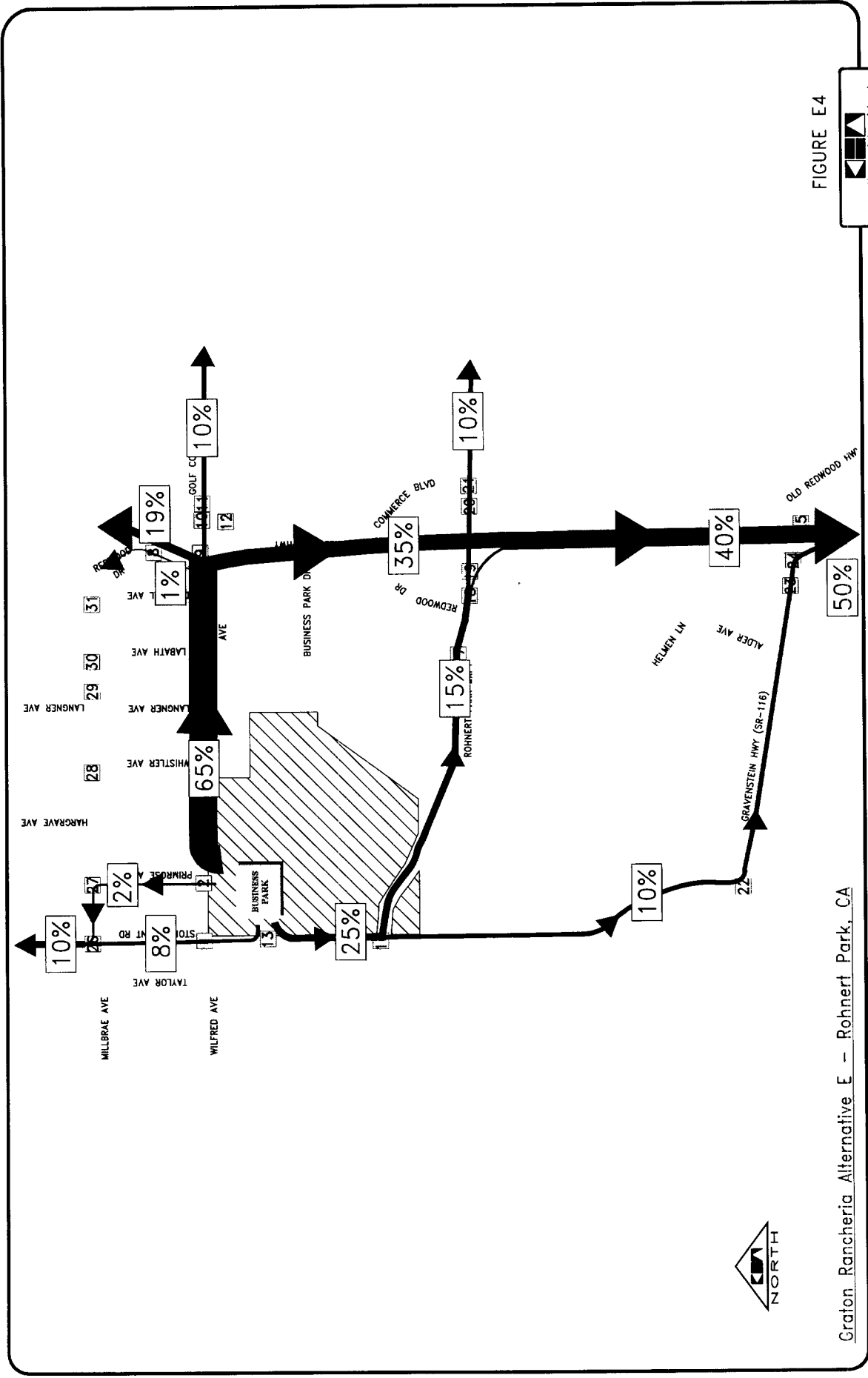


FIGURE E4



Graton Rancheria Alternative E - Rohnert Park, CA

TRIP DISTRIBUTION - OUT

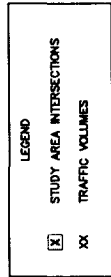
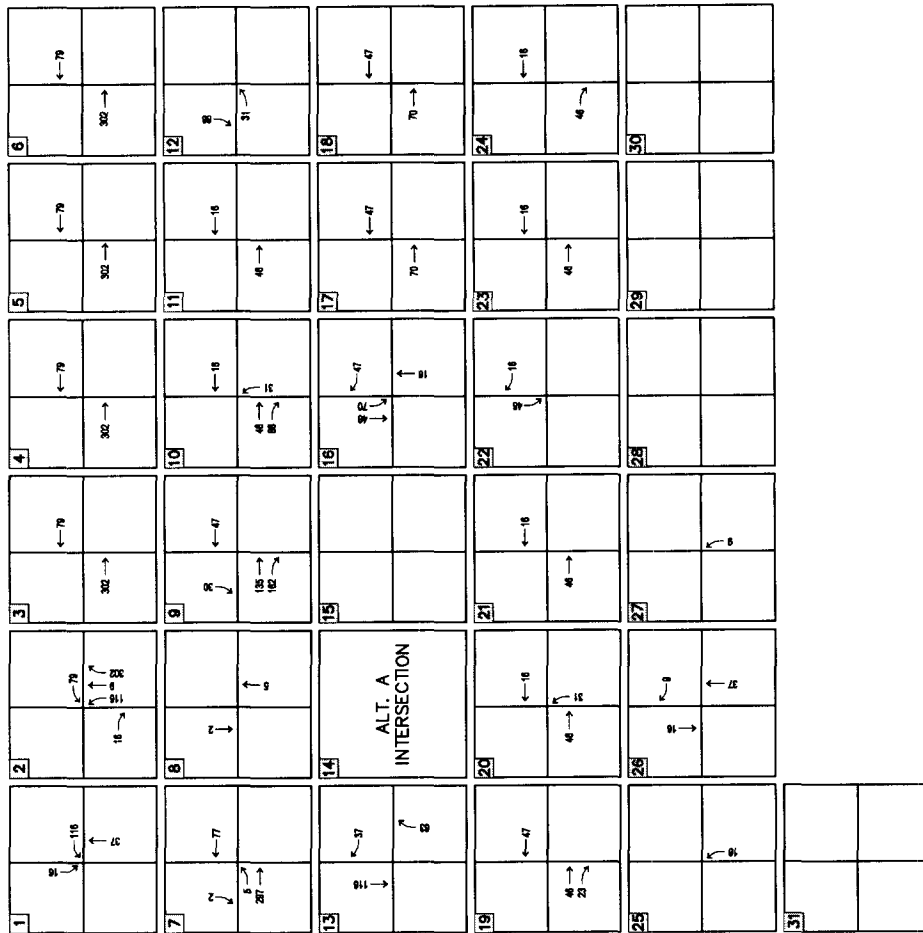
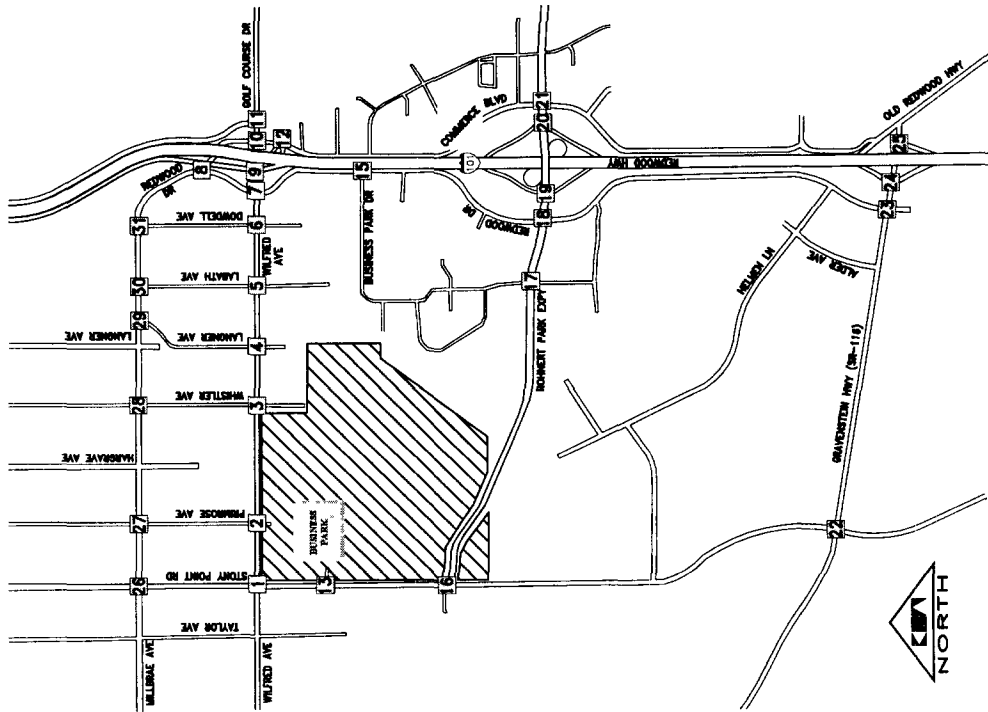
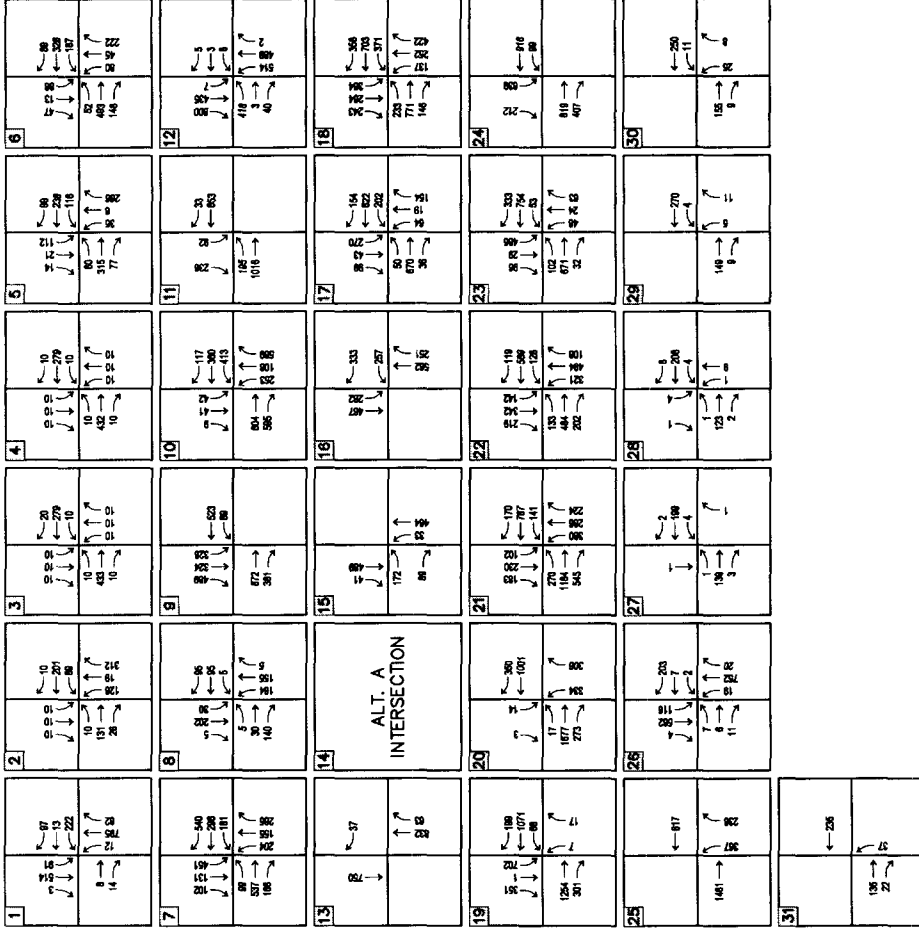


FIGURE E5



Graton Rancheria Alternative E - Rohnert Park, CA

PROJECT GENERATED PM TRAFFIC VOLUMES



LEGEND
 X STUDY AREA INTERSECTIONS
 XX TRAFFIC VOLUMES

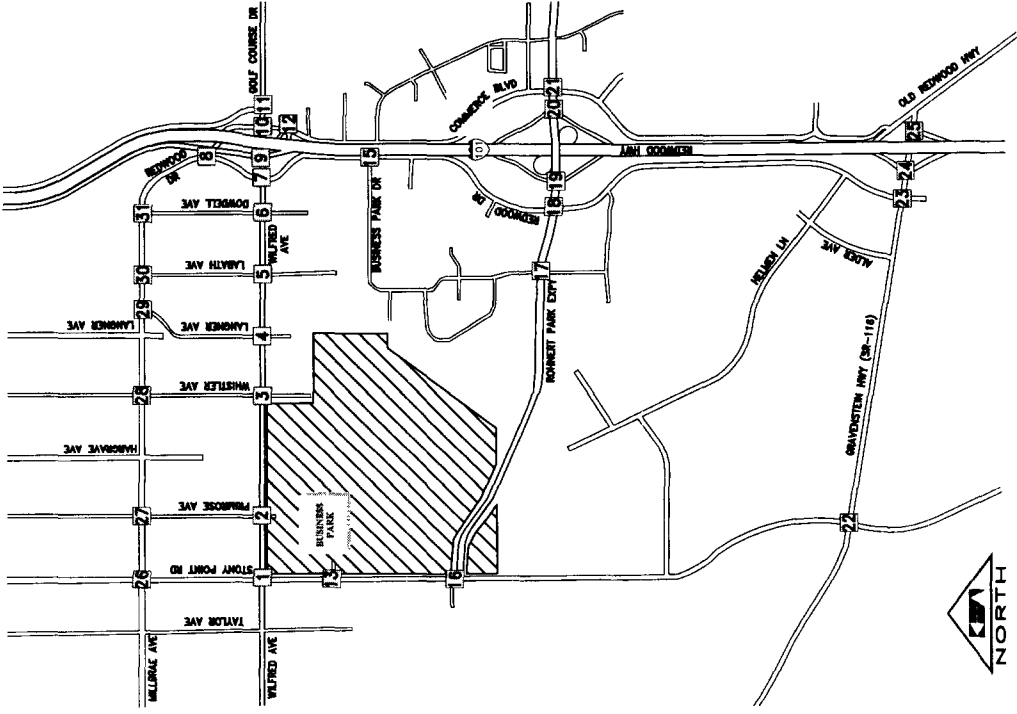
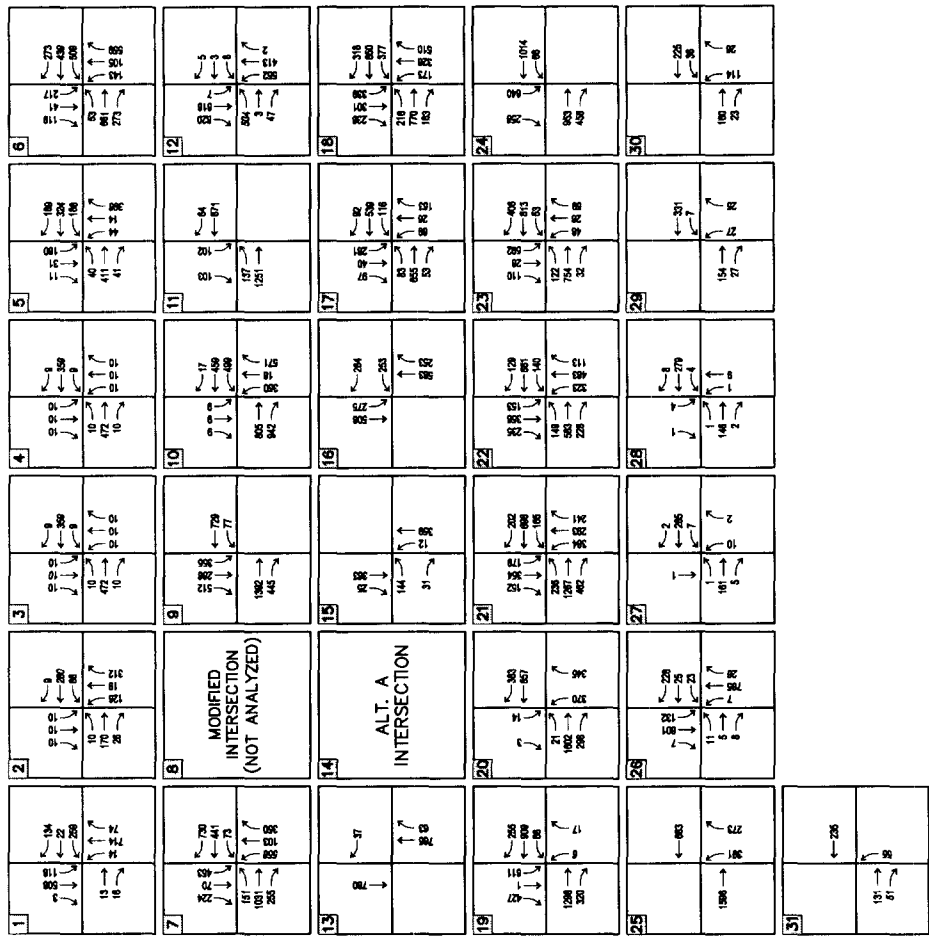
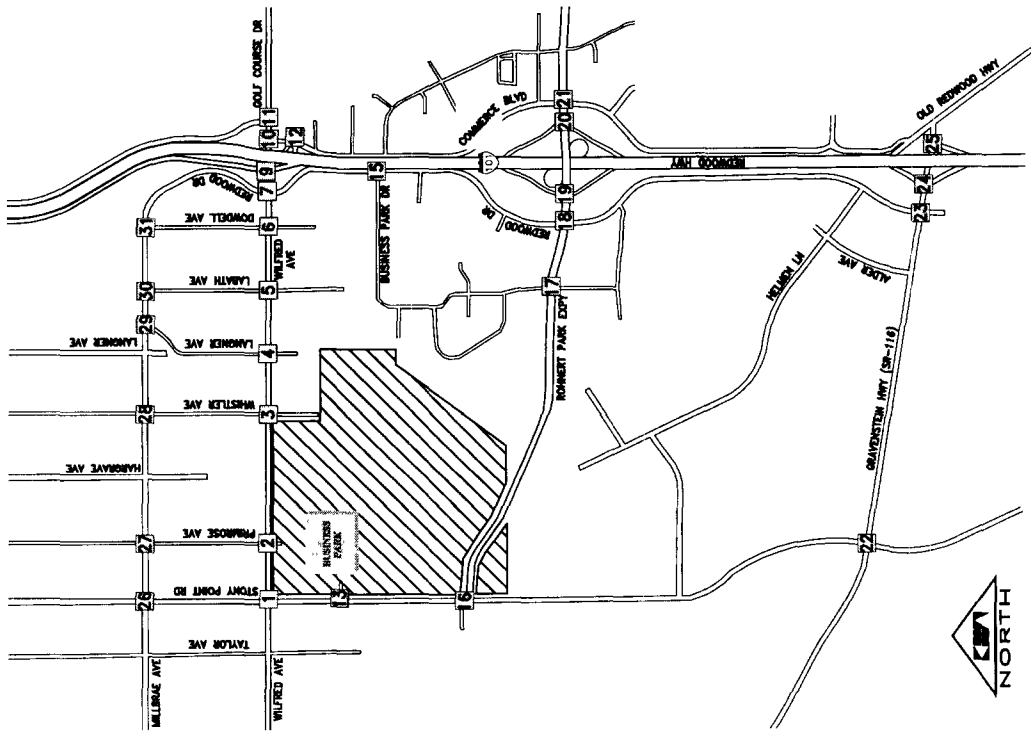


FIGURE E6



Graton Rancheria Alternative E - Rohnert Park, CA

NEAR-TERM + PROJECT PM TRAFFIC VOLUMES



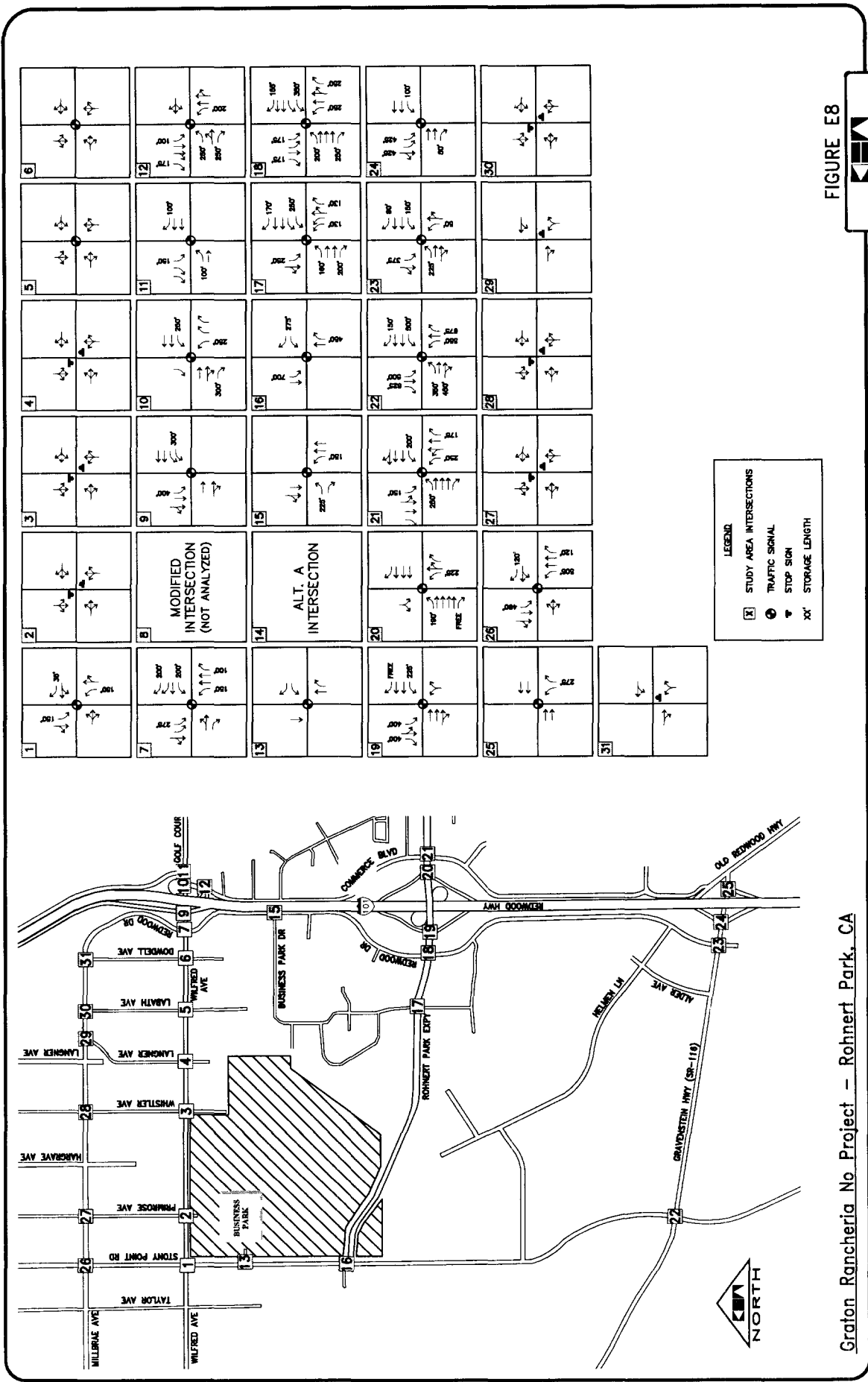
LEGEND
 X STUDY AREA INTERSECTIONS
 XX TRAFFIC VOLUMES

FIGURE E7



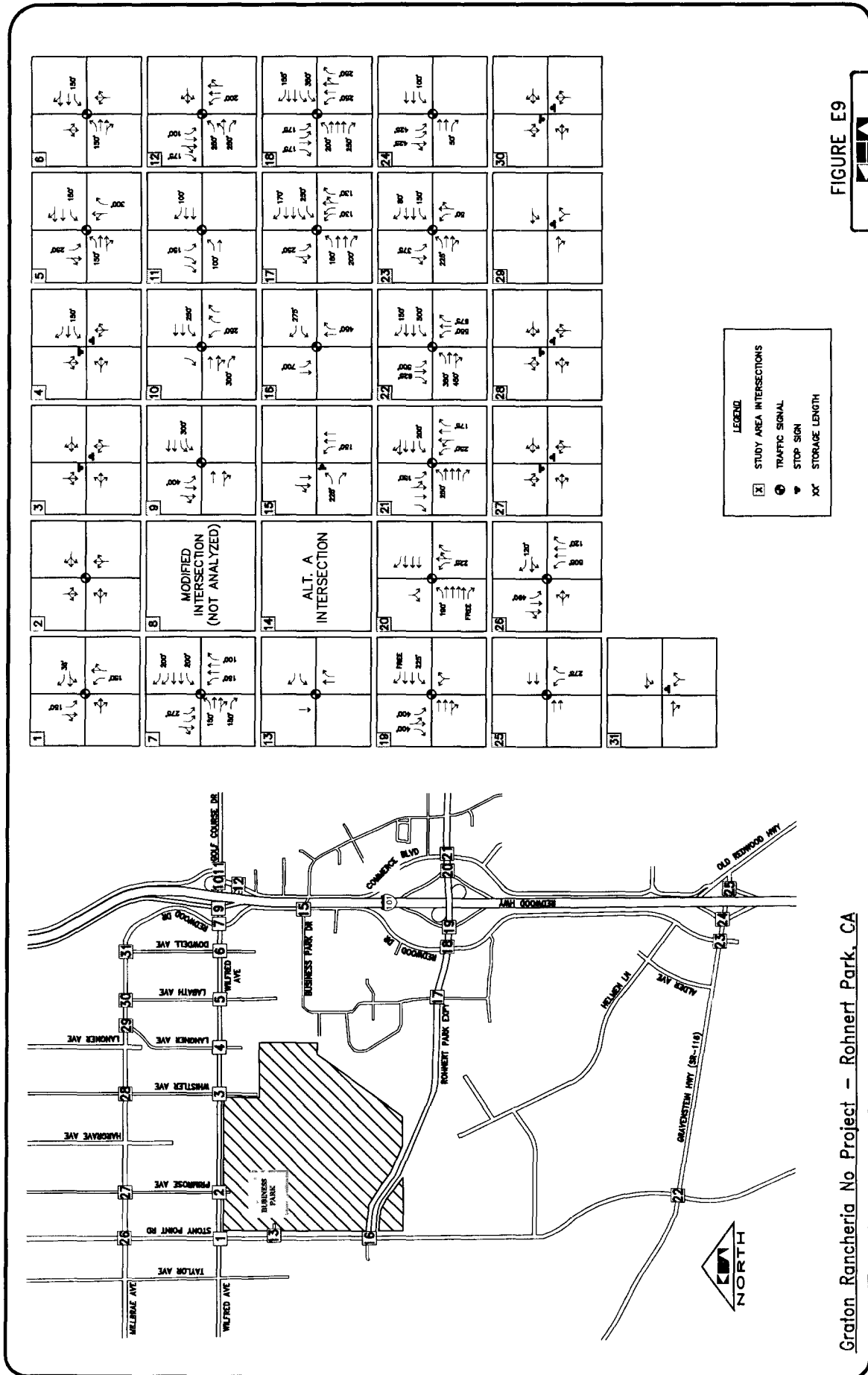
Graton Rancheria Alternative E - Rohnert Park, CA

LONG-TERM CUMULATIVE + PROJECT PM TRAFFIC VOLUMES



Graton Rancheria No Project - Rohnert Park, CA

NEAR-TERM MITIGATED LANE GEOMETRY AND TRAFFIC CONTROL



Graton Rancheria No. Project - Rohnert Park, CA

LONG-TERM MITIGATED LANE GEOMETRY AND TRAFFIC CONTROL

FIGURE E9
 Miller-Horn and Associates, Inc.

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- Wilfred-Dowdell Specific Plan, Draft, 2004
- Telephone communication with David Stewart, Utility Engineer, Consumer Protection and Safety Division, Rail Crossings Engineering Section, Public Utilities Commission, December 14, 2006.
- Telephone communication with Suzanne Smith, Sonoma County Transportation Authority, December 2006.

APPENDIX

APPENDIX

TURNING MOVEMENT VOLUMES

EXISTING CONDITIONS

NEAR-TERM 2008 NO ACTION TRAFFIC CONDITIONS

CUMULATIVE 2020 NO ACTION TRAFFIC CONDITIONS

TRIP GENERATION – ALTERNATIVES A, B & C

TRIP GENERATION – ALTERNATIVE D

TRIP GENERATION – ALTERNATIVE E

NEAR TERM 2008 + ALTERNATIVE A TRAFFIC CONDITIONS

CUMULATIVE 2020 + ALTERNATIVE A TRAFFIC CONDITIONS

NEAR TERM 2008 + ALTERNATIVE B TRAFFIC CONDITIONS

CUMULATIVE 2020 + ALTERNATIVE B TRAFFIC CONDITIONS

NEAR TERM 2008 + ALTERNATIVE C TRAFFIC CONDITIONS

CUMULATIVE 2020 + ALTERNATIVE C TRAFFIC CONDITIONS

NEAR TERM 2008 + ALTERNATIVE D TRAFFIC CONDITIONS

CUMULATIVE 2020 + ALTERNATIVE D TRAFFIC CONDITIONS

NEAR TERM 2008 + ALTERNATIVE E TRAFFIC CONDITIONS

CUMULATIVE 2020 + ALTERNATIVE E TRAFFIC CONDITIONS

SIGNAL WARRANT ANALYSIS – NO BUILD

SIGNAL WARRANT ANALYSIS – ALTERNATIVE A

SIGNAL WARRANT ANALYSIS – ALTERNATIVE B

SIGNAL WARRANT ANALYSIS – ALTERNATIVE C

SIGNAL WARRANT ANALYSIS – ALTERNATIVE D

SIGNAL WARRANT ANALYSIS – ALTERNATIVE E

NEAR TERM 2008 + ALTERNATIVE A MITIGATED TRAFFIC CONDITIONS

CUMULATIVE 2020 + ALTERNATIVE A MITIGATED TRAFFIC CONDITIONS

NEAR TERM 2008 + ALTERNATIVE B MITIGATED TRAFFIC CONDITIONS

CUMULATIVE 2020 + ALTERNATIVE B MITIGATED TRAFFIC CONDITIONS

NEAR TERM 2008 + ALTERNATIVE C MITIGATED TRAFFIC CONDITIONS

CUMULATIVE 2020 + ALTERNATIVE C MITIGATED TRAFFIC CONDITIONS

NEAR TERM 2008 + ALTERNATIVE D MITIGATED TRAFFIC CONDITIONS

CUMULATIVE 2020 + ALTERNATIVE D MITIGATED TRAFFIC CONDITIONS

NEAR TERM 2008 + ALTERNATIVE E MITIGATED TRAFFIC CONDITIONS

CUMULATIVE 2020 + ALTERNATIVE E MITIGATED TRAFFIC CONDITIONS

TURNING MOVEMENT VOLUMES

All Traffic Data
 5098 Foothills Blvd. 3-302
 Roseville, CA. 95678
 (916)771-8700

Site Code : 00000000
 Start Date: 08/24/05
 File I.D. : R16
 Page : 1

CITY OF ROHNERT PARK

Start Time	STONY POINT ROAD Southbound				ROHNERT PARK EXPRESSWAY Westbound				Northbound				Eastbound				Total
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	
7:00am	25	64	0	89	34	0	19	53	0	47	23	70	0	0	0	0	212
7:15	33	88	0	121	22	0	33	55	0	59	25	84	0	0	0	0	260
7:30	50	113	0	163	18	0	30	48	0	72	24	96	0	0	0	0	307
7:45	49	103	0	152	18	0	34	52	0	65	37	102	0	0	0	0	306
Hour Total	157	368	0	525	92	0	116	208	0	243	109	352	0	0	0	0	1065
8:00am	32	78	0	110	26	0	34	60	0	61	23	84	0	0	0	0	254
8:15	54	62	0	116	16	0	27	43	0	77	44	121	0	0	0	0	280
8:30	43	71	0	114	16	0	24	40	0	59	45	104	0	0	0	0	258
8:45	35	61	0	96	16	0	34	50	0	47	45	92	0	0	0	0	238
Hour Total	164	272	0	436	74	0	119	193	0	244	157	401	0	0	0	0	1030
Grand	321	640	0	961	166	0	235	401	0	487	266	753	0	0	0	0	2115
% of Total	15.2%	30.3%	0.0%		7.8%	0.0%	11.1%		0.0%	23.0%	12.6%		0.0%	0.0%	0.0%		
Apprch: %				45.4%				19.0%				35.6%					
% of Apprch	33.4%	66.6%	0.0%		42.4%	0.0%	58.6%		0.0%	64.7%	35.3%		0.0%	0.0%	0.0%		

Peak Hour Analysis By Entire Intersection for the Period: 07:00am to 08:45am on 08/24/05

Direction	Street Name	Start Peak Hour	Peak Hr Factor	Volumes				Percentages			
				Left	Thru	Right	Total	Left	Thru	Right	Total
Southbound	STONY POINT ROAD	07:30am	.830	185	356	0	541	34.1	65.8	.0	.0
Westbound	ROHNERT PARK EXPRESSWAY		.546	78	0	125	203	38.4	.0	61.5	.0
Northbound			.533	0	275	128	403	.0	68.2	31.7	.0
Eastbound			.0	0	0	0	0	0.0	0.0	0.0	0.0

All Traffic Data
5098 Foothills Blvd. 3-302
Roseville, CA. 95678
(916)771-8700

Site Code : 00000000
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Page : 2

CITY OF ROHNERT PARK

STONY POINT ROAD

0	356	185	0
			275
			125
			====
			400
Inbound		541	
Outbound		400	
Total		941	

125

0
0
0

0

Inbound	0
Outbound	0
Total	0

Inbound	203
Outbound	313 78
Total	516

0

0

185
0 313
128

Inbound	403
Outbound	434
Total	837

ROHNERT PARK EXPRESSWAY

78	0	275
356		
0		
====		
434		

128

CITY OF ROHNERT PARK

All Traffic Data
 5098 Foothills Blvd. 3-302
 Roseville, CA. 95678
 (916) 771-8700

Site Code : 00000000
 Start Date: 08/24/05
 File I.D. : R16
 Page : 1

Start Time	STONY POINT ROAD Southbound				ROHNERT PARK EXPRESSWAY Westbound				Northbound				Eastbound				Total
	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	
4:00pm	45	80	0	125	72	0	76	150	0	130	49	179	0	0	0	0	454
4:15	47	76	0	123	76	0	70	146	0	129	65	194	0	0	0	0	463
4:30	61	99	0	160	77	0	85	162	0	129	61	190	0	0	0	0	512
4:45	48	80	0	128	71	0	76	149	0	124	65	189	0	0	0	0	466
Hour Total	201	335	0	536	296	0	311	607	0	512	240	752	0	0	0	0	1895
5:00pm	40	65	0	133	65	0	86	153	0	141	60	201	0	0	0	0	487
5:15	63	69	0	152	74	0	66	140	0	117	50	167	0	0	0	0	489
5:30	64	78	0	142	58	0	58	116	0	125	56	181	0	0	0	0	439
5:45	44	56	0	100	64	0	51	115	0	107	53	160	0	0	0	0	375
Hour Total	219	308	0	527	261	0	263	524	0	490	219	709	0	0	0	0	1760
Grand	420	643	0	1063	557	0	574	1131	0	1002	459	1461	0	0	0	0	3655
% of Total	11.5%	17.6%	0.0%		15.2%	0.0%	15.7%		0.0%	27.4%	12.6%		0.0%	0.0%	0.0%		
Apprch %				29.1%				30.9%				40.0%					
% of Apprch	39.5%	60.5%	0.0%		45.2%	0.0%	50.0%		0.0%	68.6%	31.4%		0.0%	0.0%	0.0%		

Peak Hour Analysis By Entire Intersection for the Period: 04:00pm to 05:45pm on 08/24/05

Direction	Street Name	Start	Peak Hr	Volumes				Percentages			
				Left	Thru	Right	Total	Left	Thru	Right	Total
Southbound	STONY POINT ROAD	04:15pm	.850	204	340	0	544	37.5	62.5	.0	.0
Westbound	ROHNERT PARK EXPRESSWAY		.941	289	0	321	610	47.3	.0	52.6	.0
Northbound			.963	0	523	251	774	.0	67.5	32.4	.0
Eastbound			.0	0	0	0	0	0.0	0.0	0.0	0.0

CITY OF ROHNERT PARK

All Traffic Data
5098 Foothills Blvd. 3-302
Roseville, CA. 95678
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Site Code : 00000000
Start Date: 08/24/05
File I.D. : R16
Page : 2



STONY POINT ROAD		
0	340	204
Inbound		544
Outbound		844
Total		1388



0
523
321
=====
844

321

0
0
0

0

0

Inbound 0

Outbound 0
0 Total 0

Inbound 610

Outbound 455 289
Total 1065

0

204
0 455
251



Inbound	774
Outbound	629
Total	1403
289	0 523
340	
0	
===== 629	



ROHNERT PARK EXPRESSWAY

251

Start Time	REDWOOD DRIVE Southbound				ROHNERT PARK EXPRESSWAY Westbound				Northbound				Eastbound				Total
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	
7:00am	22	10	1	33	31	87	22	140	11	5	36	52	7	51	4	62	287
7:15	27	12	9	48	33	87	34	154	16	14	36	66	12	62	17	91	359
7:30	29	15	17	61	52	109	28	189	5	5	57	67	15	81	6	102	419
7:45	18	20	14	52	68	126	51	245	14	12	43	69	8	116	10	134	500
Hour Total	96	57	41	194	184	409	135	728	46	36	172	254	42	310	37	389	1565
8:00am	33	18	17	68	57	126	38	221	11	15	32	58	10	85	20	115	462
8:15	21	18	16	65	56	109	33	198	18	15	32	65	13	101	19	133	461
8:30	37	18	17	72	47	104	33	184	17	17	38	72	12	109	17	138	466
8:45	44	21	17	82	71	125	56	252	14	17	47	78	21	92	12	125	537
Hour Total	145	75	67	287	231	464	160	855	60	64	149	273	56	387	68	511	1926
Grand	241	132	108	481	415	873	295	1583	106	100	321	527	98	697	105	900	3491
% of Total	6.9%	3.8%	3.1%		11.9%	25.0%	8.5%		3.0%	2.9%	9.2%		2.8%	20.0%	3.0%		
Approch %				13.8%				45.3%				15.1%					25.8%
% of Approch	50.1%	27.4%	22.5%		26.2%	55.1%	18.6%		20.1%	19.0%	60.9%		10.9%	77.4%	11.7%		

Peak Hour Analysis By Entire Intersection for the Period: 07:00am to 08:45am on 07/21/05

Direction	Street Name	Start Peak Hour	Peak Hr Factor	Volumes				Percentages		
				Left	Thru	Right	Total	Left	Thru	Right
Southbound	REDWOOD DRIVE	08:00am	.875	145	75	67	287	50.5	26.1	23.3
Westbound	ROHNERT PARK EXPRESSWAY		.848	231	464	160	855	27.0	54.2	18.7
Northbound			.875	60	64	149	273	21.9	23.4	54.5
Eastbound			.926	56	387	68	511	10.9	75.7	13.3

REDWOOD DRIVE

67	75	145	56
			64
			160
			====
			280
	Inbound	287	
	Outbound	280	
	Total	567	

160

591 60
 464
 67

56

464

Inbound 511
 Outbound 591
 387 Total 1102

68

Inbound 855
 Outbound 681 231
 Total 1536

145
 387 681
 149

Inbound 273
 Outbound 374
 Total 647

ROHNERT PARK EXPRESSWAY

231	60	64	149
75			
68			
====			
374			

Start Time	REDWOOD DRIVE Southbound				ROHNERT PARK EXPRESSWAY Westbound				Northbound				Eastbound				Total
	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	
4:00pm	97	39	66	202	80	145	83	308	18	35	79	132	55	199	21	275	917
4:15	102	55	60	217	67	142	77	286	22	42	87	151	52	213	34	299	953
4:30	100	48	54	202	79	141	104	324	24	37	98	159	41	179	29	249	934
4:45	109	48	61	218	71	145	88	304	23	36	77	136	52	152	21	225	883
Hour Total	408	190	241	839	297	573	352	1222	87	150	341	578	200	743	105	1048	3687
5:00pm	121	54	57	232	100	135	92	327	20	42	78	140	58	204	29	291	990
5:15	110	64	74	248	73	147	79	299	20	38	77	135	47	157	21	225	907
5:30	112	56	71	239	86	133	92	311	18	25	64	107	45	165	20	230	887
5:45	92	73	69	234	93	154	93	340	23	31	76	130	64	145	18	227	931
Hour Total	435	247	271	953	352	569	356	1277	81	136	295	512	214	671	88	973	3715
Grand	843	437	512	1792	649	1142	708	2499	168	286	636	1090	414	1414	193	2021	7402
% of Total	11.4%	5.9%	6.9%		8.8%	15.4%	9.6%		2.3%	3.9%	8.6%		5.6%	19.1%	2.6%		
Apprch %				24.2%				33.8%				14.7%					27.3%
% of Apprch	47.0%	24.4%	28.6%		26.0%	45.7%	28.3%		15.4%	26.2%	58.3%		20.5%	70.0%	9.5%		

Peak Hour Analysis By Entire Intersection For the Period: 04:00pm to 05:45pm on 07/21/05

Direction	Street Name	Start Peak Hour	Peak Hr Factor	..... Volumes .....				..... Percentages		
				Left	Thru	Rght	Total	Left	Thru	Rght
Southbound	REDWOOD DRIVE	04:15pm	.936	432	205	232	869	49.7	23.5	26.6
Westbound	ROHNERT PARK EXPRESSWAY		.949	317	563	361	1241	25.5	45.3	29.0
Northbound			.921	89	157	340	586	15.1	26.7	58.0
Eastbound			.890	203	748	113	1064	19.0	70.3	10.6

REDWOOD DRIVE

232	205	432	203
			157
			361
			====
			721
	Inbound	869	
	Outbound	721	
	Total	1590	

361

	89
884	563
	232

203

563

	Inbound	1064
	Outbound	884
748	Total	1948

	Inbound	1241
	Outbound	1520
317	Total	2761

113

432	
748	1520
340	

	Inbound	586
	Outbound	635
	Total	1221
317	89	157
205		
113		
====		
635		

ROHNERT PARK EXPRESSWAY

340

Start Time	LABATH AVENUE Southbound				ROHNERT PARK EXPRESSWAY Westbound				Northbound				Eastbound			
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total
7:00am	10	1	2	13	7	43	25	75	5	4	18	27	14	38	6	58
7:15	14	1	3	18	3	36	40	79	3	6	9	18	12	54	11	77
7:30	15	1	7	23	10	58	27	95	4	4	5	13	14	64	7	85
7:45	22	5	5	32	4	37	57	98	6	15	12	33	25	80	8	113
Hour Total	61	8	17	86	24	174	149	347	18	29	44	91	65	236	32	333
8:00am	26	5	2	33	13	51	49	113	4	11	9	24	25	66	7	98
8:15	32	3	6	41	17	40	45	102	7	8	12	27	20	62	3	85
8:30	19	5	8	32	20	32	40	92	2	6	22	30	11	67	11	89
8:45	17	10	5	32	26	37	34	97	4	7	21	32	10	67	7	84
Hour Total	94	23	21	138	76	160	168	404	17	32	64	113	66	262	28	356
Grand	155	31	38	224	100	334	317	751	35	61	108	204	131	498	60	689
% of Total	8.3%	1.7%	2.0%		5.4%	17.9%	17.0%		1.9%	3.3%	5.8%		7.0%	26.7%	3.2%	
Approch %				12.0%				40.2%				10.9%				36.9%
% of Approch	69.2%	13.8%	17.0%		13.3%	44.5%	42.2%		17.2%	29.9%	52.9%		19.0%	72.3%	8.7%	

Peak Hour Analysis By Entire Intersection for the Period: 07:00am to 08:45am on 07/21/05

Direction	Street Name	Start Peak Hour	Peak Hr Factor	Volumes				Percentages		
				Left	Thru	Right	Total	Left	Thru	Right
Southbound	LABATH AVENUE	07:45am	.841	99	18	21	138	71.7	13.0	15.2
Westbound	ROHNERT PARK EXPRESSWAY		.896	54	160	191	405	13.3	39.5	47.1
Northbound			.864	19	40	55	114	16.6	35.0	48.2
Eastbound			.852	81	275	29	385	21.0	71.4	7.5

LABATH AVENUE

21	18	99	81
			40
			191
			=====
			312
	Inbound	138	
	Outbound	312	
	Total	450	

191

200 19
 160
 21

81

160

	Inbound	385
	Outbound	200
275	Total	585

29

	Inbound	405
	Outbound	429
54	Total	834

99
 275 429
 55

	Inbound	114
	Outbound	101
	Total	215

54	19	40
18		
29		
=====		
101		

ROHNERT PARK EXPRESSWAY

55

Start Time	LABATH AVENUE Southbound				ROHNERT PARK EXPRESSWAY Westbound				Northbound				Eastbound				Total
	Left	Thru	Right	Totl	Left	Thru	Right	Totl	Left	Thru	Right	Totl	Left	Thru	Right	Totl	
4:00pm	62	9	25	96	30	106	13	149	14	3	26	43	6	118	6	130	418
4:15	45	8	23	76	21	120	14	155	17	3	46	66	14	149	7	170	467
4:30	72	12	30	114	30	120	10	160	15	6	26	47	6	107	13	126	447
4:45	41	8	14	63	41	121	12	174	17	4	19	40	7	117	10	134	411
Hour Total	220	37	92	349	122	467	49	638	63	16	117	196	33	491	36	560	1743
5:00pm	78	17	34	129	24	129	15	168	12	0	32	44	9	158	14	181	522
5:15	37	7	11	55	24	105	11	140	16	3	22	41	5	105	10	120	356
5:30	25	11	11	47	25	124	5	154	10	3	17	30	1	118	22	141	372
5:45	22	4	7	33	35	136	7	178	24	4	27	55	5	138	18	161	427
Hour Total	162	39	63	264	108	494	38	640	62	10	98	170	20	519	64	603	1677
Grand	382	76	155	613	230	961	87	1278	125	26	215	366	53	1010	100	1163	3420
% of Total	11.2%	2.2%	4.5%		6.7%	28.1%	2.5%		3.7%	.8%	6.3%		1.5%	29.5%	2.9%		
Apprch %				17.9%				37.4%				10.7%					34.0%
% of Apprch	62.3%	12.4%	25.3%		18.0%	75.2%	6.8%		34.2%	7.1%	58.7%		4.6%	86.8%	8.6%		

Peak Hour Analysis By Entire Intersection for the Period: 04:00pm to 05:45pm on 07/21/05

Direction	Street Name	Start Peak Hour	Peak Hr Factor	..... Volumes .....				..... Percentages		
				Left	Thru	Right	Total	Left	Thru	Right
Southbound	LABATH AVENUE	04:15pm	.740	236	45	101	382	61.7	11.7	26.4
Westbound	ROHNERT PARK EXPRESSWAY		.944	116	490	51	657	17.6	74.5	7.7
Northbound			.746	61	13	123	197	30.9	6.5	62.4
Eastbound			.844	36	531	44	611	5.8	86.9	7.2

LABATH AVENUE

101	45	236	36
			13
			51
			====
			100
	Inbound	382	
	Outbound	100	
	Total	482	

51

61
 652 490
 101

36

490

Inbound 611
 Outbound 652
 531 Total 1263

44

Inbound 657
 Outbound 890 116
 Total 1547

236
 531 890
 123

Inbound 197
 Outbound 205
 Total 402

ROHNERT PARK EXPRESSWAY

116	61	13	123
45			
44			
====			
205			

SR 101 NB RAMPS/PARK AND ROHNERT PARK EXPRESSWAY SR 101 NB RAMPS

Start Time	Southbound				Westbound				Northbound				Eastbound				Total
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	
7:00am	0	0	1	1	0	100	45	145	37	1	43	81	2	87	33	122	349
7:15	0	0	0	0	0	129	39	168	41	0	35	76	2	158	55	215	459
7:30	2	0	1	3	0	145	48	193	37	0	48	85	1	197	59	257	538
7:45	0	0	0	0	0	160	41	201	57	1	91	149	2	241	49	292	642
Hour Total	2	0	2	4	0	534	173	707	172	2	217	391	7	683	196	886	1988
8:00am	2	0	0	2	0	185	31	216	51	0	62	113	0	165	48	213	544
8:15	0	0	1	1	0	149	39	188	43	2	58	103	0	185	41	226	518
8:30	0	0	0	0	0	151	49	200	39	1	61	101	1	196	49	246	547
8:45	0	0	0	0	0	145	47	192	55	0	89	144	1	202	51	254	590
Hour Total	2	0	1	3	0	630	166	796	188	3	270	461	2	748	189	939	2199
Grand	4	0	3	7	0	1164	339	1503	360	5	487	852	9	1431	385	1825	4187
% of Total	.1%	0.0%	.1%		0.0%	27.8%	8.1%		8.6%	.1%	11.6%		.2%	34.2%	9.2%		
Approch %				.2%				35.9%				20.3%					43.6%
% of Approch	57.1%	0.0%	42.9%		0.0%	77.4%	22.6%		42.3%	.6%	57.2%		.5%	78.4%	21.1%		

Peak Hour Analysis By Entire Intersection for the Period: 07:00am to 08:45am on 07/20/05

Direction	Street Name	Start Peak Hour	Peak Hr Factor	..... Volumes .....				..... Percentages		
				Left	Thru	Right	Total	Left	Thru	Right
Southbound	SR 101 NB RAMPS/PARK AN	07:45am	.375	2	0	1	3	66.6	.0	33.3
Westbound	ROHNERT PARK EXPRESSWAY		.932	0	645	160	805	.0	80.1	19.8
Northbound	SR 101 NB RAMPS		.782	190	4	272	466	40.7	.8	58.3
Eastbound			.836	3	787	187	977	.3	80.5	19.1

SR 101 NB RAMPS/PARK AND RIDE

1	0	2	3
			4
			160
			=====
			167
	Inbound		3
	Outbound		167
	Total		170

160

	190
836	645
	1
=====	
	3

645

	Inbound	977
	Outbound	836
787	Total	1813

	Inbound	805	
	Outbound	1061	0
	Total	1866	

187

	2
787	1061
272	

	Inbound	466
	Outbound	187
	Total	653

ROHNERT PARK EXPRESSWAY

	0	190	4
	0		
	187		
	=====		
	187		
SR 101 NB RAMPS			

272

Start Time	SR 101 NB RAMPS/PARK AND ROHNERT PARK EXPRESSWAY Southbound				SR 101 NB RAMPS Westbound				SR 101 NB RAMPS Northbound				SR 101 NB RAMPS Eastbound				Total
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	
4:00pm	3	0	1	4	0	192	52	244	42	0	79	121	5	355	67	427	796
4:15	2	0	2	4	0	252	82	334	64	0	60	124	5	391	64	460	922
4:30	0	0	1	1	0	262	73	335	74	0	79	153	3	387	67	457	946
4:45	7	0	0	7	0	260	64	324	56	0	74	130	4	398	51	453	914
Hour Total	12	0	4	16	0	966	271	1237	236	0	292	528	17	1531	249	1797	3578
5:00pm	5	0	0	5	0	211	96	307	68	0	49	117	3	481	65	549	978
5:15	6	0	2	8	0	205	88	293	57	0	61	118	5	402	76	483	902
5:30	5	0	0	5	0	225	73	298	65	1	63	129	6	364	75	445	877
5:45	2	0	0	2	0	210	53	263	73	1	69	143	4	356	42	402	810
Hour Total	18	0	2	20	0	851	310	1161	263	2	242	507	18	1603	258	1879	3567
Grand	30	0	6	36	0	1817	581	2398	499	2	534	1035	35	3134	507	3676	7145
% of Total	.4%	0.0%	.1%		0.0%	25.4%	8.1%		7.0%	0.0%	7.5%		.5%	43.9%	7.1%		
Approch %				.5%				33.6%				14.5%					51.4%
% of Approch	83.3%	0.0%	16.7%		0.0%	75.8%	24.2%		48.2%	.2%	51.6%		1.0%	85.3%	13.8%		

Peak Hour Analysis By Entire Intersection for the Period: 04:00pm to 05:45pm on 07/20/05

Direction	Street Name	Start Peak Hour	Peak Hr Factor	..... Volumes .....				..... Percentages		
				Left	Thru	Right	Total	Left	Thru	Right
Southbound	SR 101 NB RAMPS/PARK AN	04:15pm	.607	14	0	3	17	82.3	.0	17.6
Westbound	ROHNERT PARK EXPRESSWAY		.970	0	985	315	1300	.0	75.7	24.2
Northbound	SR 101 NB RAMPS		.856	262	0	262	524	50.0	.0	50.0
Eastbound			.874	15	1657	247	1919	.7	86.3	12.8

SR 101 NB RAMPS/PARK AND RIDE

3	0	14	15
			0
			315
			=====
			330
	Inbound		17
	Outbound		330
	Total		347

315

	262
1250	985
	3

	15

985

	Inbound	1919
	Outbound	1250
1657	Total	3169

	Inbound	1300
	Outbound	1933
	Total	3233

247

14
 1657 1933
 262

	Inbound	524
	Outbound	247
	Total	771

ROHNERT PARK EXPRESSWAY

0	262	0	262
0			
247			
=====			
247			
SR 101 NB RAMPS			

Start Time	COMMERCE BLVD. Southbound				ROHNERT PARK EXPRESSWAY Westbound				Northbound				Eastbound				Total
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	
7:00am	4	9	11	24	6	96	6	108	38	37	11	86	21	75	34	130	348
7:15	6	10	13	29	18	115	16	149	40	41	6	87	32	112	48	192	457
7:30	11	14	27	52	14	113	31	158	53	56	24	133	34	178	36	248	591
7:45	9	22	15	46	19	130	13	162	56	56	16	128	79	214	39	332	668
Hour Total	30	55	66	151	57	454	66	577	187	190	57	434	166	579	157	902	2064
8:00am	11	13	28	52	19	148	14	181	40	50	17	107	42	156	31	229	569
8:15	11	17	22	50	13	118	21	152	48	55	18	121	48	137	58	243	566
8:30	19	15	23	57	6	123	22	151	54	40	11	105	43	155	59	257	570
8:45	8	20	25	53	17	114	26	157	53	41	18	112	51	169	71	291	613
Hour Total	49	65	98	212	55	503	83	641	195	186	64	445	184	617	219	1020	2318
Grand	79	120	164	363	112	957	149	1218	382	376	121	879	350	1196	376	1922	4382
% of Total	1.8%	2.7%	3.7%		2.6%	21.8%	3.4%		8.7%	8.6%	2.8%		8.0%	27.3%	8.6%		
Apprch %				8.3%				27.8%				20.1%					43.9%
% of Apprch	21.8%	33.1%	45.2%		9.2%	78.6%	12.2%		43.5%	42.8%	13.8%		18.2%	62.2%	19.6%		

Peak Hour Analysis By Entire Intersection For the Period: 07:00am to 08:45am on 07/20/05

Direction	Street Name	Start Peak Hour	Peak Hr Factor	Volumes				Percentages		
				Left	Thru	Right	Total	Left	Thru	Right
Southbound	COMMERCE BLVD.	07:30am	.962	42	66	92	200	21.0	33.0	46.0
Westbound	ROHNERT PARK EXPRESSWAY		.902	65	509	79	653	9.9	77.9	12.0
Northbound			.919	197	217	75	489	40.2	44.3	15.3
Eastbound			.792	203	685	164	1052	19.2	65.1	15.5

COMMERCE BLVD.

92	66	42	203
			217
			79
			====
			499
	Inbound	200	
	Outbound	499	
	Total	699	

79

	197
798	509
	92

203

509

	Inbound	1052
	Outbound	798
685	Total	1850

164

	Inbound	653
	Outbound	802
	Total	1455

	42
	685
	802
	75

	Inbound	489
	Outbound	295
	Total	784
65	197	217
66		
164		
====		
295		

ROHNERT PARK EXPRESSWAY

75

Start Time	COMMERCE BLVD. Southbound				ROHNERT PARK EXPRESSWAY Westbound				Northbound				Eastbound				Total
	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	
4:00pm	24	67	31	122	30	133	27	190	80	83	52	215	66	247	124	437	964
4:15	21	53	44	118	19	197	44	260	93	71	48	212	52	270	131	453	1043
4:30	27	54	52	133	34	200	33	267	83	68	42	193	75	251	140	466	1059
4:45	29	62	33	124	31	197	34	262	94	69	59	222	61	291	127	479	1087
Hour Total	101	236	160	497	114	727	138	979	350	291	201	842	254	1059	522	1835	4153
5:00pm	25	61	28	114	33	172	29	234	107	67	54	228	80	308	144	532	1108
5:15	24	53	24	101	35	160	27	222	109	73	58	240	59	286	124	469	1032
5:30	37	36	34	107	25	158	21	204	106	96	71	273	49	266	117	432	1016
5:45	26	43	38	107	32	141	20	193	84	73	44	201	64	243	120	427	928
Hour Total	112	193	124	429	125	631	97	853	406	309	227	942	252	1103	505	1860	4084
Grand	213	429	284	926	239	1358	235	1832	756	600	428	1784	506	2162	1027	3695	8237
% of Total	2.6%	5.2%	3.4%		2.9%	16.5%	2.9%		9.2%	7.3%	5.2%		6.1%	26.2%	12.5%		
Apprch %				11.2%				22.2%				21.7%					44.9%
% of Apprch	23.0%	46.3%	30.7%		13.0%	74.1%	12.8%		42.4%	33.6%	24.0%		13.7%	58.5%	27.8%		

Peak Hour Analysis By Entire Intersection for the Period: 04:00pm to 05:45pm on 07/20/05

Direction	Street Name	Start Peak Hour	Peak Hr Factor	..... Volumes .....				..... Percentages		
				Left	Thru	Rght	Total	Left	Thru	Rght
Southbound	COMMERCE BLVD.	04:15pm	.919	102	230	157	489	20.8	47.0	32.1
Westbound	ROHNERT PARK EXPRESSWAY		.958	117	766	140	1023	11.4	74.8	13.6
Northbound			.938	377	275	203	855	44.0	32.1	23.7
Eastbound			.907	268	1120	542	1930	13.8	58.0	28.0

COMMERCE BLVD.

157	230	102	
			268
			275
			140
			====
			683
	Inbound	489	
	Outbound	683	
	Total	1172	

	140
--	-----

	377
1300	766
	157
=====	
	268

	766
--	-----

	Inbound	1930
	Outbound	1300
1120	Total	3230

	Inbound	1023
	Outbound	1425
	Total	2448

	542
--	-----

	102
	1120
	1425
	203

	Inbound	855
	Outbound	889
	Total	1744
117	377	275
230		
542		
=====		
	889	

ROHNERT PARK EXPRESSWAY

203

Start Time	SR 101 SB RAMPS Southbound				ROHNERT PARK EXPRESSWAY Westbound				SR 101 SB RAMPS/PARK AND RIDE Northbound				Eastbound				
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	
7:00am	67	1	52	120	5	94	39	138	0	0	0	0	0	58	32	87	345
7:15	104	0	62	166	11	106	53	170	1	0	0	1	0	111	27	138	475
7:30	127	11	74	212	17	106	60	183	0	0	3	3	0	127	37	164	562
7:45	127	1	103	231	9	169	39	217	1	0	0	1	0	165	48	213	662
Hour Total	425	13	291	729	42	475	191	708	2	0	3	5	0	458	144	602	2044
8:00am	82	3	71	156	20	146	70	236	0	0	2	2	0	129	32	161	555
8:15	102	0	73	175	14	140	39	193	0	0	2	2	0	122	45	167	537
8:30	115	0	66	181	14	127	49	190	0	0	0	0	0	131	46	177	548
8:45	109	1	85	195	9	149	42	200	0	0	0	0	0	145	35	180	575
Hour Total	408	4	295	707	57	562	200	819	0	0	4	4	0	527	158	685	2215
Grand	833	17	586	1436	99	1037	391	1527	2	0	7	9	0	985	302	1287	4259
% of Total	19.6%	.4%	13.8%		2.3%	24.3%	9.2%		0.0%	0.0%	.2%		0.0%	23.1%	7.1%		
Approch %				33.7%				35.9%				.2%					30.2%
% of Approch	58.0%	1.2%	40.8%		6.5%	67.9%	25.6%		22.2%	0.0%	77.8%		0.0%	76.5%	23.5%		

Peak Hour Analysis By Entire Intersection for the Period: 07:00am to 08:45am on 07/20/05

Direction	Street Name	Start Peak Hour	Peak Hr Factor	Volumes				Percentages		
				Left	Thru	Right	Total	Left	Thru	Right
Southbound	SR 101 SB RAMPS	07:30am	.836	438	15	321	774	56.5	1.9	41.4
Westbound	ROHNERT PARK EXPRESSWAY		.878	60	561	208	829	7.2	67.6	25.0
Northbound	SR 101 SB RAMPS/PARK AN		.667	1	0	7	8	12.5	.0	87.5
Eastbound			.827	0	543	162	705	.0	77.0	22.9

SR 101 SB RAMPS
321 | 15 | 438

0
0
208
=====
208

Inbound 774
Outbound 208
Total 982

208

883 1
 561
 321

0

561

Inbound 705
Outbound 883
543 Total 1588

Inbound 829
Outbound 988 60
Total 1817

162

438
543 988
7

Inbound 8
Outbound 237
Total 245

60 || 1 | 0
15 || | |
162 || | |
=====
237 || | |

ROHNERT PARK EXPRESSWAY

7

SR 101 SB RAMPS/PARK AND RIDE

Start Time	SR 101 SB RAMPS Southbound				ROHNERT PARK EXPRESSWAY Westbound				SR 101 SB RAMPS/PARK AND RIDE Northbound				Eastbound				Total
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	
4:00pm	162	1	73	236	19	182	34	235	0	0	0	0	0	265	80	345	816
4:15	163	0	79	242	13	258	47	318	1	0	3	4	0	294	67	361	925
4:30	184	0	102	286	18	264	55	337	0	0	0	0	0	273	68	341	964
4:45	150	0	65	215	13	251	52	316	0	0	11	11	0	292	65	357	899
Hour Total	659	1	319	979	63	955	188	1206	1	0	14	15	0	1124	280	1404	3604
5:00pm	195	1	73	269	24	210	45	279	5	0	3	8	0	351	65	416	972
5:15	188	0	74	262	12	204	48	264	0	0	2	2	0	293	63	356	884
5:30	161	0	86	247	17	229	44	290	2	0	10	12	0	274	72	346	895
5:45	150	0	80	230	20	227	36	283	3	0	5	8	0	247	57	304	825
Hour Total	694	1	313	1008	73	870	173	1116	10	0	20	30	0	1165	257	1422	3576
Grand	1353	2	632	1987	136	1825	361	2322	11	0	34	45	0	2289	537	2826	7180
% of Total	18.8%	0.0%	8.8%		1.9%	25.4%	5.0%		.2%	0.0%	.5%		0.0%	31.9%	7.5%		
Approch %				27.7%				32.3%				.6%					39.4%
% of Approch	68.1%	.1%	31.8%		5.9%	78.6%	15.5%		24.4%	0.0%	75.6%		0.0%	81.0%	19.0%		

Peak Hour Analysis By Entire Intersection for the Period: 04:00pm to 05:45pm on 07/20/05

Direction	Street Name	Start Peak Hour	Peak Hr Factor	..... Volumes .....				..... Percentages		
				Left	Thru	Right	Total	Left	Thru	Right
Southbound	SR 101 SB RAMPS	04:15pm	.885	692	1	319	1012	68.3	.0	31.5
Westbound	ROHNERT PARK EXPRESSWAY		.927	68	983	199	1250	5.4	78.6	15.9
Northbound	SR 101 SB RAMPS/PARK AN		.523	6	0	17	23	26.0	.0	73.9
Eastbound			.886	0	1210	265	1475	.0	82.0	17.9

SR 101 SB RAMPS	
319	1 692
Inbound	1012
Outbound	199
Total	1211

1308	6
983	
319	
<hr/>	
0	

0
0
199
====
199
199
983

Inbound	1475
Outbound	1308
1210	Total 2783

Inbound	1250
Outbound	1919 68
Total	3169

265

692
1210 1919
17

Inbound	23	
Outbound	334	
Total	357	
68	6	0
1		
265		
====		
334		

ROHNERT PARK EXPRESSWAY

17

SR 101 SB RAMPS/PARK AND RIDE

Start Time	REDWOOD DRIVE Southbound				GRAVENSTEIN HWY (SR 116) Westbound				Northbound				Eastbound				Total
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	
7:00am	29	8	7	44	15	96	42	153	4	1	11	16	12	86	6	104	317
7:15	21	2	9	32	9	106	49	164	9	1	19	29	11	117	5	133	358
7:30	39	4	4	47	4	101	58	163	8	7	12	27	13	121	9	143	380
7:45	43	6	10	59	8	120	66	194	9	9	11	29	20	134	5	159	441
Hour Total	132	20	30	182	36	423	215	674	30	18	53	101	56	458	25	539	1496
8:00am	40	8	8	56	9	109	64	182	3	3	15	21	10	106	9	125	384
8:15	44	7	10	61	5	109	51	165	7	7	11	25	14	112	10	136	387
8:30	31	3	9	43	11	98	41	150	6	5	11	22	12	125	6	143	358
8:45	22	3	14	39	11	110	44	165	3	3	9	15	14	130	7	151	370
Hour Total	137	21	41	199	36	426	200	662	19	18	46	83	50	473	32	555	1499
Grand	269	41	71	381	72	849	415	1336	49	36	99	184	106	931	57	1094	2995
% of Total	9.0%	1.4%	2.4%		2.4%	28.3%	13.9%		1.6%	1.2%	3.3%		3.5%	31.1%	1.9%		
Approch %				12.7%				44.6%				6.1%				36.5%	
% of Approch	70.6%	10.8%	18.6%		5.4%	63.5%	31.1%		26.6%	19.6%	53.8%		9.7%	85.1%	5.2%		

Peak Hour Analysis By Entire Intersection for the Period: 07:00am to 08:45am on 07/20/05

Direction	Street Name	Start Peak Hour	Peak Hr Factor	..... Volumes .....				..... Percentages		
				Left	Thru	Right	Total	Left	Thru	Right
Southbound	REDWOOD DRIVE	07:30am	.914	166	25	32	223	74.4	11.2	14.3
Westbound	GRAVENSTEIN HWY (SR 116)		.907	26	439	239	704	3.6	62.3	33.9
Northbound			.879	27	26	49	102	26.4	25.4	48.0
Eastbound			.885	57	473	33	563	10.1	84.0	5.8

REDWOOD DRIVE
32 | 25 | 166

57
26
239
=====
322

Inbound 223
Outbound 322
Total 545

239

498 27
 439
 32

57

439

Inbound 563
Outbound 498
473 Total 1061

Inbound 704
Outbound 688 26
Total 1392

33

166
473 688
49

Inbound 102
Outbound 84
Total 186

GRAVENSTEIN HWY (SR 116)

26 | 27 | 26
25
33
=====
84

49

Start Time	REDWOOD DRIVE Southbound				GRAVENSTEIN HWY (SR 116) Westbound				Northbound				Eastbound				Total
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	
4:00pm	97	4	19	120	21	169	64	254	12	5	8	25	15	113	6	134	533
4:15	83	8	14	105	13	144	58	215	13	7	19	39	20	132	12	164	523
4:30	105	14	22	141	10	177	74	261	8	8	22	38	15	153	8	176	616
4:45	91	2	27	120	9	173	53	235	15	2	14	31	28	127	6	161	547
Hour Total	376	28	82	486	53	663	249	965	48	22	63	133	78	525	32	635	2219
5:00pm	106	8	30	144	8	146	78	232	6	2	13	21	12	109	3	124	521
5:15	73	6	15	94	8	150	63	221	8	6	3	17	13	156	3	172	504
5:30	96	3	31	130	19	127	43	189	11	4	14	29	8	144	6	158	506
5:45	57	9	20	86	10	142	55	207	9	3	8	20	20	103	6	129	442
Hour Total	332	26	96	454	45	565	239	849	34	15	38	87	53	512	18	583	1973
Grand	708	54	178	940	98	1228	488	1814	82	37	101	220	131	1037	50	1218	4192
% of Total	16.9%	1.3%	4.2%		2.3%	29.3%	11.6%		2.0%	.9%	2.4%		3.1%	24.7%	1.2%		
Approch %				22.4%				43.3%				5.2%					29.1%
% of Approch	75.3%	5.7%	18.9%		5.4%	67.7%	26.9%		37.3%	16.8%	45.9%		10.8%	85.1%	4.1%		

Peak Hour Analysis By Entire Intersection for the Period: 04:00pm to 05:45pm on 07/20/05

Direction	Street Name	Start Peak Hour	Peak Hr Factor	..... Volumes .....				..... Percentages		
				Left	Thru	Right	Total	Left	Thru	Right
Southbound	REDWOOD DRIVE	04:00pm	.862	376	28	82	486	77.3	5.7	16.8
Westbound	GRAVENSTEIN HWY (SR 116)		.924	53	663	249	965	5.4	68.7	25.8
Northbound			.853	48	22	63	133	36.0	16.5	47.3
Eastbound			.902	78	525	32	635	12.2	82.6	5.0

REDWOOD DRIVE

82	28	376	78
			22
			249
			====
			349
Inbound		486	
Outbound		349	
Total		835	

249

793	48
	663
	82
=====	
	78

249	
=====	
663	

	Inbound	635
525	Outbound	793
	Total	1428

	Inbound	965
	Outbound	964
	Total	1929

32

376	
525	964
63	

	Inbound	133
	Outbound	113
	Total	246

GRAVENSTEIN HWY (SR 116)

53	48	22
28		
32		
====		
113		

63

Start Time	SR 101 SB OFF RAMP Southbound				GRAVENSTEIN HWY (SR 116) Westbound				SR 101 SB ON RAMP Northbound				Eastbound				
	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	
7:00am	66	0	47	113	51	106	0	157	0	0	0	0	0	65	62	127	397
7:15	48	0	59	107	45	105	0	150	0	0	0	0	0	91	66	157	414
7:30	78	0	37	115	48	126	0	174	0	0	0	0	0	115	57	172	461
7:45	73	0	51	124	47	143	0	190	0	0	0	0	0	115	73	188	502
Hour Total	265	0	194	459	191	480	0	671	0	0	0	0	0	386	258	644	1774
8:00am	52	0	52	104	55	130	0	185	0	0	0	0	0	85	76	161	450
8:15	65	0	49	114	51	116	0	167	0	0	0	0	0	105	62	167	448
8:30	72	0	40	112	47	110	0	157	0	0	0	0	0	110	57	167	436
8:45	89	0	42	131	31	123	0	154	0	0	0	0	0	112	49	161	446
Hour Total	278	0	183	461	184	479	0	663	0	0	0	0	0	412	244	656	1780
Grand	543	0	377	920	375	959	0	1334	0	0	0	0	0	798	502	1300	3554
% of Total	15.3%	0.0%	10.6%		10.6%	27.0%	0.0%		0.0%	0.0%	0.0%		0.0%	22.5%	14.1%		
Apprch %				25.9%				37.5%									36.6%
% of Apprch	59.0%	0.0%	41.0%		28.1%	71.9%	0.0%		0.0%	0.0%	0.0%		0.0%	61.4%	38.6%		

Peak Hour Analysis By Entire Intersection for the Period: 07:00am to 08:45am on 07/20/05

Direction	Street Name	Start Peak Hour	Peak Hr Factor	..... Volumes .....				..... Percentages		
				Left	Thru	Rght	Total	Left	Thru	Rght
Southbound	SR 101 SB OFF RAMP	07:30am	.921	268	0	189	457	58.6	.0	41.3
Westbound	GRAVENSTEIN HWY (SR 116)		.942	201	515	0	716	28.0	71.9	.0
Northbound	SR 101 SB ON RAMP		.0	0	0	0	0	0.0	0.0	0.0
Eastbound			.915	0	420	268	688	.0	61.0	38.9

SR 101 SB OFF RAMP

189	0	268	0
			0
			0
			=====
			0
	Inbound	457	
	Outbound	0	
	Total	457	

0
0
0
0
0
0

0
704
515
189
0

515

Inbound	688
Outbound	704
420	Total 1392

Inbound	716
Outbound	688
201	Total 1404

268

268
420
688
0

Inbound	0
Outbound	469
Total	469
201	0
0	
268	
=====	
469	
SR 101 SB ON RAMP	

GRAVENSTEIN HWY (SR 116)

0
0
0

Start Time	SR 101 SB OFF RAMP Southbound				GRAVENSTEIN HWY (SR 116) Westbound				SR 101 SB ON RAMP Northbound				Eastbound				Total
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	
4:00pm	124	0	53	177	26	201	0	227	0	0	0	0	0	142	76	218	622
4:15	125	0	57	182	38	158	0	196	0	0	0	0	0	154	80	234	612
4:30	156	0	47	203	30	214	0	244	0	0	0	0	0	198	82	280	727
4:45	152	0	48	200	23	187	0	210	0	0	0	0	0	154	78	232	642
Hour Total	557	0	205	762	117	760	0	877	0	0	0	0	0	648	316	964	2603
5:00pm	157	0	43	200	24	189	0	213	0	0	0	0	0	160	68	228	641
5:15	152	0	44	196	22	177	0	199	0	0	0	0	0	175	57	232	627
5:30	172	0	34	206	34	155	0	189	0	0	0	0	0	179	75	254	649
5:45	166	0	47	213	31	160	0	191	0	0	0	0	0	108	60	168	572
Hour Total	647	0	168	815	111	681	0	792	0	0	0	0	0	622	260	882	2489
Grand	1204	0	373	1577	228	1441	0	1669	0	0	0	0	0	1270	576	1846	5092
% of Total	23.6%	0.0%	7.3%		4.5%	28.3%	0.0%		0.0%	0.0%	0.0%		0.0%	24.9%	11.3%		
Apprch %				31.0%				32.8%									36.3%
% of Apprch	76.3%	0.0%	23.7%		13.7%	86.3%	0.0%		0.0%	0.0%	0.0%		0.0%	68.8%	31.2%		

Peak Hour Analysis By Entire Intersection for the Period: 04:00pm to 05:45pm on 07/20/05

Direction	Street Name	Start	Peak Hr	..... Volumes .....				..... Percentages		
		Peak Hour	Factor	Left	Thru	Right	Total	Left	Thru	Right
Southbound	SR 101 SB OFF RAMP	04:30pm	.984	617	0	182	799	77.2	.0	22.7
Westbound	GRAVENSTEIN HWY (SR 116)		.887	99	767	0	866	11.4	88.5	.0
Northbound	SR 101 SB ON RAMP		.0	0	0	0	0	0.0	0.0	0.0
Eastbound			.868	0	687	285	972	.0	70.6	29.3

SR 101 SB OFF RAMP

182	0	617	0
			0
			0
			0
			=====
			0
	Inbound	799	
	Outbound	0	
	Total	799	

0
0
0
0
=====
0
0

	0
949	767
	182
=====	
	0

767

	Inbound	972
	Outbound	949
687	Total	1921

	Inbound	866
	Outbound	1304
99	Total	2170

285

617
687
1304
0

	Inbound	0
	Outbound	384
	Total	384
99		0
0		
285		
=====		
384		

GRAVENSTEIN HWY (SR 116)

0
0

SR 101 SB ON RAMP

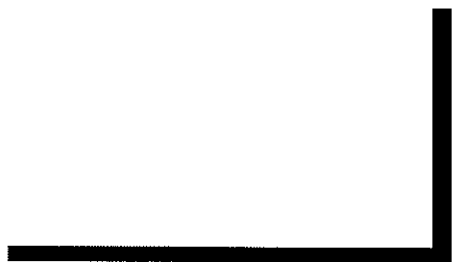
GRAVENSTEIN HWY (SR 116) SR 101 NB OFF RAMP

Start Time	Southbound				Westbound				Northbound				Eastbound				
	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	Total
7:00am	0	0	0	0	0	123	0	123	34	0	13	47	0	131	0	131	301
7:15	0	0	0	0	0	118	0	118	32	0	12	44	0	139	0	139	301
7:30	0	0	0	0	0	122	0	122	52	0	10	62	0	193	0	193	377
7:45	0	0	0	0	0	135	0	135	55	0	13	68	0	188	0	188	391
Hour Total	0	0	0	0	0	498	0	498	173	0	48	221	0	651	0	651	1370
8:00am	0	0	0	0	0	127	0	127	58	0	14	72	0	137	0	137	336
8:15	0	0	0	0	0	113	0	113	54	0	17	71	0	170	0	170	354
8:30	0	0	0	0	0	107	0	107	50	0	21	71	0	182	0	182	360
8:45	0	0	0	0	0	98	0	98	56	0	18	74	0	201	0	201	373
Hour Total	0	0	0	0	0	445	0	445	218	0	70	288	0	690	0	690	1423
Grand	0	0	0	0	0	943	0	943	391	0	118	509	0	1341	0	1341	2793
% of Total	0.0%	0.0%	0.0%		0.0%	33.8%	0.0%		14.0%	0.0%	4.2%		0.0%	48.0%	0.0%		
Apprch %								33.8%				18.2%				48.0%	
% of Apprch	0.0%	0.0%	0.0%		0.0%	100.0%	0.0%		76.8%	0.0%	23.2%		0.0%	100.0%	0.0%		

Peak Hour Analysis By Entire Intersection for the Period: 07:00am to 08:45am on 07/20/05

Direction	Street Name	Start Peak Hour	Peak Hr Factor	Volumes				Percentages		
				Left	Thru	Rght	Total	Left	Thru	Rght
Southbound		07:30am	.0	0	0	0	0	0.0	0.0	0.0
Westbound	GRAVENSTEIN HWY (SR 116)		.920	0	497	0	497	.0	100.0	.0
Northbound	SR 101 NB OFF RAMP		.948	219	0	54	273	80.2	.0	19.7
Eastbound			.891	0	688	0	688	.0	100.0	.0

0	0	0	0
			0
			0
			0
			===== 0
Inbound			0
Outbound			0
Total			0



716 219
497
.0

0

0

497

Inbound 688

Outbound 716
688 Total 1404

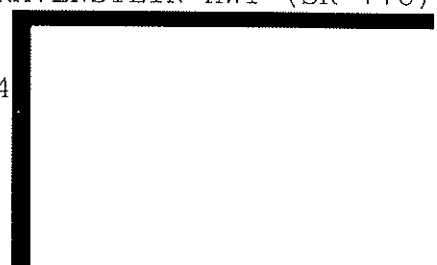
Inbound 497

Outbound 742 0
Total 1239

0

0
688 742
54

Inbound	273
Outbound	0
Total	273
0	219
0	
0	
0	
=====	
0	
SR 101 NB OFF RAMP	



GRAVENSTEIN HWY (SR 116)
54

GRAVENSTEIN HWY (SR 116) SR 101 NB OFF RAMP

Start Time	Southbound				Westbound				Northbound				Eastbound				Total
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	
4:00pm	0	0	0	0	0	137	0	137	90	0	42	132	0	266	0	266	535
4:15	0	0	0	0	0	114	0	114	82	0	41	123	0	279	0	279	516
4:30	0	0	0	0	0	153	0	153	91	0	49	140	0	354	0	354	647
4:45	0	0	0	0	0	133	0	133	77	0	57	134	0	305	0	305	572
Hour Total	0	0	0	0	0	537	0	537	340	0	189	529	0	1204	0	1204	2270
5:00pm	0	0	0	0	0	137	0	137	76	0	50	126	0	317	0	317	580
5:15	0	0	0	0	0	122	0	122	77	0	43	120	0	327	0	327	569
5:30	0	0	0	0	0	136	0	136	53	0	36	89	0	351	0	351	576
5:45	0	0	0	0	0	118	0	118	73	0	40	113	0	274	0	274	505
Hour Total	0	0	0	0	0	513	0	513	279	0	169	448	0	1269	0	1269	2230
Grand	0	0	0	0	0	1050	0	1050	619	0	358	977	0	2473	0	2473	4500
% of Total	0.0%	0.0%	0.0%		0.0%	23.3%	0.0%		13.8%	0.0%	8.0%		0.0%	55.0%	0.0%		
Approch %								23.3%				21.7%					55.0%
% of Approch	0.0%	0.0%	0.0%		0.0%	100.0%	0.0%		63.4%	0.0%	36.6%		0.0%	100.0%	0.0%		

Peak Hour Analysis By Entire Intersection for the Period: 04:00pm to 05:45pm on 07/20/05

Direction	Street Name	Start Peak Hour	Peak Hr Factor	Volumes				Percentages		
				Left	Thru	Right	Total	Left	Thru	Right
Southbound		04:30pm	.0	0	0	0	0	0.0	0.0	0.0
Westbound	GRAVENSTEIN HWY (SR 116)		.891	0	545	0	545	.0	100.0	.0
Northbound	SR 101 NB OFF RAMP		.929	321	0	199	520	61.7	.0	38.2
Eastbound			.920	0	1303	0	1303	.0	100.0	.0

0
0
0
=====

0
0
0
=====

0
0
0
=====

866 321
545
0

0

0

545

Inbound 1303

Outbound 866
1303 Total 2169

Inbound 545

Outbound 1502 0
Total 2047

0

0

0

1303 1502
199

0
0
0
=====

Inbound 520
Outbound 0
Total 520
0 321 0
0
0
=====

GRAVENSTEIN HWY (SR 116)
199

SR 101 NB OFF RAMP

Start Time	REDWOOD DRIVE Southbound				COMMERCE BLVD. Westbound				Northbound				SHOPPING Eastbound				Total
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	
7:00am	20	5	1	26	59	25	17	101	3	7	69	79	0	8	1	9	215
7:15	22	15	1	38	74	10	13	97	2	2	90	94	0	7	2	9	238
7:30	34	21	1	56	83	21	35	139	1	10	100	111	1	9	2	12	318
7:45	46	13	2	61	84	19	43	146	0	9	158	167	1	8	3	12	386
Hour Total	122	54	5	181	300	75	108	483	6	28	417	451	2	32	8	42	1157
8:00am	25	8	1	34	73	24	35	132	6	7	120	133	0	7	2	9	308
8:15	32	8	3	43	64	19	41	124	6	11	97	114	1	13	3	17	298
8:30	34	14	0	48	71	16	18	105	4	16	91	111	2	9	0	11	275
8:45	13	23	2	38	54	31	18	103	3	10	103	116	0	15	4	19	276
Hour Total	104	53	6	163	262	90	112	464	19	44	411	474	3	44	9	56	1157
Grand	226	107	11	344	562	165	220	947	25	72	828	925	5	76	17	98	2314
% of Total	9.8%	4.6%	.5%		24.3%	7.1%	9.5%		1.1%	3.1%	35.8%		.2%	3.3%	.7%		
Approch %				14.9%				40.9%				40.0%					4.2%
% of Approch	65.7%	31.1%	3.2%		59.3%	17.4%	23.2%		2.7%	7.8%	89.5%		5.1%	77.6%	17.3%		

Peak Hour Analysis By Entire Intersection for the Period: 07:00am to 08:45am on 07/19/05

Direction	Street Name	Start Peak Hour	Peak Hr Factor	..... Volumes .....				..... Percentages		
				Left	Thru	Right	Total	Left	Thru	Right
Southbound	REDWOOD DRIVE	07:30am	.795	137	50	7	194	70.6	25.7	3.6
Westbound	COMMERCE BLVD.		.926	304	83	154	541	56.1	15.3	28.4
Northbound			.786	13	37	475	525	2.4	7.0	90.4
Eastbound	SHOPPING		.735	3	37	10	50	6.0	74.0	20.0

REDWOOD DRIVE

7	50	137	
			3
			37
			154
			====
			194
	Inbound		194
	Outbound		194
	Total		388

SHOPPING

	13
103	83
	7
	====
	3

	Inbound	50
	Outbound	103
37	Total	153

10

	Inbound	525
	Outbound	364
	Total	889
304		====
50		
10		
		364

13

37

475

COMMERCE BLVD.

	Inbound	541
	Outbound	649
	Total	1190

154

83

137

37

649

475

Start Time	REDWOOD DRIVE Southbound				COMMERCE BLVD. Westbound				Northbound				SHOPPING Eastbound				Total
	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	
4:00pm	46	45	2	93	59	47	39	145	10	26	183	219	3	34	9	46	503
4:15	70	29	1	100	59	37	45	141	4	28	148	180	2	29	7	38	459
4:30	56	34	3	93	55	59	62	176	15	32	164	211	3	46	7	56	536
4:45	64	32	0	96	63	47	36	146	8	27	173	208	0	35	8	43	493
Hour Total	236	140	6	382	236	190	182	608	37	113	668	818	8	144	31	183	1991
5:00pm	74	31	0	105	57	64	61	182	16	36	163	215	1	39	9	49	551
5:15	71	44	1	116	68	60	65	193	7	28	132	167	0	29	12	41	517
5:30	50	38	2	90	72	44	66	182	10	27	170	207	2	32	6	40	519
5:45	66	36	0	102	71	67	52	190	7	30	153	190	1	27	9	37	519
Hour Total	261	149	3	413	268	235	244	747	40	121	618	779	4	127	36	167	2106
Grand	497	289	9	795	504	425	426	1355	77	234	1286	1597	12	271	67	350	4097
% of Total	12.1%	7.1%	.2%		12.3%	10.4%	10.4%		1.9%	5.7%	31.4%		.3%	6.6%	1.6%		
Apprch %				19.4%				33.1%				39.0%					8.5%
% of Apprch	62.5%	36.4%	1.1%		37.2%	31.4%	31.4%		4.8%	14.7%	80.5%		3.4%	77.4%	19.1%		

Peak Hour Analysis By Entire Intersection for the Period: 04:00pm to 05:45pm on 07/19/05

Direction	Street Name	Start Peak Hour	Peak Hr Factor	..... Volumes .....				..... Percentages		
				Left	Thru	Rght	Total	Left	Thru	Rght
Southbound	REDWOOD DRIVE	05:00pm	.890	261	149	3	413	63.1	36.0	.7
Westbound	COMMERCE BLVD.		.968	268	235	244	747	35.8	31.4	32.6
Northbound			.906	40	121	618	779	5.1	15.5	79.3
Eastbound	SHOPPING		.852	4	127	36	167	2.3	76.0	21.5

REDWOOD DRIVE

3	149	261	4
			121
			244
			=====
			369
	Inbound	413	
	Outbound	369	
	Total	782	

SHOPPING

	40
278	235
	3
=====	
	4

244

235

	Inbound	167
	Outbound	278
127	Total	445

	Inbound	747	
	Outbound	1006	268
	Total	1753	

36

261	
127	1006
618	

	Inbound	779
	Outbound	453
	Total	1232

COMMERCE BLVD.

268	40	121	618
149			
36			
=====			
453			

11

All Traffic Data
 5098 Foothills Blvd. 3-302
 Roseville, CA. 95678
 (916)771-8700

Site Code : 00000000
 Start Date: 08/24/05
 File I.D. : R22
 Page : 1

CITY OF ROHNERT PARK

Start Time	ROBERTS LAKE ROAD Southbound				GOLF COURSE DRIVE Westbound				Northbound				Eastbound				Total
	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	
7:00am	2	0	13	15	0	149	5	154	0	0	0	0	8	26	0	34	203
7:15	3	0	11	14	0	152	8	160	0	0	0	0	10	28	0	36	212
7:30	5	0	13	18	0	223	18	241	0	0	0	0	13	55	0	68	327
7:45	9	0	21	30	0	243	23	266	0	0	0	0	17	62	0	79	375
Hour Total	19	0	58	77	0	767	54	821	0	0	0	0	48	171	0	219	1117
8:00am	9	0	17	26	0	179	3	182	0	0	0	0	21	65	0	66	294
8:15	8	0	20	28	0	151	10	161	0	0	0	0	16	84	0	100	269
8:30	5	0	9	14	0	133	10	143	0	0	0	0	24	74	0	98	255
8:45	4	0	11	15	0	127	7	134	0	0	0	0	20	70	0	90	239
Hour Total	26	0	57	83	0	590	30	620	0	0	0	0	81	293	0	374	1077
Grand	45	0	115	160	0	1357	84	1441	0	0	0	0	129	464	0	593	2194
% of Total	2.1%	0.0%	5.2%		0.0%	61.9%	5.8%		0.0%	0.0%	0.0%		5.9%	21.1%	0.0%		
Apprch %				7.3%				65.7%									27.0%
% of Apprch	28.1%	0.0%	71.9%		0.0%	94.2%	5.8%		0.0%	0.0%	0.0%		21.8%	78.2%	0.0%		

Peak Hour Analysis By Entire Intersection for the Period: 07:00am to 08:45am on 08/24/05

Direction	Street Name	Start	Peak Hr	Volumes				Percentages				
				Left	Thru	Right	Total	Left	Thru	Right	Total	
Southbound	ROBERTS LAKE ROAD	07:30am	.850	31	0	71	0	102	30.3	.0	69.6	.0
Westbound	GOLF COURSE DRIVE		.799	0	796	54	0	850	.0	93.6	6.3	.0
Northbound			.0	0	0	0	0	0	0.0	0.0	0.0	0.0
Eastbound			.832	67	266	0	0	333	20.1	79.8	.0	.0

All Traffic Data
5098 Foothills Blvd. 3-302
Roseville, CA. 95678
(916) 771-8700

Site Code : 00000000
Start Date: 08/24/05
File I.D. : R22
Page : 2

CITY OF ROHNERT PARK

ROBERTS LAKE ROAD

71	0	31	67
			0
			54
			=====
			121
Inbound		102	
Outbound		121	
Total		223	

54

0
867
796
71
=====
67

796

Inbound	333
Outbound	867
266	Total 1200

Inbound	850
Outbound	297 0
Total	1147

0

31
266
0
297

Inbound	0
Outbound	0
Total	0

GOLF COURSE DRIVE

0	0	0
0		
0		
=====		
0		

CITY OF ROHNERT PARK

All Traffic Data
 5098 Foothills Blvd. 3-302
 Roseville, CA. 95678
 (916)771-8700

Site Code : 00000000
 Start Date: 08/24/05
 File I.D. : R22
 Page : 1

Start Time	ROBERTS LAKE ROAD Southbound				GOLF COURSE DRIVE Westbound				Northbound				Eastbound				Total
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	
4:00pm	19	0	42	61	0	95	15	110	0	0	0	0	36	191	0	227	398
4:15	24	0	48	72	0	117	19	136	0	0	0	0	33	203	0	236	444
4:30	22	0	53	75	0	122	15	137	0	0	0	0	55	191	0	246	458
4:45	36	0	48	84	0	129	10	139	0	0	0	0	41	203	0	244	467
Hour Total	101	0	191	292	0	463	59	522	0	0	0	0	165	786	0	953	1767
5:00pm	21	0	29	50	0	124	10	134	0	0	0	0	53	245	0	298	482
5:15	37	0	42	79	0	108	12	120	0	0	0	0	40	247	0	287	486
5:30	23	0	47	70	0	109	11	120	0	0	0	0	29	218	0	247	437
5:45	24	0	42	66	0	102	10	112	0	0	0	0	24	197	0	221	399
Hour Total	105	0	160	265	0	443	43	486	0	0	0	0	146	907	0	1053	1804
Grand	206	0	351	557	0	906	102	1008	0	0	0	0	311	1695	0	2006	3571
% of Total	5.8%	0.0%	9.8%		0.0%	25.4%	2.9%		0.0%	0.0%	0.0%		8.7%	47.5%	0.0%		
Approach %				15.6%				28.2%									56.2%
% of Approach	37.0%	0.0%	63.0%		0.0%	89.9%	10.1%		0.0%	0.0%	0.0%		15.5%	84.5%	0.0%		

Peak Hour Analysis By Entire Intersection for the Period: 04:00pm to 05:45pm on 08/24/05

Direction	Street Name	Start	Peak Hr	Volumes				Percentages				
		Peak Hour	Factor	Left	Thru	Right	Total	Left	Thru	Right		
Southbound	ROBERTS LAKE ROAD	04:30pm	.857	116	0	172	0	288	40.2	.0	59.7	.0
Westbound	GOLF COURSE DRIVE		.953	0	483	47	0	530	.0	91.1	8.8	.0
Northbound			.0	0	0	0	0	0	0.0	0.0	0.0	0.0
Eastbound			.902	109	886	0	0	1075	17.5	82.4	.0	.0

CITY OF ROHNERT PARK

All Traffic Data
5098 Foothills Blvd. 3-302
Roseville, CA. 95678
(916) 771-8700

Site Code : 00000000
Start Date: 08/24/05
File I.D. : R22
Page : 2

ROBERTS LAKE ROAD

172	0	116	189
			0
			47
			====
			236
Inbound			288
Outbound			236
Total			524

47

0	
655	483
	172
====	
189	

483

Inbound	1075
Outbound	655
886	Total 1730

Inbound	530	
Outbound	1002	0
Total	1532	

0

116	
886	1002
0	

Inbound	0
Outbound	0
Total	0

GOLF COURSE DRIVE

0	0	0
0		
0		
0		
====		
0		

Start Time	REDWOOD DRIVE Southbound				Westbound				Northbound				BUSINESS PARK DRIVE Eastbound				Total
	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	
7:00am	0	29	36	65	0	0	0	0	3	17	0	20	3	0	0	3	88
7:15	0	31	39	70	0	0	0	0	2	20	0	22	13	0	2	15	107
7:30	0	59	25	84	0	0	0	0	3	21	0	24	4	0	2	6	114
7:45	0	49	53	102	0	0	0	0	3	30	0	33	11	0	2	13	148
Hour Total	0	168	153	321	0	0	0	0	11	88	0	99	31	0	6	37	457
8:00am	0	48	49	97	0	0	0	0	5	26	0	31	13	0	4	17	145
8:15	0	36	29	65	0	0	0	0	3	28	0	31	3	0	3	6	102
8:30	0	54	17	71	0	0	0	0	3	36	0	39	13	0	1	14	124
8:45	0	46	15	61	0	0	0	0	1	51	0	52	11	0	3	14	127
Hour Total	0	184	110	294	0	0	0	0	12	141	0	153	40	0	11	51	498
Grand	0	352	263	615	0	0	0	0	23	229	0	252	71	0	17	88	955
% of Total	0.0%	36.9%	27.5%		0.0%	0.0%	0.0%		2.4%	24.0%	0.0%		7.4%	0.0%	1.8%		
Apprch %				64.4%								26.4%					9.2%
% of Apprch	0.0%	57.2%	42.8%		0.0%	0.0%	0.0%		9.1%	90.9%	0.0%		80.7%	0.0%	19.3%		

Peak Hour Analysis By Entire Intersection for the Period: 07:00am to 08:45am on 07/19/05

Direction	Street Name	Start Peak Hour	Peak Hr Factor	..... Volumes .....				..... Percentages		
				Left	Thru	Rght	Total	Left	Thru	Rght
Southbound	REDWOOD DRIVE	07:45am	.821	0	187	148	335	.0	55.8	44.1
Westbound			.0	0	0	0	0	0.0	0.0	0.0
Northbound			.859	14	120	0	134	10.4	89.5	.0
Eastbound	BUSINESS PARK DRIVE		.735	40	0	10	50	80.0	.0	20.0

BUSINESS PARK DRIVE		REDWOOD DRIVE			
162	14	148	187	0	40
	0				120
	148				0
					===== 160
		Inbound		335	
		Outbound		160	
		Total		495	
	40				
		Inbound	50		
		Outbound	162		
		Total	212		
	10				
		Inbound	134		
		Outbound	197		
		Total	331		
		0	14	120	
		187			
		10			
		===== 197			

Start Time	REDWOOD DRIVE				Westbound				Northbound				BUSINESS PARK DRIVE				Total
	Southbound	Left	Thru	Right	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	
4:00pm	0	99	11	110	0	0	0	0	4	101	0	105	36	0	13	49	264
4:15	0	115	11	126	0	0	0	0	6	102	0	108	30	0	6	36	270
4:30	0	143	11	154	0	0	0	0	3	110	0	113	42	0	10	52	319
4:45	0	135	15	150	0	0	0	0	3	116	0	119	23	0	3	26	295
Hour Total	0	492	48	540	0	0	0	0	16	429	0	445	131	0	32	163	1148
5:00pm	0	103	4	107	0	0	0	0	2	124	0	126	43	0	3	46	279
5:15	0	123	13	136	0	0	0	0	2	85	0	87	21	0	2	23	246
5:30	0	107	10	117	0	0	0	0	3	99	0	102	27	0	4	31	250
5:45	0	115	8	123	0	0	0	0	0	101	0	101	15	0	3	18	242
Hour Total	0	448	35	483	0	0	0	0	7	409	0	416	106	0	12	118	1017
Grand	0	940	83	1023	0	0	0	0	23	838	0	861	237	0	44	281	2165
% of Total	0.0%	43.4%	3.8%		0.0%	0.0%	0.0%		1.1%	38.7%	0.0%		10.9%	0.0%	2.0%		
Apprch %				47.3%								39.8%				13.0%	
% of Apprch	0.0%	91.9%	8.1%		0.0%	0.0%	0.0%		2.7%	97.3%	0.0%		84.3%	0.0%	15.7%		

Peak Hour Analysis By Entire Intersection for the Period: 04:00pm to 05:45pm on 07/19/05

Direction	Street Name	Start Peak Hour	Peak Hr Factor	Volumes				Percentages		
				Left	Thru	Right	Total	Left	Thru	Right
Southbound	REDWOOD DRIVE	04:15pm	.872	0	496	41	537	.0	92.3	7.6
Westbound			.0	0	0	0	0	0.0	0.0	0.0
Northbound			.925	14	452	0	466	3.0	96.9	.0
Eastbound	BUSINESS PARK DRIVE		.769	138	0	22	160	86.2	.0	13.7

REDWOOD DRIVE	
41	496
	0
	138
	452
	0
	=====
	590
Inbound	537
Outbound	590
Total	1127

BUSINESS PARK DRIVE	
	14
55	0
	41
	=====
	138

	0
	=====
	0

Inbound	160
Outbound	55
0	Total
	215
	=====
	22

Inbound	0
Outbound	0
0	Total
	0
	=====
	0
	0
	0
	0

Inbound	466
Outbound	518
Total	984
0	14
496	452
22	
=====	
518	

0

Start Time	REDWOOD DRIVE Southbound				SR 101 SB RAMPS Westbound				Northbound				WILFRED AVENUE Eastbound				Total
	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	
7:00am	52	22	1	75	43	3	77	123	1	17	5	23	0	1	5	6	227
7:15	63	42	4	109	38	0	100	138	2	29	2	33	3	0	2	5	285
7:30	73	53	2	128	46	0	123	169	2	26	1	29	0	5	0	5	331
7:45	59	49	6	114	59	3	163	225	0	41	3	44	4	1	5	10	393
Hour Total	247	166	13	426	186	6	463	655	5	113	11	129	7	7	12	26	1236
8:00am	57	38	1	96	50	0	120	170	0	32	3	35	1	3	2	6	307
8:15	61	42	2	105	32	1	111	144	1	38	4	43	2	1	4	7	299
8:30	64	49	4	117	21	1	99	121	1	43	8	52	1	1	1	3	293
8:45	54	39	3	96	34	1	115	150	1	50	4	55	0	2	0	2	303
Hour Total	236	168	10	414	137	3	445	585	3	163	19	185	4	7	7	18	1202
Grand	483	334	23	840	323	9	908	1240	8	276	30	314	11	14	19	44	2438
% of Total	19.8%	13.7%	.9%		13.2%	.4%	37.2%		.3%	11.3%	1.2%		.5%	.6%	.8%		
Apprch %				34.5%			50.9%					12.9%					1.8%
% of Apprch	57.5%	39.8%	2.7%		26.0%	.7%	73.2%		2.5%	87.9%	9.6%		25.0%	31.8%	43.2%		

Peak Hour Analysis By Entire Intersection for the Period: 07:00am to 08:45am on 07/19/05

Direction	Street Name	Start Peak Hour	Peak Hr Factor	..... Volumes .....				..... Percentages		
				Left	Thru	Rght	Total	Left	Thru	Rght
Southbound	REDWOOD DRIVE	07:30am	.865	250	182	11	443	56.4	41.0	2.4
Westbound	SR 101 SB RAMPS		.787	187	4	517	708	26.4	.5	73.0
Northbound			.858	3	137	11	151	1.9	90.7	7.2
Eastbound	WILFRED AVENUE		.700	7	10	11	28	25.0	35.7	39.2

REDWOOD DRIVE

11	182	250	7
			137
			517
			====
			661

Inbound 443
 Outbound 661
 Total 1104

517

WILFRED AVENUE

	3
18	4
	11

7

4

Inbound	28
Outbound	18
10 Total	46

11

Inbound	708
Outbound	271 187
Total	979

250
 10 271
 11

Inbound	151
Outbound	380
Total	531

SR 101 SB RAMPS

187	3	137
182		
11		
====		
380		

11

Start Time	REDWOOD DRIVE Southbound				SR 101 SB RAMPS Westbound				Northbound				WILFRED AVENUE Eastbound				Total
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	
4:00pm	48	101	6	155	53	2	144	199	14	120	6	140	2	1	6	9	503
4:15	53	74	11	138	60	5	119	184	4	143	9	156	1	3	3	7	485
4:30	56	93	9	158	71	1	160	232	8	158	15	181	1	3	3	7	578
4:45	33	61	5	99	65	3	116	184	4	88	10	102	1	0	8	9	394
Hour Total	190	329	31	550	249	11	539	799	30	509	40	579	5	7	20	32	1960
5:00pm	65	76	9	150	44	2	131	177	10	147	12	169	2	4	5	11	507
5:15	54	108	8	170	53	1	142	196	6	122	15	143	1	1	2	4	513
5:30	58	97	5	160	43	1	140	184	9	137	18	164	1	1	4	6	514
5:45	44	83	13	140	47	5	157	209	10	109	14	133	0	3	2	5	487
Hour Total	221	364	35	620	187	9	570	766	35	515	59	609	4	9	13	26	2021
Grand	411	693	66	1170	436	20	1109	1565	65	1024	99	1188	9	16	33	58	3981
% of Total	10.3%	17.4%	1.7%		11.0%	.5%	27.9%		1.6%	25.7%	2.5%		.2%	.4%	.8%		
Apprch %				29.4%				39.3%				29.8%					1.5%
% of Apprch	35.1%	59.2%	5.6%		27.9%	1.3%	70.9%		5.5%	86.2%	8.3%		15.5%	27.6%	56.9%		

Peak Hour Analysis By Entire Intersection for the Period: 04:00pm to 05:45pm on 07/19/05

Direction	Street Name	Start	Peak Hr	..... Volumes .....				..... Percentages		
		Peak Hour	Factor	Left	Thru	Right	Total	Left	Thru	Right
Southbound	REDWOOD DRIVE	05:00pm	.912	221	364	35	620	35.6	58.7	5.6
Westbound	SR 101 SB RAMPS		.916	187	9	570	766	24.4	1.1	74.4
Northbound			.901	35	515	59	609	5.7	84.5	9.6
Eastbound	WILFRED AVENUE		.591	4	9	13	26	15.3	34.6	50.0

REDWOOD DRIVE			
35	364	221	4
			515
			570
			=====
			1089
	Inbound	620	
	Outbound	1089	
	Total	1709	

	570
--	-----

WILFRED AVENUE

	35
79	9
	35
=====	
	4

	9
--	---

	Inbound	26
	Outbound	79
9	Total	105

	Inbound	766
	Outbound	289 187
	Total	1055

13

	221
	9 289
	59

	Inbound	609
	Outbound	564
	Total	1173
187	35	515
364		
13		
=====		
564		

SR 101 SB RAMPS

59

Start Time	STONY POINT ROAD Southbound				GRAVENSTEIN HWY (SR 116) Westbound				Northbound				Eastbound				
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	
7:00am	4	66	3	73	37	53	9	99	11	29	19	59	21	68	54	143	374
7:15	9	60	14	83	26	63	10	99	16	45	18	79	24	75	69	168	429
7:30	13	83	14	110	22	38	14	74	16	54	22	92	19	81	77	177	453
7:45	12	53	11	76	49	77	20	146	26	51	23	100	31	117	66	214	536
Hour Total	38	262	42	342	134	231	53	418	69	179	82	330	95	341	266	702	1792
8:00am	12	69	16	97	37	63	7	107	33	42	17	92	32	82	63	177	473
8:15	21	60	12	93	28	69	5	102	22	53	20	95	23	93	79	195	485
8:30	11	69	11	91	42	74	12	128	35	46	23	104	28	97	68	193	516
8:45	15	61	10	86	34	69	11	114	36	39	21	96	32	101	59	192	488
Hour Total	59	259	49	367	141	275	35	451	126	180	81	387	115	373	269	757	1962
Grand	97	521	91	709	275	506	88	869	195	359	163	717	210	714	535	1459	3754
% of Total	2.6%	13.9%	2.4%		7.3%	13.5%	2.3%		5.2%	9.6%	4.3%		5.6%	19.0%	14.3%		
Apprch %				18.9%				23.1%				19.1%				38.9%	
% of Apprch	13.7%	73.5%	12.8%		31.6%	58.2%	10.1%		27.2%	50.1%	22.7%		14.4%	48.9%	36.7%		

Peak Hour Analysis By Entire Intersection for the Period: 07:00am to 08:45am on 07/19/05

Direction	Street Name	Start Peak Hour	Peak Hr Factor	..... Volumes .....				..... Percentages		
				Left	Thru	Right	Total	Left	Thru	Right
Southbound	STONY POINT ROAD	07:45am	.920	56	251	50	357	15.6	70.3	14.0
Westbound	GRAVENSTEIN HWY (SR 116)		.827	156	283	44	483	32.2	58.5	9.1
Northbound			.940	116	192	83	391	29.6	49.1	21.2
Eastbound			.910	114	389	276	779	14.6	49.9	35.4

STONY POINT ROAD

50	251	56	114
			192
			44
			====
			350
	Inbound	357	
	Outbound	350	
	Total	707	

44

116
449 283
50

114

283

Inbound 779
Outbound 449
389 Total 1228

276

Inbound 483
Outbound 528 156
Total 1011

56
389 528
83

Inbound 391
Outbound 683
Total 1074

156 116 192
251
276
====
683

GRAVENSTEIN HWY (SR 116)

83

Start Time	STONY POINT ROAD Southbound				GRAVENSTEIN HWY (SR 116) Westbound				Northbound				Eastbound				
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Total
4:00pm	21	77	52	150	21	124	28	173	79	135	32	246	36	94	31	161	730
4:15	25	74	41	140	17	118	31	166	88	132	29	249	39	89	27	155	710
4:30	18	83	55	156	20	131	18	169	67	125	30	222	28	117	39	184	731
4:45	19	78	49	146	32	119	13	164	88	120	36	246	20	73	49	142	698
Hour Total	83	312	197	592	90	492	90	672	322	512	129	963	123	373	146	642	2869
5:00pm	22	83	53	158	26	134	29	189	67	107	13	187	27	107	39	173	707
5:15	28	94	52	174	32	125	26	183	94	133	20	247	40	82	36	158	762
5:30	14	71	47	132	25	132	25	182	70	149	30	249	26	111	48	185	748
5:45	24	61	24	109	21	108	22	151	105	98	25	228	12	93	43	148	636
Hour Total	88	309	176	573	104	499	102	705	336	487	88	911	105	393	166	664	2853
Grand	171	621	373	1165	194	991	192	1377	658	999	217	1874	228	766	312	1306	5722
% of Total	3.0%	10.9%	6.5%		3.4%	17.3%	3.4%		11.5%	17.5%	3.8%		4.0%	13.4%	5.5%		
Apprch %				20.4%				24.1%				32.8%					22.8%
% of Apprch	14.7%	53.3%	32.0%		14.1%	72.0%	13.9%		35.1%	53.3%	11.6%		17.5%	58.7%	23.9%		

Peak Hour Analysis By Entire Intersection for the Period: 04:00pm to 05:45pm on 07/19/05

Direction	Street Name	Start	Peak Hr	..... Volumes .....				..... Percentages		
		Peak Hour	Factor	Left	Thru	Right	Total	Left	Thru	Right
Southbound	STONY POINT ROAD	04:45pm	.876	83	326	201	610	13.6	53.4	32.9
Westbound	GRAVENSTEIN HWY (SR 116)		.950	115	510	93	718	16.0	71.0	12.9
Northbound			.933	319	509	101	929	34.3	54.7	10.8
Eastbound			.889	113	373	172	658	17.1	56.6	26.1

STONY POINT ROAD

201	326	83	113
			509
			93
			====
			715
Inbound		610	
Outbound		715	
Total		1325	

93

1030	319
	510
	201

	113

510

Inbound	658
Outbound	1030
373	Total 1688

Inbound	718
Outbound	557
115	Total 1275

172

83
373
101

Inbound	929
Outbound	613
Total	1542

GRAVENSTEIN HWY (SR 116)

115	319	509
326		
172		
====		
613		

101

Start Time	LABATH AVENUE Southbound				WILFRED AVENUE Westbound				Northbound				Eastbound				
	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	Total
7:00am	0	0	0	0	0	5	0	5	1	1	0	2	2	4	0	6	13
7:15	1	0	0	1	2	4	0	6	0	0	1	1	0	3	0	3	11
7:30	0	0	0	0	0	5	0	5	0	0	0	0	0	4	1	5	10
7:45	2	0	0	2	0	5	0	5	0	0	0	0	0	6	0	6	13
Hour Total	3	0	0	3	2	19	0	21	1	1	1	3	2	17	1	20	47
8:00am	0	0	1	1	0	1	1	2	0	0	0	0	0	4	0	4	7
8:15	1	0	0	1	0	4	0	4	0	0	1	1	0	4	0	4	10
8:30	0	0	0	0	0	6	0	6	0	0	0	0	0	0	0	0	6
8:45	1	0	0	1	0	8	0	8	0	0	0	0	0	2	0	2	11
Hour Total	2	0	1	3	0	19	1	20	0	0	1	1	0	10	0	10	34
Grand	5	0	1	6	2	38	1	41	1	1	2	4	2	27	1	30	81
% of Total	6.2%	0.0%	1.2%		2.5%	46.9%	1.2%		1.2%	1.2%	2.5%		2.5%	33.3%	1.2%		
Apprch %				7.4%				50.6%				4.9%					37.0%
% of Apprch	83.3%	0.0%	16.7%		4.9%	92.7%	2.4%		25.0%	25.0%	50.0%		6.7%	90.0%	3.3%		

Peak Hour Analysis By Entire Intersection for the Period: 07:00am to 08:45am on 07/19/05

Direction	Street Name	Start Peak Hour	Peak Hr Factor	..... Volumes .....				..... Percentages		
				Left	Thru	Rght	Total	Left	Thru	Rght
Southbound	LABATH AVENUE	07:00am	.375	3	0	0	3	100.0	.0	.0
Westbound	WILFRED AVENUE		.875	2	19	0	21	9.5	90.4	.0
Northbound			.375	1	1	1	3	33.3	33.3	33.3
Eastbound			.833	2	17	1	20	10.0	85.0	5.0

LABATH AVENUE

0	0	3	2
			1
			0
			=====
			3
	Inbound	3	
	Outbound	3	
	Total	6	

	1
20	19
	0
=====	
	2

	0
=====	
	19

	Inbound	20
	Outbound	20
17	Total	40
=====		
		1

	Inbound	21
	Outbound	21
	Total	42
=====		
		2

	3
	17
	1
	21

	Inbound	3
	Outbound	3
	Total	6
2		1
0		
1		
=====		
3		

WILFRED AVENUE

1	
---	--

Start Time	LABATH AVENUE Southbound				WILFRED AVENUE Westbound				Northbound				Eastbound				Total
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	
4:00pm	0	0	0	0	0	19	0	19	0	0	0	0	0	6	0	6	25
4:15	1	0	0	1	1	17	2	20	0	0	0	0	0	4	0	4	25
4:30	1	0	0	1	2	16	0	18	0	0	1	1	0	4	0	4	24
4:45	2	1	0	3	0	10	1	11	0	0	0	0	0	2	0	2	16
Hour Total	4	1	0	5	3	62	3	68	0	0	1	1	0	16	0	16	90
5:00pm	0	1	0	1	0	18	1	19	0	0	1	1	0	4	0	4	25
5:15	3	0	0	3	0	15	1	16	0	0	0	0	0	0	0	0	19
5:30	1	0	0	1	0	16	0	16	1	0	0	1	0	3	0	3	21
5:45	2	0	0	2	0	22	2	24	0	0	1	1	0	1	0	1	28
Hour Total	6	1	0	7	0	71	4	75	1	0	2	3	0	8	0	8	93
Grand	10	2	0	12	3	133	7	143	1	0	3	4	0	24	0	24	183
% of Total	5.5%	1.1%	0.0%		1.6%	72.7%	3.8%		.5%	0.0%	1.6%		0.0%	13.1%	0.0%		
Approch %				6.6%				78.1%				2.2%					13.1%
% of Approch	83.3%	16.7%	0.0%		2.1%	93.0%	4.9%		25.0%	0.0%	75.0%		0.0%	100.0%	0.0%		

Peak Hour Analysis By Entire Intersection for the Period: 04:00pm to 05:45pm on 07/19/05

Direction	Street Name	Start Peak Hour	Peak Hr Factor	..... Volumes .....				..... Percentages		
				Left	Thru	Right	Total	Left	Thru	Right
Southbound	LABATH AVENUE	05:00pm	.583	6	1	0	7	85.7	14.2	.0
Westbound	WILFRED AVENUE		.781	0	71	4	75	.0	94.6	5.3
Northbound			.750	1	0	2	3	33.3	.0	66.6
Eastbound			.500	0	8	0	8	.0	100.0	.0

LABATH AVENUE

0	1	6	0
			0
			4
			=====
			4
Inbound		7	
Outbound		4	
Total		11	

4

	1
72	71
	0
=====	
	0

71

Inbound	8
Outbound	72
Total	80

Inbound	75	
Outbound	16	0
Total	91	

0

6	
8	16
2	

Inbound	3
Outbound	1
Total	4

0	1	0
1		
0		
=====		
1		

WILFRED AVENUE

2

Start Time	DOWDELL AVENUE Southbound				WILFRED AVENUE Westbound				Northbound				Eastbound				Total
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	
7:00am	4	0	0	4	0	5	0	5	0	0	0	0	0	3	0	3	12
7:15	0	0	2	2	0	4	1	5	0	0	0	0	1	5	0	6	13
7:30	1	0	0	1	0	5	0	5	0	0	0	0	0	4	0	4	10
7:45	2	1	0	3	2	5	2	9	0	0	0	0	0	8	0	8	20
Hour Total	7	1	2	10	2	19	3	24	0	0	0	0	1	20	0	21	55
8:00am	3	1	1	5	0	1	0	1	0	1	0	1	1	3	0	4	11
8:15	0	0	1	1	1	3	0	4	0	0	1	1	0	6	0	6	12
8:30	2	0	0	2	0	6	0	6	0	0	1	1	0	0	0	0	9
8:45	0	0	2	2	0	5	0	5	0	0	0	0	0	3	0	3	10
Hour Total	5	1	4	10	1	15	0	16	0	1	2	3	1	12	0	13	42
Grand	12	2	6	20	3	34	3	40	0	1	2	3	2	32	0	34	97
% of Total	12.4%	2.1%	6.2%		3.1%	35.1%	3.1%		0.0%	1.0%	2.1%		2.1%	33.0%	0.0%		
Approch %				20.6%				41.2%				3.1%					35.1%
% of Approch	60.0%	10.0%	30.0%		7.5%	85.0%	7.5%		0.0%	33.3%	66.7%		5.9%	94.1%	0.0%		

Peak Hour Analysis By Entire Intersection for the Period: 07:00am to 08:45am on 07/19/05

Direction	Street Name	Start Peak Hour	Peak Hr Factor	..... Volumes .....				..... Percentages		
				Left	Thru	Right	Total	Left	Thru	Right
Southbound	DOWDELL AVENUE	07:00am	.625	7	1	2	10	70.0	10.0	20.0
Westbound	WILFRED AVENUE		.667	2	19	3	24	8.3	79.1	12.5
Northbound			.0	0	0	0	0	0.0	0.0	0.0
Eastbound			.656	1	20	0	21	4.7	95.2	.0

DOWDELL AVENUE

2	1	7	1
			0
			3
			=====
			4
	Inbound	10	
	Outbound	4	
	Total	14	

3

19

21 0
 19
 2

1

Inbound	21
Outbound	21
Total	42

Inbound	24	
Outbound	27	2
Total	51	

0

7
 20 27
 0

Inbound	0
Outbound	3
Total	3

WILFRED AVENUE

2	0	0
1		
0		
=====		
3		

Start Time	DOWDELL AVENUE Southbound				WILFRED AVENUE Westbound				Northbound				Eastbound				Total
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	
4:00pm	3	0	0	3	0	19	3	22	0	0	0	0	0	6	0	6	31
4:15	1	2	2	5	0	18	2	20	1	1	2	4	1	4	0	5	34
4:30	0	0	2	2	0	16	2	18	0	1	1	2	0	6	0	6	28
4:45	5	0	0	5	0	11	1	12	0	0	0	0	0	4	0	4	21
Hour Total	9	2	4	15	0	64	8	72	1	2	3	6	1	20	0	21	114
5:00pm	5	0	2	7	0	17	4	21	0	1	2	3	0	4	1	5	36
5:15	1	0	2	3	0	14	1	15	0	0	0	0	0	3	0	3	21
5:30	2	0	2	4	0	14	1	15	0	0	0	0	0	4	0	4	23
5:45	3	0	0	3	2	24	2	28	0	0	0	0	2	2	0	4	35
Hour Total	11	0	6	17	2	69	8	79	0	1	2	3	2	13	1	16	115
Grand	20	2	10	32	2	133	16	151	1	3	5	9	3	33	1	37	229
% of Total	8.7%	.9%	4.4%		.9%	58.1%	7.0%		.4%	1.3%	2.2%		1.3%	14.4%	.4%		
Approch %				14.0%				65.9%				3.9%				16.2%	
% of Approch	62.5%	6.2%	31.2%		1.3%	88.1%	10.6%		11.1%	33.3%	55.6%		8.1%	89.2%	2.7%		

Peak Hour Analysis By Entire Intersection for the Period: 04:00pm to 05:45pm on 07/19/05

Direction	Street Name	Start Peak Hour	Peak Hr Factor	..... Volumes .....				..... Percentages		
				Left	Thru	Right	Total	Left	Thru	Right
Southbound	DOWDELL AVENUE	04:15pm	.679	11	2	6	19	57.8	10.5	31.5
Westbound	WILFRED AVENUE		.845	0	62	9	71	.0	87.3	12.6
Northbound			.562	1	3	5	9	11.1	33.3	55.5
Eastbound			.833	1	18	1	20	5.0	90.0	5.0

DOWDELL AVENUE

6 | 2 | 11

1
3
9
=====
13

Inbound 19
Outbound 13
Total 32

9

69 1
 62
 6

1

62

Inbound 20
Outbound 69
18 Total 89

1

Inbound 71
Outbound 34 0
Total 105

11
18 34
5

WILFRED AVENUE

Inbound 9
Outbound 3
Total 12

0 | 1 | 3
2 | |
1 | |
=====
3

5

Start Time	COMMERCE BLVD. Southbound				AUTO CENTER Westbound				Northbound				SR 101 NB RAMPS Eastbound				Total
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	
7:00am	0	83	84	167	0	0	0	0	93	29	0	122	37	0	5	42	331
7:15	2	90	90	182	0	0	0	0	123	25	1	149	31	0	7	38	369
7:30	0	131	105	236	0	0	0	0	146	46	0	192	20	0	11	31	459
7:45	3	198	99	300	0	0	0	0	97	41	1	139	31	0	14	45	484
Hour Total	5	502	378	885	0	0	0	0	459	141	2	602	119	0	37	156	1643
8:00am	2	119	89	210	1	0	0	1	118	49	2	169	22	0	8	30	410
8:15	1	114	92	207	2	2	2	6	104	51	4	159	36	0	8	44	416
8:30	2	96	88	186	3	1	2	6	110	42	2	154	23	0	13	36	382
8:45	1	101	81	183	0	0	1	1	85	46	2	133	35	0	8	43	360
Hour Total	6	430	350	786	6	3	5	14	417	188	10	615	116	0	37	153	1568
Grand	11	932	728	1671	6	3	5	14	876	329	12	1217	235	0	74	309	3211
% of Total	.3%	29.0%	22.7%		.2%	.1%	.2%		27.3%	10.2%	.4%		7.3%	0.0%	2.3%		
Approch %				52.0%				.4%				37.9%					9.6%
% of Approch	.7%	55.8%	43.6%		42.9%	21.4%	35.7%		72.0%	27.0%	1.0%		76.1%	0.0%	23.9%		

Peak Hour Analysis By Entire Intersection for the Period: 07:00am to 08:45am on 07/19/05

Direction	Street Name	Start Peak Hour	Peak Hr Factor	..... Volumes .....				..... Percentages		
				Left	Thru	Right	Total	Left	Thru	Right
Southbound	COMMERCE BLVD.	07:30am	.794	6	562	385	953	.6	58.9	40.3
Westbound	AUTO CENTER		.292	3	2	2	7	42.8	28.5	28.5
Northbound			.858	465	187	7	659	70.5	28.3	1.0
Eastbound	SR 101 NB RAMPS		.833	109	0	41	150	72.6	.0	27.3

COMMERCE BLVD.		
385	562	6
		109
		187
		2
		=====
		298
Inbound		953
Outbound		298
Total		1251

SR 101 NB RAMPS

465
852
2
385

109

Inbound	150
Outbound	852
0	Total
	1002

41

Inbound	659
Outbound	606
Total	1265

3	465	187
562		
41		
=====		
606		

Inbound	7
Outbound	13
Total	20

2

6
0
7
13

AUTO CENTER

7

Start Time	COMMERCE BLVD. Southbound				AUTO CENTER Westbound				Northbound				SR 101 NB RAMPS Eastbound				Total
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	
4:00pm	1	120	125	246	4	1	1	6	111	125	1	237	62	1	9	72	561
4:15	3	118	119	240	4	1	2	7	98	131	2	231	68	1	8	77	555
4:30	3	102	125	230	1	0	2	3	143	146	0	289	77	1	5	83	605
4:45	0	102	101	203	1	1	0	2	112	134	0	246	68	0	7	75	526
Hour Total	7	442	470	919	10	3	5	18	464	536	3	1003	275	3	29	307	2247
5:00pm	1	107	123	231	2	1	1	4	148	137	0	285	82	1	9	92	612
5:15	1	90	105	196	0	0	1	1	105	122	1	228	93	0	4	97	522
5:30	1	104	124	229	1	0	0	1	127	130	0	257	78	0	8	86	573
5:45	1	101	97	199	1	0	1	2	84	131	0	215	94	0	5	99	515
Hour Total	4	402	449	855	4	1	3	8	464	520	1	985	347	1	26	374	2222
Grand	11	844	919	1774	14	4	8	26	928	1056	4	1988	622	4	55	681	4469
% of Total	.2%	18.9%	20.6%		.3%	.1%	.2%		20.8%	23.6%	.1%		13.9%	.1%	1.2%		
Approch %				39.7%				.6%				44.5%				15.2%	
% of Approch	.6%	47.6%	51.8%		53.8%	15.4%	30.8%		46.7%	53.1%	.2%		91.3%	.6%	8.1%		

Peak Hour Analysis By Entire Intersection for the Period: 04:00pm to 05:45pm on 07/19/05

Direction	Street Name	Start Peak Hour	Peak Hr Factor	Volumes				Percentages		
				Left	Thru	Right	Total	Left	Thru	Right
Southbound	COMMERCE BLVD.	04:15pm	.942	7	429	468	904	.7	47.4	51.7
Westbound	AUTO CENTER		.571	8	3	5	16	50.0	18.7	31.2
Northbound			.909	501	548	2	1051	47.6	52.1	.1
Eastbound	SR 101 NB RAMPS		.889	295	3	29	327	90.2	.9	8.8

COMMERCE BLVD.			
468	429	7	295
			548
			5
			====
			848
	Inbound	904	
	Outbound	848	
	Total	1752	

SR 101 NB RAMPS

501
972 3
468

295

Inbound	327
Outbound	972
3 Total	1299

29

Inbound	1051	
Outbound	466	
Total	1517	
8	501	548
429		
29		
====		
466		

5

5

3

Inbound	16	
Outbound	12	8
Total	28	

7

3

12

2

AUTO CENTER

2

Start Time	COMMERCE BLVD. Southbound				GOLF COURSE DRIVE Westbound				Northbound				Eastbound				Total
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	
7:00am	19	78	0	97	89	0	65	154	0	36	30	66	0	0	0	0	317
7:15	32	86	0	118	95	0	80	175	0	17	39	56	0	0	0	0	349
7:30	40	105	0	145	131	0	106	237	0	32	34	66	0	0	0	0	448
7:45	59	150	0	209	148	0	117	265	0	31	41	72	0	0	0	0	546
Hour Total	150	419	0	569	463	0	368	831	0	116	144	260	0	0	0	0	1660
8:00am	48	103	0	151	107	0	91	198	0	41	30	71	0	0	0	0	420
8:15	44	97	0	141	112	0	83	195	0	43	43	86	0	0	0	0	422
8:30	44	90	0	134	91	0	73	164	0	32	36	68	0	0	0	0	366
8:45	41	90	0	131	93	0	66	159	0	37	45	82	0	0	0	0	372
Hour Total	177	380	0	557	403	0	313	716	0	153	154	307	0	0	0	0	1580
Grand	327	799	0	1126	866	0	681	1547	0	269	298	567	0	0	0	0	3240
% of Total	10.1%	24.7%	0.0%		26.7%	0.0%	21.0%		0.0%	8.3%	9.2%		0.0%	0.0%	0.0%		
Approch %				34.8%				47.7%				17.5%					
% of Approch	29.0%	71.0%	0.0%		56.0%	0.0%	44.0%		0.0%	47.4%	52.6%		0.0%	0.0%	0.0%		

Peak Hour Analysis By Entire Intersection for the Period: 07:00am to 08:45am on 07/19/05

Direction	Street Name	Start Peak Hour	Peak Hr Factor	..... Volumes .....				..... Percentages		
				Left	Thru	Right	Total	Left	Thru	Right
Southbound	COMMERCE BLVD.	07:30am	.773	191	455	0	646	29.5	70.4	.0
Westbound	GOLF COURSE DRIVE		.844	498	0	397	895	55.6	.0	44.3
Northbound			.858	0	147	148	295	.0	49.8	50.1
Eastbound			.0	0	0	0	0	0.0	0.0	0.0

COMMERCE BLVD.

0	455	191	0
			147
			397
			=====
			544
Inbound			646
Outbound			544
Total			1190

397

0 0
 0 0
 0 0

0

0

Inbound 0
 Outbound 0
 Total 0

Inbound 895
 Outbound 339 498
 Total 1234

0

191
 0 339
 148

Inbound 295
 Outbound 953
 Total 1248

GOLF COURSE DRIVE

498	0	147	148
455			
0			
=====			
953			

Start Time	COMMERCE BLVD. Southbound				GOLF COURSE DRIVE Westbound				Northbound				Eastbound				
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	
4:00pm	110	156	0	266	90	0	77	167	0	72	116	188	0	0	0	0	621
4:15	103	144	0	247	96	0	72	168	0	75	128	203	0	0	0	0	618
4:30	125	141	0	266	91	0	78	169	0	98	129	227	0	0	0	0	662
4:45	145	128	0	273	73	0	99	172	0	48	154	202	0	0	0	0	647
Hour Total	483	569	0	1052	350	0	326	676	0	293	527	820	0	0	0	0	2548
5:00pm	147	130	0	277	100	0	103	203	0	80	143	223	0	0	0	0	703
5:15	122	111	0	233	84	0	117	201	0	76	145	221	0	0	0	0	655
5:30	139	115	0	254	114	0	114	228	0	70	140	210	0	0	0	0	692
5:45	139	107	0	246	92	0	113	205	0	83	143	226	0	0	0	0	677
Hour Total	547	463	0	1010	390	0	447	837	0	309	571	880	0	0	0	0	2727
Grand	1030	1032	0	2062	740	0	773	1513	0	602	1098	1700	0	0	0	0	5275
% of Total	19.5%	19.6%	0.0%		14.0%	0.0%	14.7%		0.0%	11.4%	20.8%		0.0%	0.0%	0.0%		
Approch %				39.1%				28.7%				32.2%					
% of Approch	50.0%	50.0%	0.0%		48.9%	0.0%	51.1%		0.0%	35.4%	64.6%		0.0%	0.0%	0.0%		

Peak Hour Analysis By Entire Intersection for the Period: 04:00pm to 05:45pm on 07/19/05

Direction	Street Name	Start Peak Hour	Peak Hr Factor	..... Volumes .....				..... Percentages		
				Left	Thru	Right	Total	Left	Thru	Right
Southbound	COMMERCE BLVD.	05:00pm	.912	547	463	0	1010	54.1	45.8	.0
Westbound	GOLF COURSE DRIVE		.918	390	0	447	837	46.5	.0	53.4
Northbound			.973	0	309	571	880	.0	35.1	64.8
Eastbound			.0	0	0	0	0	0.0	0.0	0.0

COMMERCE BLVD.

0	463	547	0
			309
			447
			=====
			756
Inbound		1010	
Outbound		756	
Total		1766	

447

0	0
0	0
0	0

0

Inbound	0
Outbound	0
Total	0

Inbound	837
Outbound	1118 390
Total	1955

0

547
0 1118
571

Inbound	880
Outbound	853
Total	1733

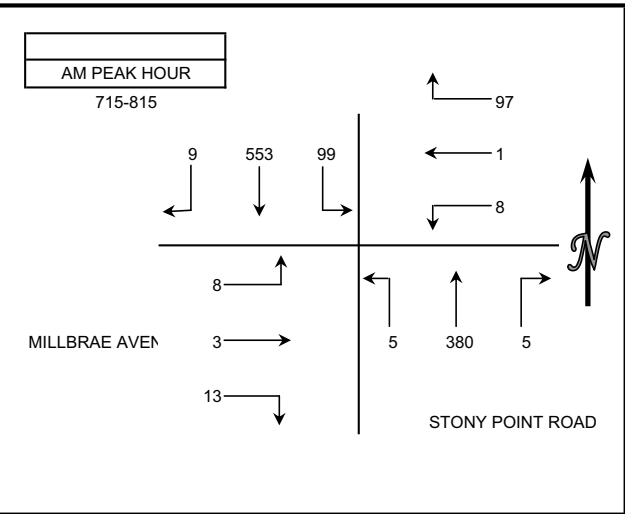
GOLF COURSE DRIVE

390	0	309	571
463			
0			
=====			
853			

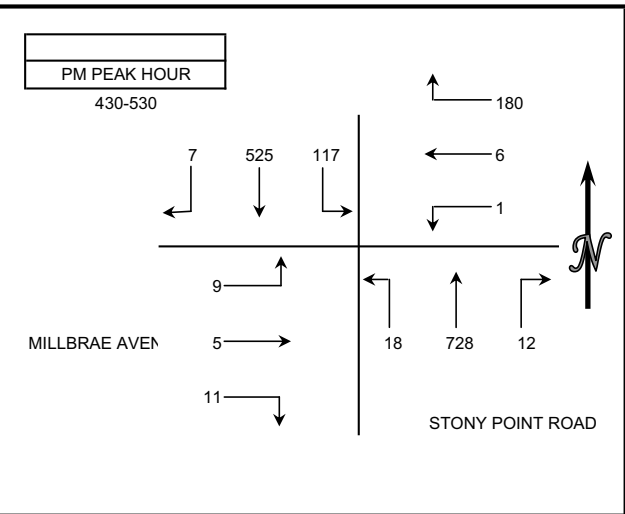
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: KIMLEY-HORN AND ASSOCIATES
 PROJECT: ROHNERT PARK
 DATE: WEDNESDAY, NOVEMBER 8TH 2006
 PERIODS: 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM
 INTERSECTION: N/S STONY POINT ROAD
 E/W MILLBRAE AVENUE

15 MIN COUNTS														7:00 AM TO 9:00 AM													
PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL														
700-715	1	102	27	24	1	4	1	79	1	2	0	0	242														
715-730	2	125	26	28	0	3	1	105	2	4	1	1	298														
730-745	3	138	27	23	1	3	1	96	0	5	0	4	301														
745-800	3	149	22	24	0	1	1	88	2	4	0	1	295														
800-815	1	141	24	22	0	1	2	91	1	0	2	2	287														
815-830	1	123	21	19	0	1	0	79	0	5	0	1	250														
830-845	2	107	22	18	1	2	1	86	1	0	1	0	241														
845-900	0	83	18	10	0	1	1	71	0	1	1	1	187														
HOOR TOTALS																											
TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL														
700-800	9	514	102	99	2	11	4	368	5	15	1	6	1136														
715-815	9	553	99	97	1	8	5	380	5	13	3	8	1181														
730-830	8	551	94	88	1	6	4	354	3	14	2	8	1133														
745-845	7	520	89	83	1	5	4	344	4	9	3	4	1073														
800-900	4	454	85	69	1	5	4	327	2	6	4	4	965														



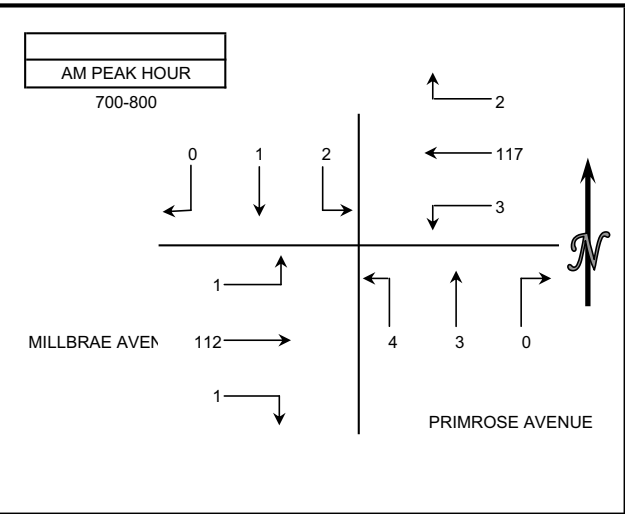
15 MIN COUNTS														4:00 PM TO 6:00 PM													
PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL														
400-415	2	118	20	31	0	2	3	182	7	3	0	0	368														
415-430	2	110	21	37	1	1	4	176	3	1	0	1	357														
430-445	2	121	31	43	1	0	2	188	4	3	2	3	400														
445-500	4	135	30	48	3	0	2	186	6	4	1	1	420														
500-515	0	138	30	43	2	0	3	177	3	1	1	2	400														
515-530	1	131	26	46	0	1	5	177	5	3	1	3	399														
530-545	1	123	28	38	0	1	1	183	4	0	1	1	381														
545-600	3	114	26	38	2	2	5	163	5	1	1	0	360														
HOOR TOTALS																											
TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL														
400-500	10	484	102	159	5	3	11	732	20	11	3	5	1545														
415-515	8	504	112	171	7	1	11	727	16	9	4	7	1577														
430-530	7	525	117	180	6	1	12	728	18	11	5	9	1619														
445-545	6	527	114	175	5	2	11	723	18	8	4	7	1600														
500-600	5	506	110	165	4	4	14	700	17	5	4	6	1540														



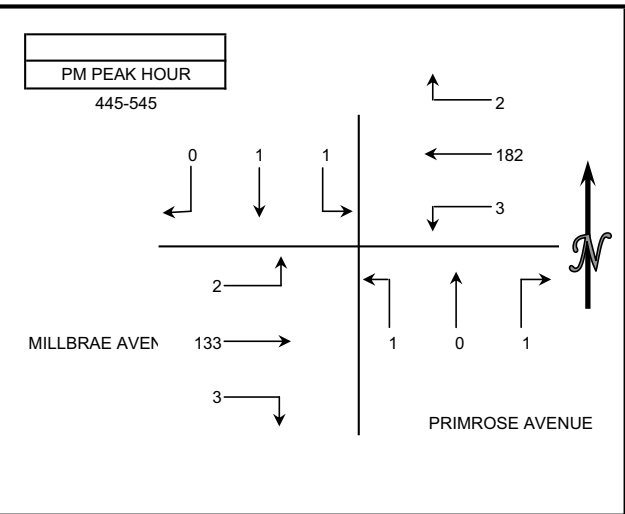
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: KIMLEY-HORN AND ASSOCIATES
 PROJECT: ROHNERT PARK
 DATE: WEDNESDAY, NOVEMBER 8TH 2006
 PERIODS: 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM
 INTERSECTION: N/S PRIMROSE AVENUE
 E/W MILLBRAE AVENUE

15 MIN COUNTS														7:00 AM TO 9:00 AM													
PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL														
700-715	0	0	1	2	26	1	0	2	2	0	26	0	60														
715-730	0	0	0	0	35	1	0	1	1	0	34	1	73														
730-745	0	1	1	0	32	1	0	0	1	0	33	0	69														
745-800	0	0	0	0	24	0	0	0	0	1	19	0	44														
800-815	0	1	0	0	19	0	1	1	0	1	23	0	46														
815-830	0	1	0	0	19	0	0	0	0	2	23	0	45														
830-845	0	0	1	0	22	0	0	0	0	0	27	0	50														
845-900	0	0	0	2	15	0	0	0	0	0	23	2	42														
HOOR TOTALS																											
TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL														
700-800	0	1	2	2	117	3	0	3	4	1	112	1	246														
715-815	0	2	1	0	110	2	1	2	2	2	109	1	232														
730-830	0	3	1	0	94	1	1	1	1	4	98	0	204														
745-845	0	2	1	0	84	0	1	1	0	4	92	0	185														
800-900	0	2	1	2	75	0	1	1	0	3	96	2	183														



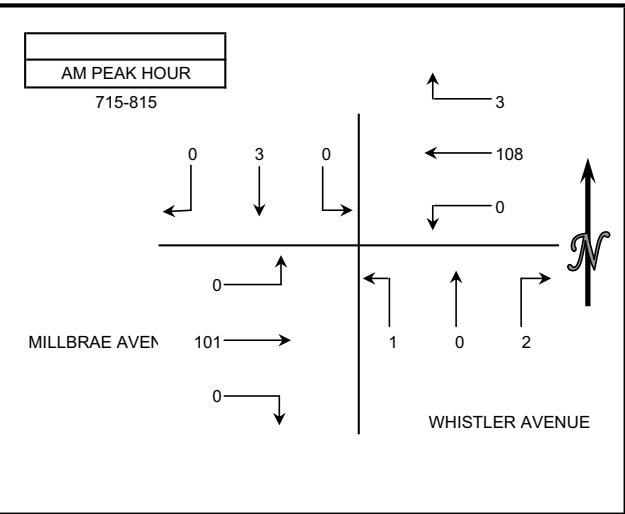
15 MIN COUNTS														4:00 PM TO 6:00 PM													
PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL														
400-415	0	0	0	0	34	0	0	1	0	1	24	0	60														
415-430	0	0	0	0	47	0	0	0	1	0	30	0	78														
430-445	0	0	0	1	46	0	2	0	0	3	31	1	84														
445-500	0	0	0	1	47	2	0	0	1	0	36	1	88														
500-515	0	0	0	0	48	1	0	0	0	2	25	0	76														
515-530	0	1	1	0	45	0	0	0	0	1	32	0	80														
530-545	0	0	0	1	42	0	1	0	0	0	40	1	85														
545-600	1	0	1	0	33	0	0	0	3	0	27	0	65														
HOOR TOTALS																											
TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL														
400-500	0	0	0	2	174	2	2	1	2	4	121	2	310														
415-515	0	0	0	2	188	3	2	0	2	5	122	2	326														
430-530	0	1	1	2	186	3	2	0	1	6	124	2	328														
445-545	0	1	1	2	182	3	1	0	1	3	133	2	329														
500-600	1	1	2	1	168	1	1	0	3	3	124	1	306														



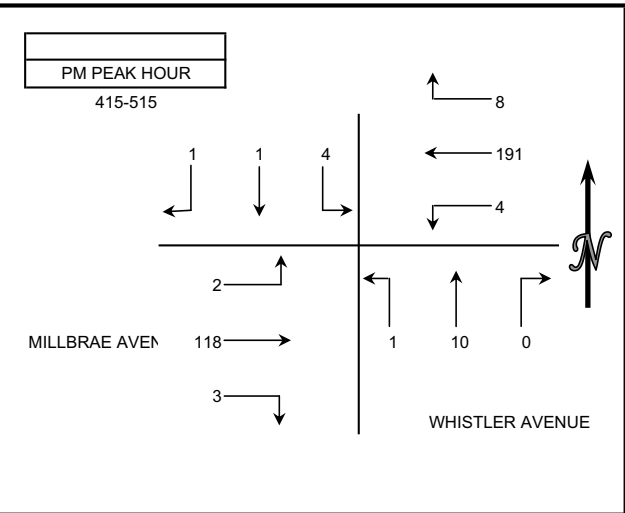
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: KIMLEY-HORN AND ASSOCIATES
 PROJECT: ROHNERT PARK
 DATE: WEDNESDAY, NOVEMBER 8TH 2006
 PERIODS: 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM
 INTERSECTION: N/S WHISTLER AVENUE
 E/W MILLBRAE AVENUE

15 MIN COUNTS														7:00 AM TO 9:00 AM													
PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL														
700-715	0	0	0	0	19	0	0	1	1	0	17	0	38														
715-730	0	1	0	0	34	0	1	0	0	0	27	0	63														
730-745	0	1	0	0	27	0	0	0	0	0	33	0	61														
745-800	0	0	0	0	24	0	0	0	1	0	21	0	46														
800-815	0	1	0	3	23	0	1	0	0	0	20	0	48														
815-830	0	0	0	0	20	1	0	0	0	0	24	1	46														
830-845	0	0	1	1	22	0	0	1	0	1	12	0	38														
845-900	0	0	0	0	16	0	0	0	1	0	19	0	36														
HOURLY TOTALS																											
TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL														
700-800	0	2	0	0	104	0	1	1	2	0	98	0	208														
715-815	0	3	0	3	108	0	2	0	1	0	101	0	218														
730-830	0	2	0	3	94	1	1	0	1	0	98	1	201														
745-845	0	1	1	4	89	1	1	1	1	1	77	1	178														
800-900	0	1	1	4	81	1	1	1	1	1	75	1	168														



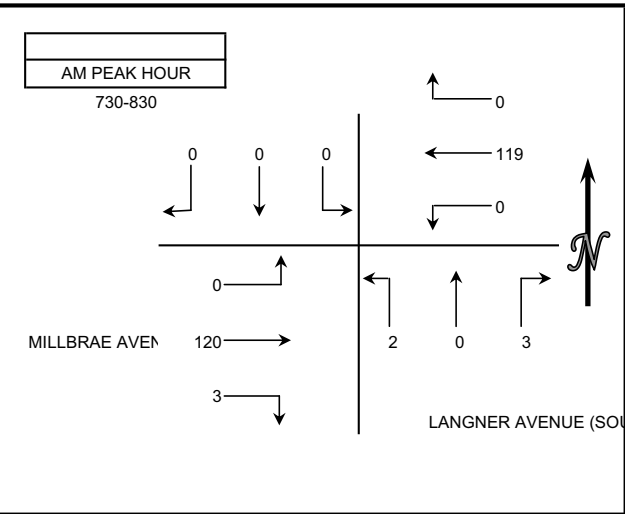
15 MIN COUNTS														4:00 PM TO 6:00 PM													
PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL														
400-415	0	0	0	3	38	1	0	0	0	0	16	0	58														
415-430	0	0	1	1	41	1	0	8	0	1	32	0	85														
430-445	0	0	2	2	43	3	0	2	0	1	34	1	88														
445-500	0	0	1	1	49	0	0	0	0	0	31	0	82														
500-515	1	1	0	4	58	0	0	0	1	1	21	1	88														
515-530	0	0	0	5	41	1	0	0	0	0	36	0	83														
530-545	2	1	1	0	37	0	2	2	0	0	37	0	82														
545-600	0	0	3	0	40	0	0	2	0	0	25	0	70														
HOURLY TOTALS																											
TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL														
400-500	0	0	4	7	171	5	0	10	0	2	113	1	313														
415-515	1	1	4	8	191	4	0	10	1	3	118	2	343														
430-530	1	1	3	12	191	4	0	2	1	2	122	2	341														
445-545	3	2	2	10	185	1	2	2	1	1	125	1	335														
500-600	3	2	4	9	176	1	2	4	1	1	119	1	323														



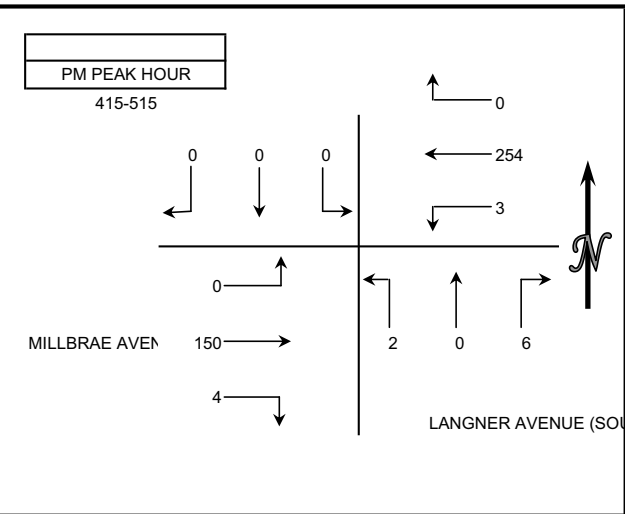
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: KIMLEY-HORN AND ASSOCIATES
 PROJECT: ROHNERT PARK
 DATE: WEDNESDAY, NOVEMBER 8TH 2006
 PERIODS: 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM
 INTERSECTION: N/S LANGNER AVENUE (SOUTH)
 E/W MILLBRAE AVENUE

15 MIN COUNTS													
7:00 AM TO 9:00 AM													
PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-715	0	0	0	0	13	0	0	0	1	0	16	0	30
715-730	0	0	0	0	20	0	2	0	0	0	29	0	51
730-745	0	0	0	0	33	0	2	0	1	0	29	0	65
745-800	0	0	0	0	33	0	1	0	0	1	34	0	69
800-815	0	0	0	0	29	0	0	0	1	0	29	0	59
815-830	0	0	0	0	24	0	0	0	0	2	28	0	54
830-845	0	0	0	0	19	1	0	0	0	2	27	0	49
845-900	0	0	0	0	18	1	1	0	0	4	25	0	49
HOOR TOTALS													
TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-800	0	0	0	0	99	0	5	0	2	1	108	0	215
715-815	0	0	0	0	115	0	5	0	2	1	121	0	244
730-830	0	0	0	0	119	0	3	0	2	3	120	0	247
745-845	0	0	0	0	105	1	1	0	1	5	118	0	231
800-900	0	0	0	0	90	2	1	0	1	8	109	0	211



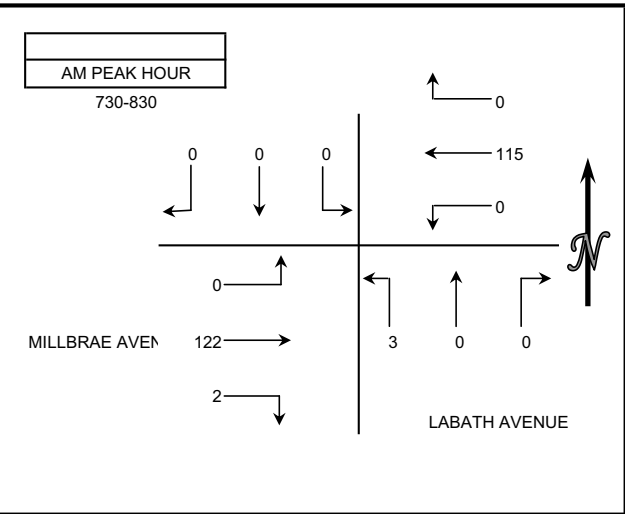
15 MIN COUNTS													
4:00 PM TO 6:00 PM													
PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-415	0	0	0	0	54	0	0	0	1	0	18	0	73
415-430	0	0	0	0	60	0	2	0	0	2	36	0	100
430-445	0	0	0	0	65	1	1	0	0	1	36	0	104
445-500	0	0	0	0	66	1	3	0	0	1	41	0	112
500-515	0	0	0	0	63	1	0	0	2	0	37	0	103
515-530	0	0	0	0	59	0	2	0	2	1	33	0	97
530-545	0	0	0	0	55	0	0	0	0	0	41	0	96
545-600	0	0	0	0	51	0	0	0	0	2	32	0	85
HOOR TOTALS													
TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-500	0	0	0	0	245	2	6	0	1	4	131	0	389
415-515	0	0	0	0	254	3	6	0	2	4	150	0	419
430-530	0	0	0	0	253	3	6	0	4	3	147	0	416
445-545	0	0	0	0	243	2	5	0	4	2	152	0	408
500-600	0	0	0	0	228	1	2	0	4	3	143	0	381



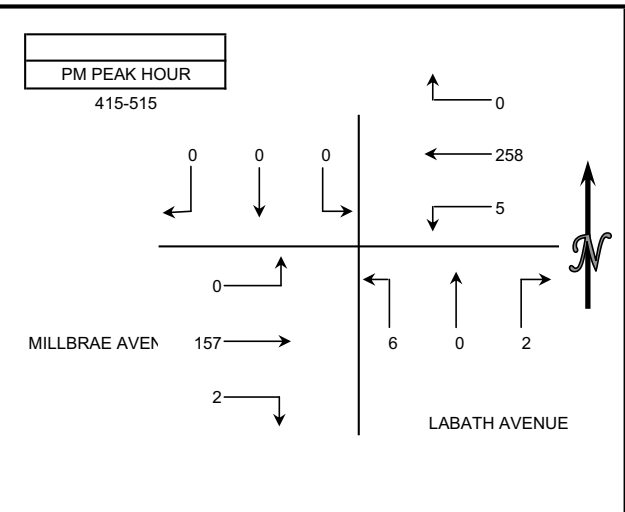
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: KIMLEY-HORN AND ASSOCIATES
 PROJECT: ROHNERT PARK
 DATE: WEDNESDAY, NOVEMBER 8TH 2006
 PERIODS: 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM
 INTERSECTION: N/S LABATH AVENUE
 E/W MILLBRAE AVENUE

15 MIN COUNTS														7:00 AM TO 9:00 AM													
PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL														
700-715	0	0	0	0	16	0	0	0	2	0	13	0	31														
715-730	0	0	0	0	20	1	0	0	0	0	25	0	46														
730-745	0	0	0	0	35	0	0	0	0	1	34	0	70														
745-800	0	0	0	0	28	0	0	0	0	1	38	0	67														
800-815	0	0	0	0	25	0	0	0	3	0	23	0	51														
815-830	0	0	0	0	27	0	0	0	0	0	27	0	54														
830-845	0	0	0	0	21	0	0	0	0	1	28	0	50														
845-900	0	0	0	0	28	0	2	0	0	2	29	0	61														
HOOR TOTALS																											
TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL														
700-800	0	0	0	0	99	1	0	0	2	2	110	0	214														
715-815	0	0	0	0	108	1	0	0	3	2	120	0	234														
730-830	0	0	0	0	115	0	0	0	3	2	122	0	242														
745-845	0	0	0	0	101	0	0	0	3	2	116	0	222														
800-900	0	0	0	0	101	0	2	0	3	3	107	0	216														



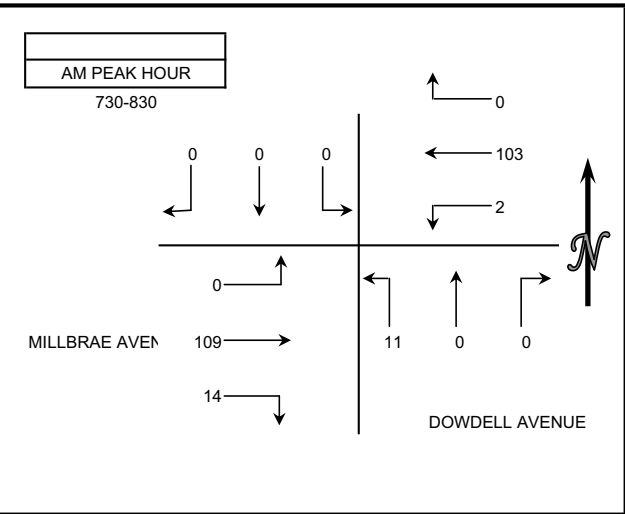
15 MIN COUNTS														4:00 PM TO 6:00 PM													
PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL														
400-415	0	0	0	0	52	5	1	0	0	2	26	0	86														
415-430	0	0	0	0	58	1	0	0	1	0	38	0	98														
430-445	0	0	0	0	69	1	0	0	2	0	42	0	114														
445-500	0	0	0	0	53	0	0	0	1	2	40	0	96														
500-515	0	0	0	0	78	3	2	0	2	0	37	0	122														
515-530	0	0	0	0	50	0	1	0	1	0	33	0	85														
530-545	0	0	0	0	50	0	0	0	1	4	39	0	94														
545-600	0	0	0	0	48	1	0	0	3	0	39	0	91														
HOOR TOTALS																											
TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL														
400-500	0	0	0	0	232	7	1	0	4	4	146	0	394														
415-515	0	0	0	0	258	5	2	0	6	2	157	0	430														
430-530	0	0	0	0	250	4	3	0	6	2	152	0	417														
445-545	0	0	0	0	231	3	3	0	5	6	149	0	397														
500-600	0	0	0	0	226	4	3	0	7	4	148	0	392														



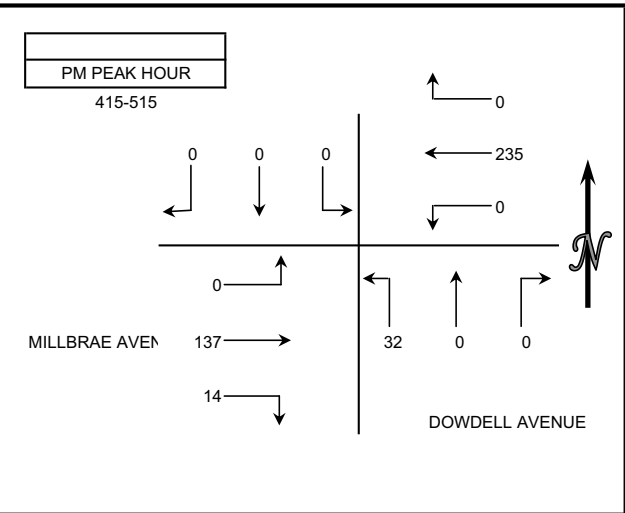
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: KIMLEY-HORN AND ASSOCIATES
 PROJECT: ROHNERT PARK
 DATE: WEDNESDAY, NOVEMBER 8TH 2006
 PERIODS: 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM
 INTERSECTION: N/S DOWDELL AVENUE
 E/W MILLBRAE AVENUE

15 MIN COUNTS														7:00 AM TO 9:00 AM													
PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL														
700-715	0	0	0	0	16	0	0	0	2	2	14	0	34														
715-730	0	0	0	0	25	1	1	0	3	1	24	0	55														
730-745	0	0	0	0	31	0	0	0	2	2	29	0	64														
745-800	0	0	0	0	27	1	0	0	1	4	30	0	63														
800-815	0	0	0	0	22	0	0	0	1	3	24	0	50														
815-830	0	0	0	0	23	1	0	0	7	5	26	0	62														
830-845	0	0	0	0	22	0	0	0	1	5	15	0	43														
845-900	0	0	0	0	20	0	1	0	2	2	19	0	44														
HOOR TOTALS																											
TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL														
700-800	0	0	0	0	99	2	1	0	8	9	97	0	216														
715-815	0	0	0	0	105	2	1	0	7	10	107	0	232														
730-830	0	0	0	0	103	2	0	0	11	14	109	0	239														
745-845	0	0	0	0	94	2	0	0	10	17	95	0	218														
800-900	0	0	0	0	87	1	1	0	11	15	84	0	199														



15 MIN COUNTS														4:00 PM TO 6:00 PM													
PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL														
400-415	0	0	0	0	51	1	1	0	7	2	25	0	87														
415-430	0	0	0	0	50	0	0	0	9	7	30	0	96														
430-445	0	0	0	0	62	0	0	0	6	3	35	0	106														
445-500	0	0	0	0	64	0	0	0	6	3	35	0	108														
500-515	0	0	0	0	59	0	0	0	11	1	37	0	108														
515-530	0	0	0	0	38	2	0	0	6	4	37	0	87														
530-545	0	0	0	0	46	2	0	0	8	4	36	0	96														
545-600	0	0	0	0	42	0	1	0	9	3	32	0	87														
HOOR TOTALS																											
TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL														
400-500	0	0	0	0	227	1	1	0	28	15	125	0	397														
415-515	0	0	0	0	235	0	0	0	32	14	137	0	418														
430-530	0	0	0	0	223	2	0	0	29	11	144	0	409														
445-545	0	0	0	0	207	4	0	0	31	12	145	0	399														
500-600	0	0	0	0	185	4	1	0	34	12	142	0	378														



**EXISTING CONDITIONS
(TRAFFIX)**

 Impact Analysis Report
 Level Of Service

Intersection		Base		Future		Change	
		Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C	in	
# 1 Wilfred Ave/Stony Point Rd	F	109.1	0.000	F 109.1	0.000	+ 0.000	D/V
# 2 Wilfred Ave/Primrose Ave	A	9.4	0.000	A 9.4	0.000	+ 0.000	D/V
# 3 Wilfred Ave/Whistler Ave	A	9.4	0.000	A 9.4	0.000	+ 0.000	D/V
# 4 Langner Ave/Wilfred Ave	A	9.4	0.000	A 9.4	0.000	+ 0.000	D/V
# 5 Wilfred Ave/Labath Ave	A	9.1	0.000	A 9.1	0.000	+ 0.000	D/V
# 6 Dowell Ave/Wilfred Ave	A	9.1	0.000	A 9.1	0.000	+ 0.000	D/V
# 7 Wilfred Ave/Redwood Dr	C	28.1	0.548	C 28.1	0.548	+ 0.000	D/V
# 8 Redwood Dr/Commerce Blvd	D	46.5	0.906	D 46.5	0.906	+ 0.000	D/V
# 9 Wilfred Ave/101 SB Ramp		0.0	0.000	0.0	0.000	+ 0.000	D/V
# 10 Golf Course Dr/Commerce Blvd	E	61.7	1.067	E 61.7	1.067	+ 0.000	D/V
# 11 Roberts Lake Dr/Golf Course Dr	B	18.4	0.425	B 18.4	0.425	+ 0.000	D/V
# 12 101 NB Ramps/Commerce Blvd	C	28.7	0.804	C 28.7	0.804	+ 0.000	D/V
# 13 New Driveway/Stony Point Rd	A	0.0	0.000	A 0.0	0.000	+ 0.000	D/V
# 14 New Driveway/Labath Ave		0.0	0.000	0.0	0.000	+ 0.000	D/V
# 15 Redwood Dr/Business Park Dr	C	23.4	0.000	C 23.4	0.000	+ 0.000	D/V
# 16 Rohnert Park Expwy/Stony Point	C	25.2	0.671	C 25.2	0.671	+ 0.000	D/V
# 17 Rohnert Park Expwy/Labath Ave	C	27.5	0.420	C 27.5	0.420	+ 0.000	D/V
# 18 Rohnert Park Expwy/Redwood Dr	C	33.4	0.678	C 33.4	0.678	+ 0.000	D/V
# 19 Rohnert Park Expwy/101 SB Ramp	C	23.2	0.628	C 23.2	0.628	+ 0.000	D/V
# 20 Rohnert Park Expwy/101 NB Ramp	C	21.1	0.454	C 21.1	0.454	+ 0.000	D/V
# 21 Rohnert Park Expwy/Commerce Bl	C	31.5	0.761	C 31.5	0.761	+ 0.000	D/V
# 22 Gravenstein Hwy (SR 116)/ Ston	C	34.7	0.696	C 34.7	0.696	+ 0.000	D/V
# 23 Gravenstein Hwy (SR 116)/ Redw	C	29.5	0.593	C 29.5	0.593	+ 0.000	D/V
# 24 Gravenstein Hwy and SB 101 Ram	C	21.0	0.497	C 21.0	0.497	+ 0.000	D/V
# 25 Gravenstein Hwy and NB 101 Ram	B	16.2	0.636	B 16.2	0.636	+ 0.000	D/V

Intersection		Base		Future		Change in	
		Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C		
# 26 Millbrae Ave/Stony Point Rd	E	38.3	0.000	E 38.3	0.000	+ 0.000	D/V
# 27 Millbrae Ave/Primrose Ave	B	11.1	0.000	B 11.1	0.000	+ 0.000	D/V
# 28 Millbrae Ave/Whistler Ave	B	11.3	0.000	B 11.3	0.000	+ 0.000	D/V
# 29 Millbrae Ave/Langner Ave	A	9.6	0.000	A 9.6	0.000	+ 0.000	D/V
# 30 Millbrae Ave/Labath Ave	B	10.8	0.000	B 10.8	0.000	+ 0.000	D/V
# 31 Millbrae Ave/Dowdell Ave	B	11.2	0.000	B 11.2	0.000	+ 0.000	D/V

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1 Wilfred Ave/Stony Point Rd

Average Delay (sec/veh): 8.8 Worst Case Level Of Service: F[109.1]

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:	1	0	0	1	0	0	0	0	0	0	1	0

Volume Module:

Base Vol:	10	852	46	53	523	2	0	4	11	63	5	54
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:	10	852	46	53	523	2	0	4	11	63	5	54
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	852	46	53	523	2	0	4	11	63	5	54
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	897	48	56	551	2	0	4	12	66	5	57
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	11	897	48	56	551	2	0	4	12	66	5	57

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflict Vol:	553	xxxx	xxxxx	945	xxxx	xxxxx	xxxx	1629	552	1613	1606	921
Potent Cap.:	1028	xxxx	xxxxx	734	xxxx	xxxxx	xxxx	103	538	85	106	331
Move Cap.:	1028	xxxx	xxxxx	734	xxxx	xxxxx	xxxx	94	538	75	97	331
Volume/Cap:	0.01	xxxx	xxxx	0.08	xxxx	xxxx	xxxx	0.04	0.02	0.89	0.05	0.17

Level Of Service Module:

2Way95thQ:	0.0	xxxx	xxxxx	0.2	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0.6			
Control Del:	8.5	xxxx	xxxxx	10.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	18.1			
LOS by Move:	A	*	*	B	*	*	*	*	*	*	*	C			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	238	76	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	0.2	4.9	xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	21.2	181.3	xxxx	xxxxx			
Shared LOS:	*	*	*	*	*	*	*	*	C	F	*	*			
ApproachDel:	xxxxxx			xxxxxx				21.2				109.1			
ApproachLOS:	*			*				C				F			

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Wilfred Ave/Primrose Ave

Average Delay (sec/veh): 4.2 Worst Case Level Of Service: A[9.4]

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

Volume Module:

Base Vol:	10	10	10	10	10	10	10	17	10	10	51	10
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:	10	10	10	10	10	10	10	17	10	10	51	10
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	10	10	10	10	10	10	17	10	10	51	10
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	11	11	11	11	11	11	18	11	11	54	11
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	11	11	11	11	11	11	11	18	11	11	54	11
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	135	129	23	135	129	59	64	xxxx	xxxxx	28	xxxx	xxxxx
Potent Cap.:	841	765	1059	841	765	1012	1551	xxxx	xxxxx	1598	xxxx	xxxxx
Move Cap.:	815	755	1059	816	755	1012	1551	xxxx	xxxxx	1598	xxxx	xxxxx
Volume/Cap:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	xxxx	xxxx	0.01	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.3	xxxx	xxxxx	7.3	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	858	xxxxx	xxxx	848	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	0.1	xxxxx	xxxxx	0.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	9.4	xxxxx	xxxxx	9.4	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	A	*	*	A	*	*	*	*	*	*	*			
ApproachDel:		9.4			9.4		xxxxxxx		xxxxxxx		xxxxxxx				
ApproachLOS:		A			A		*		*		*				

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 Wilfred Ave/Whistler Ave

Average Delay (sec/veh): 4.2 Worst Case Level Of Service: A[9.4]

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

Volume Module:

Base Vol:	10	10	10	10	10	10	10	17	10	10	51	10
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:	10	10	10	10	10	10	10	17	10	10	51	10
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	10	10	10	10	10	10	17	10	10	51	10
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	11	11	11	11	11	11	18	11	11	54	11
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	11	11	11	11	11	11	11	18	11	11	54	11
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	135	129	23	135	129	59	64	xxxx	xxxxx	28	xxxx	xxxxx
Potent Cap.:	841	765	1059	841	765	1012	1551	xxxx	xxxxx	1598	xxxx	xxxxx
Move Cap.:	815	755	1059	816	755	1012	1551	xxxx	xxxxx	1598	xxxx	xxxxx
Volume/Cap:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	xxxx	xxxx	0.01	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.3	xxxx	xxxxx	7.3	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	858	xxxxx	xxxx	848	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	0.1	xxxxx	xxxxx	0.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	9.4	xxxxx	xxxxx	9.4	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	A	*	*	A	*	*	*	*	*	*	*			
ApproachDel:		9.4			9.4		xxxxxxx		xxxxxxx						
ApproachLOS:		A			A		*		*		*				

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Langner Ave/Wilfred Ave

Average Delay (sec/veh): 4.2 Worst Case Level Of Service: A[9.4]

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

Volume Module:

Base Vol:	10	10	10	10	10	10	10	17	10	10	51	10
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:	10	10	10	10	10	10	10	17	10	10	51	10
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	10	10	10	10	10	10	17	10	10	51	10
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	11	11	11	11	11	11	18	11	11	54	11
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	11	11	11	11	11	11	11	18	11	11	54	11
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	135	129	23	135	129	59	64	xxxx	xxxxx	28	xxxx	xxxxx
Potent Cap.:	841	765	1059	841	765	1012	1551	xxxx	xxxxx	1598	xxxx	xxxxx
Move Cap.:	815	755	1059	816	755	1012	1551	xxxx	xxxxx	1598	xxxx	xxxxx
Volume/Cap:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	xxxx	xxxx	0.01	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.3	xxxx	xxxxx	7.3	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	858	xxxxx	xxxx	848	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	0.1	xxxxx	xxxxx	0.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	9.4	xxxxx	xxxxx	9.4	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	A	*	*	A	*	*	*	*	*	*	*			
ApproachDel:		9.4			9.4		xxxxxxx		xxxxxxx		xxxxxxx				
ApproachLOS:		A			A		*		*		*				

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #5 Wilfred Ave/Labath Ave

Average Delay (sec/veh): 1.0 Worst Case Level Of Service: A[9.1]

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

Volume Module:

Base Vol:	1	0	2	6	1	0	0	8	0	0	71	4
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:	1	0	2	6	1	0	0	8	0	0	71	4
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1	0	2	6	1	0	0	8	0	0	71	4
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	1	0	2	6	1	0	0	8	0	0	75	4
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	1	0	2	6	1	0	0	8	0	0	75	4

Critical Gap Module:

Critical Gp:	7.1	6.5	6.2	7.1	6.5	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	86	87	8	86	85	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	905	807	1079	904	809	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	904	807	1079	903	809	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.00	0.00	0.00	0.01	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	1014	xxxxx	888	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	0.0	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	8.6	xxxxx	9.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	A	*	A	*	*	*	*	*	*	*	*			
ApproachDel:		8.6			9.1		xxxxxxx			xxxxxxx					
ApproachLOS:		A			A		*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #6 Dowell Ave/Wilfred Ave

Average Delay (sec/veh): 2.2 Worst Case Level Of Service: A[9.1]

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, and Lanes.

Volume Module: Table with 13 columns representing different traffic volumes and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Critical Gap Module: Table with 13 columns showing critical gap and follow-up time values.

Capacity Module: Table with 13 columns showing capacity-related metrics like Cnflict Vol, Potent Cap., Move Cap., etc.

Level Of Service Module: Table with 13 columns showing level of service details like 2Way95thQ, Control Del, LOS by Move, etc.

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

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

Intersection #7 Wilfred Ave/Redwood Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.548
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 28.1
Optimal Cycle: 44 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected, Split Phase), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns for different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns for different traffic movements. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns for different traffic movements. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueueDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2k95thQ.

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

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

Intersection #8 Redwood Dr/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.906
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 46.5
Optimal Cycle: 113 Level Of Service: D

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic volumes and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 13 columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, etc.

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

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

 Intersection #9 Wilfred Ave/101 SB Ramp

Cycle (sec): 100 Critical Vol./Cap.(X): 0.000
 Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 0.0
 Optimal Cycle: 0 Level Of Service:

Street Name: US-101 SB Ramp Wilfred Avenue

Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	0	0	0	0	0	0	0	0	0

Volume Module:

Base Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Growth Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Bse:	0	0	0	0	0	0	0	0	0	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	0	0	0	0	0	0	0	0	0
User Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHF Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHF Volume:	0	0	0	0	0	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PCE Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MLF Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Final Vol.:	0	0	0	0	0	0	0	0	0	0	0	0

Saturation Flow Module:

Sat/Lane:	0	0	0	0	0	0	0	0	0	0	0	0
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Final Sat.:	0	0	0	0	0	0	0	0	0	0	0	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Crit Moves:												
Green/Cycle:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Del:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IncrcmntDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LOS by Move:												
HCM2k95thQ:	0	0	0	0	0	0	0	0	0	0	0	0

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

Intersection #10 Golf Course Dr/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 1.067
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 61.7
Optimal Cycle: 180 Level Of Service: E

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Permitted, Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns for different volume types (Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.) and 4 rows of data.

Saturation Flow Module: Table with 13 columns for saturation flow metrics (Sat/Lane, Adjustment, Lanes, Final Sat.) and 4 rows of data.

Capacity Analysis Module: Table with 13 columns for capacity analysis metrics (Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ) and 13 rows of data.

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

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

Intersection #11 Roberts Lake Dr/Golf Course Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.425
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 18.4
Optimal Cycle: 30 Level Of Service: B

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Permitted, Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns for different volume types (Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.) and 4 rows of data.

Saturation Flow Module: Table with 13 columns for saturation flow metrics (Sat/Lane, Adjustment, Lanes, Final Sat.) and 4 rows of data.

Capacity Analysis Module: Table with 13 columns for capacity analysis metrics (Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ) and 13 rows of data.

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

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

Intersection #12 101 NB Ramps/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.804
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 28.7
Optimal Cycle: 78 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic volumes and adjustment factors.

Saturation Flow Module: Table with 13 columns representing saturation flow rates and adjustment factors.

Capacity Analysis Module: Table with 13 columns representing capacity analysis metrics like Vol/Sat, Crit Moves, Green/Cycle, etc.

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #13 New Driveway/Stony Point Rd

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

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	1	0	0	1	0	0	0	0	0	0

Volume Module:

Base Vol:	0	908	0	0	597	0	0	0	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
Initial Bse:	0	908	0	0	597	0	0	0	0	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	908	0	0	597	0	0	0	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
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	956	0	0	628	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	956	0	0	628	0	0	0	0	0	0	0

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3

Capacity Module:

Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	956
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	316
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	316
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.00

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*			
ApproachDel:	xxxxxxx			xxxxxxx			xxxxxxx			xxxxxxx					
ApproachLOS:	*			*			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #14 New Driveway/Labath Ave

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

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

Volume Module:

Base Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Growth Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Bse:	0	0	0	0	0	0	0	0	0	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	0	0	0	0	0	0	0	0	0
User Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHF Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHF Volume:	0	0	0	0	0	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	0	0	0	0	0	0	0	0	0
Critical Gap Module:												
Critical Gp:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FollowUpTim:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Capacity Module:

Cnflict Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Potent Cap.:	0	0	0	0	0	0	0	0	0	0	0	0
Move Cap.:	1	1	1	1	1	1	1	1	1	1	1	1
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Level Of Service Module:

2Way95thQ:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Del:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LOS by Move:												
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	0	0	0	0	0	0	0	0	0	0	0	0
SharedQueue:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Shrd ConDel:	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Shared LOS:												
ApproachDel:	0.0			0.0			0.0			0.0		
ApproachLOS:												

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #15 Redwood Dr/Business Park Dr

Average Delay (sec/veh): 3.3 Worst Case Level Of Service: C[23.4]

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:	1	0	2	0	0	1	1	0	0	1	0	0

Volume Module:

Base Vol:	14	452	0	0	496	41	138	0	22	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:	14	452	0	0	496	41	138	0	22	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	14	452	0	0	496	41	138	0	22	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	15	476	0	0	522	43	145	0	23	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	15	476	0	0	522	43	145	0	23	0	0	0

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.8	6.5	6.9	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	565	xxxx	xxxxx	xxxxx	xxxx	xxxxx	811	1049	283	xxxx	xxxx	xxxxx
Potent Cap.:	1017	xxxx	xxxxx	xxxxx	xxxx	xxxxx	321	229	720	xxxx	xxxx	xxxxx
Move Cap.:	1017	xxxx	xxxxx	xxxxx	xxxx	xxxxx	318	226	720	xxxx	xxxx	xxxxx
Volume/Cap:	0.01	xxxx	xxxx	xxxxx	xxxx	xxxxx	0.46	0.00	0.03	xxxx	xxxx	xxxxx

Level Of Service Module:

2Way95thQ:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.3	xxxx	xxxxx	xxxx	xxxx	xxxxx			
Control Del:	8.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	25.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
LOS by Move:	A	*	*	*	*	*	D	*	*	*	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxx	xxxx	720	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	0.1	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	10.2	xxxxx	xxxx	xxxxx			
Shared LOS:	*	*	*	*	*	*	*	*	B	*	*	*			
ApproachDel:	xxxxxx			xxxxxx			23.4			xxxxxx					
ApproachLOS:	*			*			C			*					

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #16 Rohnert Park Expwy/Stony Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.671
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 25.2
Optimal Cycle: 39 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Permitted, Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns for different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns for different traffic movements. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns for different traffic movements. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2k95thQ.

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

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

Intersection #17 Rohnert Park Expwy/Labath Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.420
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 27.5
Optimal Cycle: 36 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic movements and 13 rows of volume-related metrics such as Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 13 columns and 4 rows showing Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns and 13 rows showing Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, etc.

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #18 Rohnert Park Expwy/Redwood Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.678

Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 33.4

Optimal Cycle: 57 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound											
Movement:	L	T	R	L	T	R	L	T	R	L	T	R									
Control:	Protected			Protected			Protected			Protected											
Rights:	Include			Include			Include			Include											
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0									
Lanes:	1	0	1	1	1	1	2	0	1	0	1	1	0	3	0	1	2	0	2	0	1

Volume Module:

Base Vol:	89	157	340	432	205	232	203	748	113	317	563	361
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:	89	157	340	432	205	232	203	748	113	317	563	361
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	89	157	340	432	205	232	203	748	113	317	563	361
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	94	165	358	455	216	244	214	787	119	334	593	380
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	94	165	358	455	216	244	214	787	119	334	593	380
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	94	165	358	455	216	244	214	787	119	334	593	380

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.88	0.88	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.83
Lanes:	1.00	1.00	2.00	2.00	1.00	1.00	1.00	3.00	1.00	2.00	2.00	1.00
Final Sat.:	1769	1670	3340	3538	1862	1583	1769	5586	1583	3538	3724	1583

Capacity Analysis Module:

Vol/Sat:	0.05	0.10	0.11	0.13	0.12	0.15	0.12	0.14	0.08	0.09	0.16	0.24
Crit Moves:			****	****			****					****
Green/Cycle:	0.09	0.16	0.16	0.19	0.26	0.26	0.18	0.32	0.32	0.21	0.35	0.35
Volume/Cap:	0.60	0.63	0.68	0.68	0.45	0.60	0.68	0.44	0.24	0.44	0.45	0.68
Uniform Del:	43.8	39.3	39.7	37.7	31.1	32.5	38.4	27.0	25.1	34.2	24.8	27.4
IncrcmntDel:	6.1	1.5	2.4	2.8	0.7	2.4	5.8	0.2	0.2	0.4	0.2	3.3
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	50.0	40.8	42.1	40.5	31.7	34.9	44.2	27.2	25.3	34.6	25.0	30.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	50.0	40.8	42.1	40.5	31.7	34.9	44.2	27.2	25.3	34.6	25.0	30.8
LOS by Move:	D	D	D	D	C	C	D	C	C	C	C	C
HCM2k95thQ:	8	11	12	15	11	14	14	13	6	9	14	20

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

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

Intersection #19 Rohnert Park Expwy/101 SB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.628
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 23.2
Optimal Cycle: 51 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Split Phase, Permitted, Protected), Rights (Include, Ignore), Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic movements and 13 rows of volume-related metrics such as Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns and 4 rows showing Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns and 14 rows showing Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2k95thQ.

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #20 Rohnert Park Expwy/101 NB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.454
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 21.1
Optimal Cycle: 55 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected, Permitted), Rights (Include, Ignore), Min. Green, and Lanes.

Volume Module: Table with 13 columns for different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns for different traffic movements. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns for different traffic movements. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2k95thQ.

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #21 Rohnert Park Expwy/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.761
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 31.5
Optimal Cycle: 69 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module:

Table with 13 columns representing different traffic volumes and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module:

Table with 13 columns for saturation flow metrics: Sat/Lane, Adjustment, Lanes, Final Sat., etc.

Capacity Analysis Module:

Table with 13 columns for capacity analysis metrics: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, etc.

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #22 Gravenstein Hwy (SR 116)/ Stoney Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.696
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 34.7
Optimal Cycle: 59 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2k95thQ.

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #23 Gravenstein Hwy (SR 116)/ Redwood Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.593
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 29.5
Optimal Cycle: 48 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns for different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2k95thQ.

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #24 Gravenstein Hwy and SB 101 Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.497
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 21.0
Optimal Cycle: 34 Level Of Service: C

Street Name: SB 101 Ramps Gravenstein Hwy
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Permitted Protected
Rights: Include Include Ignore Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 0 0 0 2 0 0 1 0 0 0 2 0 1 1 0 2 0 0

Volume Module:
Base Vol: 0 0 0 617 0 182 0 687 285 99 767 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: 0 0 0 617 0 182 0 687 285 99 767 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 617 0 182 0 687 285 99 767 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.00 0.95 0.95 0.95
PHF Volume: 0 0 0 649 0 192 0 723 0 104 807 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 0 0 649 0 192 0 723 0 104 807 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
Final Vol.: 0 0 0 649 0 192 0 723 0 104 807 0

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 1.00 1.00 1.00 0.90 1.00 0.83 1.00 0.93 1.00 0.93 0.93 1.00
Lanes: 0.00 0.00 0.00 2.00 0.00 1.00 0.00 2.00 1.00 1.00 2.00 0.00
Final Sat.: 0 0 0 3432 0 1583 0 3538 1900 1769 3538 0

Capacity Analysis Module:
Vol/Sat: 0.00 0.00 0.00 0.19 0.00 0.12 0.00 0.20 0.00 0.06 0.23 0.00
Crit Moves: **** *
Green/Cycle: 0.00 0.00 0.00 0.38 0.00 0.38 0.00 0.41 0.00 0.12 0.53 0.00
Volume/Cap: 0.00 0.00 0.00 0.50 0.00 0.32 0.00 0.50 0.00 0.50 0.43 0.00
Uniform Del: 0.0 0.0 0.0 23.7 0.0 21.8 0.0 21.8 0.0 41.3 14.3 0.0
IncrcmntDel: 0.0 0.0 0.0 0.3 0.0 0.3 0.0 0.3 0.0 1.9 0.2 0.0
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 0.00 0.00 0.00 1.00 0.00 1.00 0.00 1.00 0.00 1.00 1.00 0.00
Delay/Veh: 0.0 0.0 0.0 24.0 0.0 22.1 0.0 22.1 0.0 43.1 14.5 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 0.0 0.0 24.0 0.0 22.1 0.0 22.1 0.0 43.1 14.5 0.0
LOS by Move: A A A C A C A C A D B A
HCM2k95thQ: 0 0 0 15 0 8 0 16 0 7 15 0

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #25 Gravenstein Hwy and NB 101 Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.636
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 16.2
Optimal Cycle: 44 Level Of Service: B

Street Name: NB 101 Ramps Gravenstein Hwy
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Permitted Permitted Permitted
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 0 0 1 0 0 0 0 0 0 2 0 0 0 0 2 0 0

Volume Module:

Base Vol: 321 0 199 0 0 0 0 0 1303 0 0 545 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: 321 0 199 0 0 0 0 0 1303 0 0 545 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 321 0 199 0 0 0 0 0 1303 0 0 545 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 338 0 209 0 0 0 0 0 1372 0 0 574 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 338 0 209 0 0 0 0 0 1372 0 0 574 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 338 0 209 0 0 0 0 0 1372 0 0 574 0

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.93 1.00 0.83 1.00 1.00 1.00 1.00 0.93 1.00 1.00 0.93 1.00
Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 2.00 0.00 0.00 2.00 0.00
Final Sat.: 1769 0 1583 0 0 0 0 0 3538 0 0 3538 0

Capacity Analysis Module:

Vol/Sat: 0.19 0.00 0.13 0.00 0.00 0.00 0.00 0.39 0.00 0.00 0.16 0.00
Crit Moves: ****
Green/Cycle: 0.30 0.00 0.30 0.00 0.00 0.00 0.00 0.61 0.00 0.00 0.61 0.00
Volume/Cap: 0.64 0.00 0.44 0.00 0.00 0.00 0.00 0.64 0.00 0.00 0.27 0.00
Uniform Del: 30.3 0.0 28.2 0.0 0.0 0.0 0.0 12.4 0.0 0.0 9.1 0.0
IncrmntDel: 2.5 0.0 0.7 0.0 0.0 0.0 0.0 0.6 0.0 0.0 0.1 0.0
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 1.00 0.00 0.00 1.00 0.00
Delay/Veh: 32.8 0.0 28.9 0.0 0.0 0.0 0.0 13.1 0.0 0.0 9.2 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 32.8 0.0 28.9 0.0 0.0 0.0 0.0 13.1 0.0 0.0 9.2 0.0
LOS by Move: C A C A A A A B A A A A
HCM2k95thQ: 18 0 11 0 0 0 0 26 0 0 8 0

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #26 Millbrae Ave/Stony Point Rd

Average Delay (sec/veh): 3.1 Worst Case Level Of Service: E[38.3]

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:	1	0	2	0	1	1	0	0	1!	0	0	1

Volume Module:

Base Vol:	18	728	12	117	525	7	9	5	11	1	6	180
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:	18	728	12	117	525	7	9	5	11	1	6	180
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	18	728	12	117	525	7	9	5	11	1	6	180
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	19	766	13	123	553	7	9	5	12	1	6	189
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	19	766	13	123	553	7	9	5	12	1	6	189

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.5	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflict Vol:	560	xxxx	xxxxx	779	xxxx	xxxxx	1227	1619	280	1329	1611	383
Potent Cap.:	1021	xxxx	xxxxx	847	xxxx	xxxxx	137	104	723	115	106	621
Move Cap.:	1021	xxxx	xxxxx	847	xxxx	xxxxx	79	87	723	95	89	621
Volume/Cap:	0.02	xxxx	xxxx	0.15	xxxx	xxxx	0.12	0.06	0.02	0.01	0.07	0.31

Level Of Service Module:

2Way95thQ:	0.1	xxxx	xxxxx	0.5	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	1.3			
Control Del:	8.6	xxxx	xxxxx	10.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	13.3			
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	B			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	134	xxxxx	89	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.7	xxxxx	0.3	xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	38.3	xxxxx	48.9	xxxx	xxxxx			
Shared LOS:	*	*	*	*	*	*	*	E	*	E	*	*			
ApproachDel:	xxxxxx			xxxxxx			38.3			14.7					
ApproachLOS:	*			*			E			B					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #27 Millbrae Ave/Primrose Ave

Average Delay (sec/veh): 0.2 Worst Case Level Of Service: B[11.1]

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

Volume Module:

Base Vol:	1	0	1	1	1	0	2	133	3	3	182	2
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:	1	0	1	1	1	0	2	133	3	3	182	2
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1	0	1	1	1	0	2	133	3	3	182	2
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	1	0	1	1	1	0	2	140	3	3	192	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	1	0	1	1	1	0	2	140	3	3	192	2

Critical Gap Module:

Critical Gp:	7.1	6.5	6.2	7.1	6.5	xxxxx	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	xxxxx	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	345	346	142	345	346	xxxxx	194	xxxx	xxxxx	143	xxxx	xxxxx
Potent Cap.:	613	581	912	613	580	xxxxx	1392	xxxx	xxxxx	1452	xxxx	xxxxx
Move Cap.:	610	578	912	610	578	xxxxx	1392	xxxx	xxxxx	1452	xxxx	xxxxx
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	xxxx	0.00	xxxx	xxxx	0.00	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx	7.5	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	731	xxxxx	594	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.0	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	9.9	xxxxx	11.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	A	*	B	*	*	*	*	*	*	*	*
ApproachDel:		9.9		11.1			xxxxxxx			xxxxxxx		
ApproachLOS:		A		B			*			*		

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #28 Millbrae Ave/Whistler Ave

Average Delay (sec/veh): 0.7 Worst Case Level Of Service: B[11.3]

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

Volume Module:

Base Vol:	1	10	0	4	1	1	2	118	3	4	191	8
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	10	0	4	1	1	2	118	3	4	191	8
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1	10	0	4	1	1	2	118	3	4	191	8
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	1	11	0	4	1	1	2	124	3	4	201	8
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	1	11	0	4	1	1	2	124	3	4	201	8

Critical Gap Module:

Critical Gp:	7.1	6.5	xxxxx	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	345	348	xxxxx	349	345	205	209	xxxx	xxxxx	127	xxxx	xxxxx
Potent Cap.:	613	579	xxxxx	609	581	840	1373	xxxx	xxxxx	1471	xxxx	xxxxx
Move Cap.:	610	576	xxxxx	599	578	840	1373	xxxx	xxxxx	1471	xxxx	xxxxx
Volume/Cap:	0.00	0.02	xxxx	0.01	0.00	0.00	0.00	xxxx	xxxx	0.00	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx	7.5	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	579	xxxx	xxxxx	xxxx	625	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	0.1	xxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	11.3	xxxx	xxxxx	xxxxx	10.8	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	B	*	*	*	B	*	*	*	*	*	*	*			
ApproachDel:	11.3			10.8			xxxxxx			xxxxxx					
ApproachLOS:	B			B			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #29 Millbrae Ave/Langner Ave

Average Delay (sec/veh): 0.2 Worst Case Level Of Service: A[9.6]

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, and Lanes.

Volume Module: Table with 13 columns for traffic volume metrics (Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Vol.) and 4 columns for each approach.

Critical Gap Module: Table with 13 columns for gap metrics (Critical Gp, FollowUpTim) and 4 columns for each approach.

Capacity Module: Table with 13 columns for capacity metrics (Cnflict Vol, Potent Cap., Move Cap., Volume/Cap) and 4 columns for each approach.

Level Of Service Module: Table with 13 columns for LOS metrics (2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS) and 4 columns for each approach.

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #30 Millbrae Ave/Labath Ave

Average Delay (sec/veh): 0.3 Worst Case Level Of Service: B[10.8]

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

Volume Module:

Base Vol:	6	0	2	0	0	0	0	157	2	5	258	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:	6	0	2	0	0	0	0	157	2	5	258	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	6	0	2	0	0	0	0	157	2	5	258	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	6	0	2	0	0	0	0	165	2	5	272	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	6	0	2	0	0	0	0	165	2	5	272	0

Critical Gap Module:

Critical Gp:	6.4	6.5	6.2	7.1	6.5	6.2	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	448	448	166	449	449	272	xxxx	xxxx	xxxxx	167	xxxx	xxxxx
Potent Cap.:	572	509	883	523	508	772	xxxx	xxxx	xxxxx	1423	xxxx	xxxxx
Move Cap.:	570	507	883	521	506	772	xxxx	xxxx	xxxxx	1423	xxxx	xxxxx
Volume/Cap:	0.01	0.00	0.00	0.00	0.00	0.00	xxxx	xxxx	xxxx	0.00	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	626	xxxxx	xxxx	0	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	0.0	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx			
Shrd ConDel:	xxxxx	10.8	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx			
Shared LOS:	*	B	*	*	*	*	*	*	*	A	*	*			
ApproachDel:	10.8			xxxxxx			xxxxxx			xxxxxx					
ApproachLOS:	B			*			*			*					

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

Level of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #31 Millbrae Ave/Dowdell Ave

Average Delay (sec/veh): 0.9 Worst Case Level Of Service: B[11.2]

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

Volume Module:

Base Vol:	32	0	0	0	0	0	0	137	14	0	235	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:	32	0	0	0	0	0	0	137	14	0	235	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	32	0	0	0	0	0	0	137	14	0	235	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	34	0	0	0	0	0	0	144	15	0	247	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	34	0	0	0	0	0	0	144	15	0	247	0

Critical Gap Module:

Critical Gp:	6.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	399	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Potent Cap.:	611	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Move Cap.:	611	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Volume/Cap:	0.06	xxxx	xxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx

Level of Service Module:

2Way95thQ:	0.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Control Del:	11.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
LOS by Move:	B	*	*	*	*	*	*	*	*	*	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	11.2			xxxxxx			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	B			*			*			*			*		

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

**NEAR-TERM 2008 No ACTION
TRAFFIC CONDITIONS
(TRAFFIX)**

 Impact Analysis Report
 Level Of Service

Intersection		Base		Future		Change	
		Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C	in	
# 1 Wilfred Ave/Stony Point Rd	F	238.0	0.000	F 238.0	0.000	+ 0.000	D/V
# 2 Wilfred Ave/Primrose Ave	B	11.3	0.000	B 11.3	0.000	+ 0.000	D/V
# 3 Wilfred Ave/Whistler Ave	B	11.3	0.000	B 11.3	0.000	+ 0.000	D/V
# 4 Langner Ave/Wilfred Ave	B	11.3	0.000	B 11.3	0.000	+ 0.000	D/V
# 5 Wilfred Ave/Labath Ave	E	48.3	0.000	E 48.3	0.000	+ 0.000	D/V
# 6 Dowell Ave/Wilfred Ave	F	333.5	0.000	F 333.5	0.000	+ 0.000	D/V
# 7 Wilfred Ave/Redwood Dr	D	37.1	0.708	D 37.1	0.708	+ 0.000	D/V
# 8 Redwood Dr/Commerce Blvd	C	26.6	0.290	C 26.5	0.290	-0.050	D/V
# 9 Wilfred Ave/101 SB Ramp	C	30.6	0.630	C 30.6	0.630	+ 0.000	D/V
# 10 Golf Course Dr/Commerce Blvd	D	44.0	0.925	D 44.0	0.925	+ 0.000	D/V
# 11 Roberts Lake Dr/Golf Course Dr	B	15.6	0.512	B 15.6	0.512	+ 0.000	D/V
# 12 101 NB Ramps/Commerce Blvd	C	34.9	0.877	C 34.9	0.877	+ 0.000	D/V
# 13 New Driveway/Stony Point Rd	A	0.0	0.000	A 0.0	0.000	+ 0.000	D/V
# 14 New Driveway/Labath Ave		0.0	0.000	0.0	0.000	+ 0.000	D/V
# 15 Redwood Dr/Business Park Dr	D	26.5	0.000	D 26.5	0.000	+ 0.000	D/V
# 16 Rohnert Park Expwy/Stony Point	C	24.0	0.665	C 24.0	0.665	+ 0.000	D/V
# 17 Rohnert Park Expwy/Labath Ave	C	29.8	0.576	C 33.1	0.576	+ 3.370	D/V
# 18 Rohnert Park Expwy/Redwood Dr	D	35.6	0.711	D 44.7	0.711	+ 9.152	D/V
# 19 Rohnert Park Expwy/101 SB Ramp	C	21.1	0.716	C 21.1	0.716	+ 0.000	D/V
# 20 Rohnert Park Expwy/101 NB Ramp	B	15.8	0.437	B 15.8	0.437	+ 0.000	D/V
# 21 Rohnert Park Expwy/Commerce Bl	C	33.9	0.815	C 33.9	0.815	+ 0.000	D/V
# 22 Gravenstein Hwy (SR 116)/ Ston	D	37.1	0.766	D 37.1	0.766	+ 0.000	D/V
# 23 Gravenstein Hwy (SR 116)/ Redw	C	28.6	0.734	C 28.6	0.734	+ 0.000	D/V
# 24 Gravenstein Hwy and SB 101 Ram	B	17.6	0.562	B 17.7	0.562	+ 0.112	D/V
# 25 Gravenstein Hwy and NB 101 Ram	B	17.3	0.707	B 17.3	0.707	+ 0.000	D/V

Intersection		Base		Future		Change in	
		Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C		
# 26 Millbrae Ave/Stony Point Rd	E	38.2	0.000	E 38.2	0.000	+ 0.000	D/V
# 27 Millbrae Ave/Primrose Ave	B	11.4	0.000	B 11.4	0.000	+ 0.000	D/V
# 28 Millbrae Ave/Whistler Ave	B	11.5	0.000	B 11.5	0.000	+ 0.000	D/V
# 29 Millbrae Ave/Langner Ave	A	9.9	0.000	A 9.9	0.000	+ 0.000	D/V
# 30 Millbrae Ave/Labath Ave	B	11.2	0.000	B 11.2	0.000	+ 0.000	D/V
# 31 Millbrae Ave/Dowdell Ave	B	11.3	0.000	B 11.3	0.000	+ 0.000	D/V

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1 Wilfred Ave/Stony Point Rd

Average Delay (sec/veh): 31.8 Worst Case Level Of Service: F[238.0]

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:	1	0	0	1	0	0	0	0	0	1	0	0

Volume Module:

Base Vol:	12	758	62	75	514	3	0	8	14	106	13	97
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	12	758	62	75	514	3	0	8	14	106	13	97
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	12	758	62	75	514	3	0	8	14	106	13	97
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	13	798	65	79	541	3	0	8	15	112	14	102
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	13	798	65	79	541	3	0	8	15	112	14	102

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflict Vol:	544	xxxx	xxxxx	863	xxxx	xxxxx	xxxx	1589	543	1568	1558	831
Potent Cap.:	1035	xxxx	xxxxx	788	xxxx	xxxxx	xxxx	109	544	91	114	373
Move Cap.:	1035	xxxx	xxxxx	788	xxxx	xxxxx	xxxx	97	544	76	101	373
Volume/Cap:	0.01	xxxx	xxxx	0.10	xxxx	xxxx	xxxx	0.09	0.03	1.47	0.14	0.27

Level Of Service Module:

2Way95thQ:	0.0	xxxx	xxxxx	0.3	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	1.1			
Control Del:	8.5	xxxx	xxxxx	10.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	18.3			
LOS by Move:	A	*	*	B	*	*	*	*	*	*	*	C			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	203	78	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	0.4	10.4	xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	25.0	417.1	xxxx	xxxxx			
Shared LOS:	*	*	*	*	*	*	*	*	D	F	*	*			
ApproachDel:	xxxxxx			xxxxxx				25.0				238.0			
ApproachLOS:	*			*				D				F			

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Wilfred Ave/Primrose Ave

Average Delay (sec/veh): 1.9 Worst Case Level Of Service: B[11.3]

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

Volume Module:

Base Vol:	10	10	10	10	10	10	10	131	10	10	201	10
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:	10	10	10	10	10	10	10	131	10	10	201	10
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	10	10	10	10	10	10	131	10	10	201	10
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	11	11	11	11	11	11	138	11	11	212	11
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	11	11	11	11	11	11	11	138	11	11	212	11

Critical Gap Module:

Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	413	407	143	413	407	217	222	xxxx	xxxxx	148	xxxx	xxxxx
Potent Cap.:	553	536	910	553	536	828	1359	xxxx	xxxxx	1445	xxxx	xxxxx
Move Cap.:	532	528	910	532	528	828	1359	xxxx	xxxxx	1445	xxxx	xxxxx
Volume/Cap:	0.02	0.02	0.01	0.02	0.02	0.01	0.01	xxxx	xxxx	0.01	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.7	xxxx	xxxxx	7.5	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	616	xxxxx	xxxx	603	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	0.2	xxxxx	xxxxx	0.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	11.2	xxxxx	xxxxx	11.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	B	*	*	B	*	*	*	*	*	*	*			
ApproachDel:	11.2			11.3			xxxxxxx			xxxxxxx					
ApproachLOS:	B			B			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 Wilfred Ave/Whistler Ave

Average Delay (sec/veh): 1.9 Worst Case Level Of Service: B[11.3]

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

Volume Module:

Base Vol:	10	10	10	10	10	10	10	131	10	10	200	20
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:	10	10	10	10	10	10	10	131	10	10	200	20
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	10	10	10	10	10	10	131	10	10	200	20
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	11	11	11	11	11	11	138	11	11	211	21
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	11	11	11	11	11	11	11	138	11	11	211	21

Critical Gap Module:

Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxxx	4.1	xxxx	xxxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxxx	2.2	xxxx	xxxxxx

Capacity Module:

Cnflict Vol:	417	417	143	417	412	221	232	xxxx	xxxxxx	148	xxxx	xxxxxx
Potent Cap.:	550	530	910	550	533	824	1348	xxxx	xxxxxx	1445	xxxx	xxxxxx
Move Cap.:	528	522	910	529	525	824	1348	xxxx	xxxxxx	1445	xxxx	xxxxxx
Volume/Cap:	0.02	0.02	0.01	0.02	0.02	0.01	0.01	xxxx	xxxx	0.01	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	0.0	xxxx	xxxxxx	0.0	xxxx	xxxxxx			
Control Del:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	7.7	xxxx	xxxxxx	7.5	xxxx	xxxxxx			
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	611	xxxxxx	xxxx	599	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx			
SharedQueue:	xxxxxx	0.2	xxxxxx	xxxxxx	0.2	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx			
Shrd ConDel:	xxxxxx	11.2	xxxxxx	xxxxxx	11.3	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx			
Shared LOS:	*	B	*	*	B	*	*	*	*	*	*	*			
ApproachDel:	11.2			11.3			xxxxxxx			xxxxxxx					
ApproachLOS:	B			B			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Langner Ave/Wilfred Ave

Average Delay (sec/veh): 1.9 Worst Case Level Of Service: B[11.3]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 1! 0 0 0 0 1! 0 0 0 0 1! 0 0

Volume Module:

Base Vol: 10 10 10 10 10 10 10 130 10 10 200 10
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: 10 10 10 10 10 10 10 130 10 10 200 10
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 10 10 10 10 10 10 10 130 10 10 200 10
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 11 11 11 11 11 11 11 137 11 11 211 11
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 11 11 11 11 11 11 11 137 11 11 211 11

Critical Gap Module:

Critical Gp: 7.1 6.5 6.2 7.1 6.5 6.2 4.1 xxxx xxxxx 4.1 xxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 3.5 4.0 3.3 2.2 xxxx xxxxx 2.2 xxxx xxxxx

Capacity Module:

Cnflict Vol: 411 405 142 411 405 216 221 xxxx xxxxx 147 xxxx xxxxx
Potent Cap.: 555 538 911 555 538 829 1360 xxxx xxxxx 1447 xxxx xxxxx
Move Cap.: 534 530 911 534 530 829 1360 xxxx xxxxx 1447 xxxx xxxxx
Volume/Cap: 0.02 0.02 0.01 0.02 0.02 0.01 0.01 xxxx xxxx 0.01 xxxx xxxx

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx 0.0 xxxx xxxxx 0.0 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx 7.7 xxxx xxxxx 7.5 xxxx xxxxx
LOS by Move: * * * * * A * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx 617 xxxxx xxxx 604 xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
SharedQueue:xxxxx 0.2 xxxxx xxxxx 0.2 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 11.1 xxxxx xxxxx 11.3 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS: * B * * B * * * * *
ApproachDel: 11.1 11.3 xxxxxxx xxxxxxx
ApproachLOS: B B * *

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #5 Wilfred Ave/Labath Ave

Average Delay (sec/veh): 12.6 Worst Case Level Of Service: E[48.3]

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

Volume Module:

Base Vol:	35	6	266	112	21	14	60	13	77	116	159	99
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	6	266	112	21	14	60	13	77	116	159	99
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	35	6	266	112	21	14	60	13	77	116	159	99
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	37	6	280	118	22	15	63	14	81	122	167	104
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	37	6	280	118	22	15	63	14	81	122	167	104
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	663	696	54	787	685	219	272	xxxx	xxxxx	95	xxxx	xxxxx
Potent Cap.:	378	368	1019	312	373	825	1303	xxxx	xxxxx	1512	xxxx	xxxxx
Move Cap.:	316	319	1019	200	324	825	1303	xxxx	xxxxx	1512	xxxx	xxxxx
Volume/Cap:	0.12	0.02	0.27	0.59	0.07	0.02	0.05	xxxx	xxxx	0.08	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.2	xxxx	xxxxx	0.3	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.9	xxxx	xxxxx	7.6	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	786	xxxxx	xxxx	229	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	2.0	xxxxx	xxxxx	4.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	12.7	xxxxx	xxxxx	48.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	B	*	*	E	*	*	*	*	*	*	*			
ApproachDel:	12.7			48.3			xxxxxxx			xxxxxxx					
ApproachLOS:	B			E			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #6 Dowell Ave/Wilfred Ave

Average Delay (sec/veh): 77.5 Worst Case Level Of Service: F[333.5]

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

Volume Module:

Base Vol:	80	45	222	88	13	47	52	191	148	187	247	89
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:	80	45	222	88	13	47	52	191	148	187	247	89
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	80	45	222	88	13	47	52	191	148	187	247	89
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	84	47	234	93	14	49	55	201	156	197	260	94
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	84	47	234	93	14	49	55	201	156	197	260	94
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	1121	1136	279	1229	1167	307	354	xxxx	xxxxx	357	xxxx	xxxxx
Potent Cap.:	185	204	765	156	195	738	1216	xxxx	xxxxx	1213	xxxx	xxxxx
Move Cap.:	134	159	765	70	152	738	1216	xxxx	xxxxx	1213	xxxx	xxxxx
Volume/Cap:	0.63	0.30	0.31	1.32	0.09	0.07	0.05	xxxx	xxxx	0.16	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	0.6	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.1	xxxx	xxxxx	8.5	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	297	xxxxx	xxxx	105	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	16.8	xxxxx	xxxxx	11.4	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	167	xxxxx	xxxxx	334	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	F	*	*	F	*	*	*	*	*	*	*			
ApproachDel:	166.5			333.5			xxxxxxx			xxxxxxx					
ApproachLOS:	F			F			*			*					

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

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

Intersection #7 Wilfred Ave/Redwood Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.708
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 37.1
Optimal Cycle: 60 Level Of Service: D

Table with columns for Approach (North, South, East, West Bound) and Movement (L, T, R). Rows include Control, Rights, Min. Green, and Lanes.

Volume Module: Table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module: Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 Redwood Dr/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.290

Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 26.5

Optimal Cycle: 31 Level Of Service: C

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 2 0 1 1 0 1 1 0 1 1 0 1 0

Volume Module:
Base Vol: 164 150 5 30 200 5 5 30 140 5 95 95
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: 164 150 5 30 200 5 5 30 140 5 95 95
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 164 150 5 30 200 5 5 30 140 5 95 95
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 173 158 5 32 211 5 5 32 147 5 100 100
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 173 158 5 32 211 5 5 32 147 5 100 100
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 173 158 5 32 211 5 5 32 147 5 100 100

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.93 0.93 0.83 0.93 0.93 0.93 0.93 0.98 0.83 0.93 0.86 0.86
Lanes: 1.00 2.00 1.00 1.00 1.95 0.05 1.00 1.00 1.00 1.00 1.00 1.00
Final Sat.: 1769 3538 1583 1769 3438 86 1769 1862 1583 1769 1636 1636

Capacity Analysis Module:
Vol/Sat: 0.10 0.04 0.00 0.02 0.06 0.06 0.00 0.02 0.09 0.00 0.06 0.06
Crit Moves: **** **** ****
Green/Cycle: 0.34 0.39 0.39 0.16 0.21 0.21 0.02 0.32 0.32 0.01 0.32 0.32
Volume/Cap: 0.29 0.11 0.01 0.11 0.29 0.29 0.15 0.05 0.29 0.30 0.19 0.19
Uniform Del: 24.1 19.5 18.7 35.9 33.2 33.2 48.2 23.5 25.5 49.2 24.6 24.6
IncrcmntDel: 0.3 0.0 0.0 0.2 0.2 0.2 1.9 0.0 0.3 9.2 0.1 0.1
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Delay/Veh: 24.4 19.5 18.7 36.1 33.5 33.5 50.1 23.6 25.8 58.4 24.7 24.7
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 24.4 19.5 18.7 36.1 33.5 33.5 50.1 23.6 25.8 58.4 24.7 24.7
LOS by Move: C B B D C C D C C E C C
HCM2k95thQ: 8 3 0 2 6 6 1 1 7 1 5 5

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

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

Intersection #9 Wilfred Ave/101 SB Ramp

Cycle (sec): 145 Critical Vol./Cap.(X): 0.630
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 30.6
Optimal Cycle: 45 Level Of Service: C

Street Name: US-101 SB Ramp Wilfred Avenue
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Permitted Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 0 0 0 1 0 1 1 0 0 0 1 1 0 2 0 2 0 0

Volume Module:
Base Vol: 0 0 0 328 324 459 0 737 219 89 476 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: 0 0 0 328 324 459 0 737 219 89 476 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 328 324 459 0 737 219 89 476 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 0 0 0 345 341 483 0 776 231 94 501 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 0 0 345 341 483 0 776 231 94 501 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 0 0 0 345 341 483 0 776 231 94 501 0

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 1.00 1.00 1.00 0.83 0.89 0.89 1.00 0.95 0.95 0.93 0.98 1.00
Lanes: 0.00 0.00 0.00 1.00 1.00 1.00 0.00 1.54 0.46 2.00 2.00 0.00
Final Sat.: 0 0 0 1583 1698 1698 0 2773 824 3538 3724 0

Capacity Analysis Module:
Vol/Sat: 0.00 0.00 0.00 0.22 0.20 0.28 0.00 0.28 0.28 0.03 0.13 0.00
Crit Moves: ****
Green/Cycle: 0.00 0.00 0.00 0.45 0.45 0.45 0.00 0.44 0.44 0.04 0.49 0.00
Volume/Cap: 0.00 0.00 0.00 0.48 0.44 0.63 0.00 0.63 0.63 0.63 0.28 0.00
Uniform Del: 0.0 0.0 0.0 27.9 27.3 30.5 0.0 31.1 31.1 68.3 22.1 0.0
IncrmntDel: 0.0 0.0 0.0 0.5 0.2 1.0 0.0 0.8 0.8 8.4 0.1 0.0
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 0.00 0.00 0.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 0.00
Delay/Veh: 0.0 0.0 0.0 28.4 27.4 31.5 0.0 31.9 31.9 76.8 22.2 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 0.0 0.0 28.4 27.4 31.5 0.0 31.9 31.9 76.8 22.2 0.0
LOS by Move: A A A C C C A C C E C A
HCM2k95thQ: 0 0 0 20 19 29 0 30 30 6 12 0

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #10 Golf Course Dr/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.925

Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 44.0

Optimal Cycle: 122 Level Of Service: D

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 0 1 1 1 0 0 1 1 0 1 0 1 0 1 0

Volume Module:
Base Vol: 222 108 569 42 41 9 0 558 507 413 344 117
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: 222 108 569 42 41 9 0 558 507 413 344 117
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 222 108 569 42 41 9 0 558 507 413 344 117
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 234 114 599 44 43 9 0 587 534 435 362 123
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 234 114 599 44 43 9 0 587 534 435 362 123
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 234 114 599 44 43 9 0 587 534 435 362 123

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.93 0.86 0.86 0.93 0.95 0.95 1.00 0.91 0.91 0.93 0.94 0.94
Lanes: 1.00 0.32 1.68 1.00 0.82 0.18 0.00 1.05 0.95 1.00 1.49 0.51
Final Sat.: 1769 519 2736 1769 1486 326 0 1813 1647 1769 2673 909

Capacity Analysis Module:
Vol/Sat: 0.13 0.22 0.22 0.02 0.03 0.03 0.00 0.32 0.32 0.25 0.14 0.14
Crit Moves: ****
Green/Cycle: 0.22 0.24 0.24 0.03 0.05 0.05 0.00 0.35 0.35 0.27 0.62 0.62
Volume/Cap: 0.61 0.92 0.92 0.92 0.61 0.61 0.00 0.92 0.92 0.92 0.22 0.22
Uniform Del: 35.4 37.3 37.3 48.5 46.7 46.7 0.0 31.2 31.2 35.7 8.5 8.5
IncrcmntDel: 2.9 16.9 16.9 101.7 12.2 12.2 0.0 11.9 11.9 24.1 0.1 0.1
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00
Delay/Veh: 38.3 54.1 54.1 150.2 58.9 58.9 0.0 43.1 43.1 59.9 8.6 8.6
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 38.3 54.1 54.1 150.2 58.9 58.9 0.0 43.1 43.1 59.9 8.6 8.6
LOS by Move: D D D F E E A D D E A A
HCM2k95thQ: 14 26 26 7 5 5 0 35 35 30 7 7

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #11 Roberts Lake Dr/Golf Course Dr

Cycle (sec): 80 Critical Vol./Cap.(X): 0.512

Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 15.6

Optimal Cycle: 27 Level Of Service: B

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Protected Permitted
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 0 0 0 1 0 0 0 1 1 0 2 0 0 0 0 1 1 0

Volume Module:
Base Vol: 0 0 0 92 0 236 195 970 0 0 637 33
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 0 92 0 236 195 970 0 0 637 33
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 92 0 236 195 970 0 0 637 33
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 0 0 0 97 0 248 205 1021 0 0 671 35
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 0 0 97 0 248 205 1021 0 0 671 35
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 0 0 0 97 0 248 205 1021 0 0 671 35

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 1.00 1.00 1.00 0.93 1.00 0.83 0.93 0.93 1.00 1.00 0.92 0.92
Lanes: 0.00 0.00 0.00 1.00 0.00 1.00 1.00 2.00 0.00 0.00 1.90 0.10
Final Sat.: 0 0 0 1769 0 1583 1769 3538 0 0 3340 173

Capacity Analysis Module:
Vol/Sat: 0.00 0.00 0.00 0.05 0.00 0.16 0.12 0.29 0.00 0.00 0.20 0.20
Crit Moves: ****
Green/Cycle: 0.00 0.00 0.00 0.31 0.00 0.31 0.23 0.62 0.00 0.00 0.39 0.39
Volume/Cap: 0.00 0.00 0.00 0.18 0.00 0.51 0.51 0.47 0.00 0.00 0.51 0.51
Uniform Del: 0.0 0.0 0.0 20.4 0.0 22.8 27.1 8.2 0.0 0.0 18.5 18.5
IncrcmntDel: 0.0 0.0 0.0 0.2 0.0 0.9 1.1 0.2 0.0 0.0 0.3 0.3
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 0.00 0.00 0.00 1.00 0.00 1.00 1.00 1.00 0.00 0.00 1.00 1.00
Delay/Veh: 0.0 0.0 0.0 20.5 0.0 23.7 28.2 8.3 0.0 0.0 18.8 18.8
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 0.0 0.0 20.5 0.0 23.7 28.2 8.3 0.0 0.0 18.8 18.8
LOS by Move: A A A C A C C A A B B
HCM2k95thQ: 0 0 0 4 0 11 10 14 0 0 14 14

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

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

Intersection #12 101 NB Ramps/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.877
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 34.9
Optimal Cycle: 100 Level Of Service: C

Table with columns for Approach (North, South, East, West Bound) and Movement (L, T, R). Rows include Control, Rights, Min. Green, and Lanes.

Volume Module: Table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module: Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #13 New Driveway/Stony Point Rd

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

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	1	0	0	1	0	0	0	0	0	0

Volume Module:

Base Vol:	0	832	0	0	634	0	0	0	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
Initial Bse:	0	832	0	0	634	0	0	0	0	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	832	0	0	634	0	0	0	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
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	876	0	0	667	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	876	0	0	667	0	0	0	0	0	0	0

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3

Capacity Module:

Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	876
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	351
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	351
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.00

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*			
ApproachDel:	xxxxxxx			xxxxxxx			xxxxxxx			xxxxxxx					
ApproachLOS:	*			*			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #14 New Driveway/Labath Ave

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

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 0 0 0 0 0 1! 0 0 0 1 0 0 0 1 0

Volume Module:

Base Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Growth Adj: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
Initial Bse: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
User Adj: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
PHF Adj: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
PHF Volume: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Critical Gap Module:

Critical Gp: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
FollowUpTim: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

Capacity Module:

Cnflict Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Potent Cap.: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Move Cap.: 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Volume/Cap: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

Level Of Service Module:

2Way95thQ: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Control Del: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
LOS by Move:
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
SharedQueue: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Shrd ConDel: 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
Shared LOS:
ApproachDel: 0.0 0.0 0.0 0.0
ApproachLOS:

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #15 Redwood Dr/Business Park Dr

Average Delay (sec/veh): 5.6 Worst Case Level Of Service: D[26.5]

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:	1	0	2	0	0	1	1	0	0	1	0	0

Volume Module:

Base Vol:	33	464	0	0	489	41	172	0	89	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:	33	464	0	0	489	41	172	0	89	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	33	464	0	0	489	41	172	0	89	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	35	488	0	0	515	43	181	0	94	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	35	488	0	0	515	43	181	0	94	0	0	0

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.8	6.5	6.9	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	558	xxxx	xxxxx	xxxx	xxxx	xxxxx	850	1094	279	xxxx	xxxx	xxxxx
Potent Cap.:	1023	xxxx	xxxxx	xxxx	xxxx	xxxxx	303	216	724	xxxx	xxxx	xxxxx
Move Cap.:	1023	xxxx	xxxxx	xxxx	xxxx	xxxxx	296	208	724	xxxx	xxxx	xxxxx
Volume/Cap:	0.03	xxxx	xxxx	xxxx	xxxx	xxxx	0.61	0.00	0.13	xxxx	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	3.8	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	8.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	34.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	*	*	*	D	*	*	*	*	*
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	724	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	0.4	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	10.7	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	B	*	*	*
ApproachDel:	xxxxxxx			xxxxxxx			26.5			xxxxxxx		
ApproachLOS:	*			*			D			*		

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #16 Rohnert Park Expwy/Stony Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.665

Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 24.0

Optimal Cycle: 38 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Control:	Permitted			Protected			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1	0	0	1	0	0	0	1	0	0

Volume Module:

Base Vol:	0	546	251	212	421	0	0	0	0	257	0	286
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	546	251	212	421	0	0	0	0	257	0	286
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	546	251	212	421	0	0	0	0	257	0	286
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	575	264	223	443	0	0	0	0	271	0	301
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	575	264	223	443	0	0	0	0	271	0	301
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	575	264	223	443	0	0	0	0	271	0	301

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.98	0.83	0.93	0.98	1.00	1.00	1.00	1.00	0.93	1.00	0.83
Lanes:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	1862	1583	1769	1862	0	0	0	0	1769	0	1583

Capacity Analysis Module:

Vol/Sat:	0.00	0.31	0.17	0.13	0.24	0.00	0.00	0.00	0.00	0.15	0.00	0.19
Crit Moves:	****			****						****		
Green/Cycle:	0.00	0.46	0.46	0.19	0.65	0.00	0.00	0.00	0.00	0.29	0.00	0.29
Volume/Cap:	0.00	0.66	0.36	0.67	0.36	0.00	0.00	0.00	0.00	0.53	0.00	0.66
Uniform Del:	0.0	20.8	17.2	37.6	7.9	0.0	0.0	0.0	0.0	30.1	0.0	31.5
IncrcmntDel:	0.0	2.0	0.3	5.0	0.2	0.0	0.0	0.0	0.0	1.1	0.0	3.7
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Delay/Veh:	0.0	22.7	17.5	42.6	8.0	0.0	0.0	0.0	0.0	31.2	0.0	35.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	22.7	17.5	42.6	8.0	0.0	0.0	0.0	0.0	31.2	0.0	35.2
LOS by Move:	A	C	B	D	A	A	A	A	A	C	A	D
HCM2k95thQ:	0	25	10	14	12	0	0	0	0	14	0	17

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #17 Rohnert Park Expwy/Labath Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.576

Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 33.1

Optimal Cycle: 46 Level Of Service: C

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 2 0 0 1 1 1 0 0 1 0 1 0 2 0 1 1 0 3 0 1

Volume Module:
Base Vol: 64 19 154 270 43 99 50 600 36 202 575 154
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: 64 19 154 270 43 99 50 600 36 202 575 154
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 64 19 154 270 43 99 50 600 36 202 575 154
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 67 20 162 284 45 104 53 632 38 213 605 162
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 67 20 162 284 45 104 53 632 38 213 605 162
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 67 20 162 284 45 104 53 632 38 213 605 162

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.93 0.85 0.85 0.93 0.88 0.88 0.93 0.98 0.83 0.93 0.98 0.83
Lanes: 2.00 0.22 1.78 1.00 0.30 0.70 1.00 2.00 1.00 1.00 3.00 1.00
Final Sat.: 3538 355 2874 1769 505 1162 1769 3724 1583 1769 5586 1583

Capacity Analysis Module:
Vol/Sat: 0.02 0.06 0.06 0.16 0.09 0.09 0.03 0.17 0.02 0.12 0.11 0.10
Crit Moves: ****
Green/Cycle: 0.07 0.12 0.12 0.25 0.29 0.29 0.26 0.28 0.28 0.24 0.26 0.26
Volume/Cap: 0.27 0.47 0.47 0.64 0.31 0.31 0.11 0.61 0.09 0.50 0.42 0.39
Uniform Del: 44.1 41.0 41.0 33.5 27.7 27.7 28.2 31.2 26.6 32.8 30.7 30.5
IncrcmntDel: 0.6 0.9 0.9 3.2 0.4 0.4 0.1 1.0 0.1 0.9 0.2 0.6
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Delay/Veh: 44.7 41.9 41.9 36.7 28.1 28.1 28.3 32.2 26.6 33.8 30.9 31.1
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 44.7 41.9 41.9 36.7 28.1 28.1 28.3 32.2 26.6 33.8 30.9 31.1
LOS by Move: D D D D C C C C C C C
HCM2k95thQ: 3 6 6 16 7 7 3 17 2 12 10 9

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

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

Intersection #18 Rohnert Park Expwy/Redwood Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.711
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 44.7
Optimal Cycle: 61 Level Of Service: D

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic movements and 13 rows of volume-related metrics like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 13 columns for different movements and 4 rows of saturation flow metrics like Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns for different movements and 13 rows of capacity analysis metrics like Vol/Sat, Crit Moves, Green/Cycle, etc.

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

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

 Intersection #19 Rohnert Park Expwy/101 SB Ramps

Cycle (sec): 80 Critical Vol./Cap.(X): 0.716
 Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 21.1
 Optimal Cycle: 58 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1	1	0	0	0	2	1	1	0	2

Volume Module:

Base Vol:	7	0	17	702	1	351	0	1208	278	68	1024	199
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:	7	0	17	702	1	351	0	1208	278	68	1024	199
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	7	0	17	702	1	351	0	1208	278	68	1024	199
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00
PHF Volume:	7	0	18	739	1	369	0	1272	293	72	1078	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	7	0	18	739	1	369	0	1272	293	72	1078	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Final Vol.:	7	0	18	739	1	369	0	1272	293	72	1078	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.85	1.00	0.85	0.70	0.70	0.83	1.00	0.95	0.95	0.93	0.98	1.00
Lanes:	0.29	0.00	0.71	1.99	0.01	1.00	0.00	2.44	0.56	1.00	2.00	1.00
Final Sat.:	472	0	1147	2640	4	1583	0	4414	1016	1769	3724	1900

Capacity Analysis Module:

Vol/Sat:	0.02	0.00	0.02	0.28	0.28	0.23	0.00	0.29	0.29	0.04	0.29	0.00
Crit Moves:				****			****			****		
Green/Cycle:	0.39	0.00	0.39	0.39	0.39	0.39	0.00	0.40	0.40	0.06	0.46	0.00
Volume/Cap:	0.04	0.00	0.04	0.72	0.72	0.60	0.00	0.72	0.72	0.72	0.63	0.00
Uniform Del:	15.1	0.0	15.1	20.6	20.6	19.4	0.0	20.1	20.1	37.1	16.5	0.0
IncrcmntDel:	0.0	0.0	0.0	2.4	2.4	1.6	0.0	1.2	1.2	21.8	0.8	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	15.1	0.0	15.1	23.0	23.0	21.0	0.0	21.2	21.2	58.9	17.2	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	15.1	0.0	15.1	23.0	23.0	21.0	0.0	21.2	21.2	58.9	17.2	0.0
LOS by Move:	B	A	B	C	C	C	A	C	C	E	B	A
HCM2k95thQ:	1	0	1	17	17	15	0	22	22	7	20	0

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #20 Rohnert Park Expwy/101 NB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.437
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 15.8
Optimal Cycle: 24 Level Of Service: B

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Protected/Permitted), Rights (Include/Ignore), Min. Green, and Lanes.

Volume Module: Table with 13 columns for different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns for different traffic movements. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns for different traffic movements. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2k95thQ.

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #21 Rohnert Park Expwy/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.815
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 33.9
Optimal Cycle: 81 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Split Phase, Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2k95thQ.

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

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

Intersection #22 Gravenstein Hwy (SR 116)/ Stoney Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.766
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 37.1
Optimal Cycle: 70 Level Of Service: D

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueueDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2k95thQ.

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #23 Gravenstein Hwy (SR 116)/ Redwood Rd

Cycle (sec): 80 Critical Vol./Cap.(X): 0.734
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 28.6
Optimal Cycle: 61 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns for different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2k95thQ.

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #24 Gravenstein Hwy and SB 101 Ramps

Cycle (sec): 80 Critical Vol./Cap.(X): 0.562

Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 17.7

Optimal Cycle: 37 Level Of Service: B

Street Name: SB 101 Ramps Gravenstein Hwy

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Permitted Protected

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 0 0 0 0 0 2 0 0 1 0 0 0 2 0 1 1 0 2 0 0

Volume Module:

Table with 13 columns for traffic movements and 13 rows for volume metrics including Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module:

Table with 13 columns for traffic movements and 4 rows for saturation flow metrics including Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with 13 columns for traffic movements and 13 rows for capacity analysis metrics including Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2k95thQ.

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #25 Gravenstein Hwy and NB 101 Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.707

Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 17.3

Optimal Cycle: 52 Level Of Service: B

Street Name: NB 101 Ramps Gravenstein Hwy

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Permitted Permitted Permitted

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 1 0 0 0 1 0 0 0 0 0 0 0 2 0 0 0 0 0 2 0 0

Volume Module:

Base Vol: 351 0 236 0 0 0 0 0 1461 0 0 617 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: 351 0 236 0 0 0 0 0 1461 0 0 617 0

Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 351 0 236 0 0 0 0 0 1461 0 0 617 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95

PHF Volume: 369 0 248 0 0 0 0 0 1538 0 0 649 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 369 0 248 0 0 0 0 0 1538 0 0 649 0

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Vol.: 369 0 248 0 0 0 0 0 1538 0 0 649 0

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900

Adjustment: 0.93 1.00 0.83 1.00 1.00 1.00 1.00 0.93 1.00 1.00 0.93 1.00

Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 2.00 0.00 0.00 2.00 0.00

Final Sat.: 1769 0 1583 0 0 0 0 0 3538 0 0 3538 0

Capacity Analysis Module:

Vol/Sat: 0.21 0.00 0.16 0.00 0.00 0.00 0.00 0.43 0.00 0.00 0.18 0.00

Crit Moves: **** ****

Green/Cycle: 0.30 0.00 0.30 0.00 0.00 0.00 0.00 0.61 0.00 0.00 0.61 0.00

Volume/Cap: 0.71 0.00 0.53 0.00 0.00 0.00 0.00 0.71 0.00 0.00 0.30 0.00

Uniform Del: 31.4 0.0 29.5 0.0 0.0 0.0 0.0 13.1 0.0 0.0 9.1 0.0

IncrcmntDel: 4.4 0.0 1.2 0.0 0.0 0.0 0.0 1.1 0.0 0.0 0.1 0.0

InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

Delay Adj: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 1.00 0.00 0.00 1.00 0.00

Delay/Veh: 35.8 0.0 30.6 0.0 0.0 0.0 0.0 14.2 0.0 0.0 9.2 0.0

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 35.8 0.0 30.6 0.0 0.0 0.0 0.0 14.2 0.0 0.0 9.2 0.0

LOS by Move: D A C A A A A B A A A A

HCM2k95thQ: 21 0 13 0 0 0 0 30 0 0 10 0

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #26 Millbrae Ave/Stony Point Rd

Average Delay (sec/veh): 3.2 Worst Case Level Of Service: E[38.2]

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:	1	0	2	0	1	1	0	0	1!	0	0	1

Volume Module:

Base Vol:	19	715	20	116	546	4	7	6	11	2	7	194
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:	19	715	20	116	546	4	7	6	11	2	7	194
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	19	715	20	116	546	4	7	6	11	2	7	194
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	20	753	21	122	575	4	7	6	12	2	7	204
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	20	753	21	122	575	4	7	6	12	2	7	204

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.5	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflict Vol:	579	xxxx	xxxxx	774	xxxx	xxxxx	1241	1635	289	1327	1616	376
Potent Cap.:	1005	xxxx	xxxxx	851	xxxx	xxxxx	133	102	713	115	105	627
Move Cap.:	1005	xxxx	xxxxx	851	xxxx	xxxxx	74	86	713	94	88	627
Volume/Cap:	0.02	xxxx	xxxx	0.14	xxxx	xxxx	0.10	0.07	0.02	0.02	0.08	0.33

Level Of Service Module:

2Way95thQ:	0.1	xxxx	xxxxx	0.5	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	1.4			
Control Del:	8.7	xxxx	xxxxx	9.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	13.5			
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	B			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	133	xxxxx	89	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.7	xxxxx	0.3	xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	38.2	xxxxx	50.1	xxxx	xxxxx			
Shared LOS:	*	*	*	*	*	*	*	E	*	F	*	*			
ApproachDel:	xxxxxx			xxxxxx				38.2				15.1			
ApproachLOS:	*			*				E				C			

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

Level of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #27 Millbrae Ave/Primrose Ave

Average Delay (sec/veh): 0.2 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:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	0	0	0	0	0	0	1!	0	0	1!

Volume Module:

Base Vol:	0	0	1	0	1	0	1	139	3	4	199	2
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	1	0	1	0	1	139	3	4	199	2
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	1	0	1	0	1	139	3	4	199	2
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	1	0	1	0	1	146	3	4	209	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	1	0	1	0	1	146	3	4	209	2

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	6.2	xxxxx	6.5	xxxxx	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	3.3	xxxxx	4.0	xxxxx	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	xxxx	xxxx	148	xxxx	371	xxxxx	212	xxxx	xxxxx	149	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	904	xxxx	562	xxxxx	1371	xxxx	xxxxx	1444	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	904	xxxx	560	xxxxx	1371	xxxx	xxxxx	1444	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	0.00	xxxx	0.00	xxxx	0.00	xxxx	xxxx	0.00	xxxx	xxxx

Level of Service Module:

2Way95thQ:	xxxx	xxxx	0.0	xxxx	0.0	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	9.0	xxxxx	11.4	xxxxx	7.6	xxxx	xxxxx	7.5	xxxx	xxxxx			
LOS by Move:	*	*	A	*	B	*	A	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*			
ApproachDel:	9.0			11.4			xxxxxxx			xxxxxxx					
ApproachLOS:	A			B			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #28 Millbrae Ave/Whistler Ave

Average Delay (sec/veh): 0.6 Worst Case Level Of Service: B[11.5]

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

Volume Module:

Base Vol:	1	9	0	4	0	1	1	123	2	4	208	8
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	9	0	4	0	1	1	123	2	4	208	8
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1	9	0	4	0	1	1	123	2	4	208	8
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	1	9	0	4	0	1	1	129	2	4	219	8
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	1	9	0	4	0	1	1	129	2	4	219	8

Critical Gap Module:

Critical Gp:	7.1	6.5	xxxxx	7.1	6.5	6.2	4.1	xxxxx	xxxxx	4.1	xxxxx	xxxxx
FollowUpTim:	3.5	4.0	xxxxx	3.5	4.0	3.3	2.2	xxxxx	xxxxx	2.2	xxxxx	xxxxx

Capacity Module:

Cnflct Vol:	365	368	xxxxx	369	365	223	227	xxxxx	xxxxx	132	xxxxx	xxxxx
Potent Cap.:	595	564	xxxxx	591	566	821	1353	xxxxx	xxxxx	1466	xxxxx	xxxxx
Move Cap.:	593	562	xxxxx	582	564	821	1353	xxxxx	xxxxx	1466	xxxxx	xxxxx
Volume/Cap:	0.00	0.02	xxxxx	0.01	0.00	0.00	0.00	xxxxx	xxxxx	0.00	xxxxx	xxxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.7	xxxx	xxxxx	7.5	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	565	xxxx	xxxxx	xxxx	618	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.1	xxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	11.5	xxxx	xxxxx	xxxxx	10.9	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	B	*	*	*	B	*	*	*	*	*	*	*
ApproachDel:	11.5			10.9			xxxxxxx			xxxxxxx		
ApproachLOS:	B			B			*			*		

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #29 Millbrae Ave/Langner Ave

Average Delay (sec/veh): 0.4 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:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	1! 0 0	0	0	0 0 0	0	0	0 1 0	0	1	0 0 0

Volume Module:

Base Vol:	5	0	11	0	0	0	0	149	9	4	270	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:	5	0	11	0	0	0	0	149	9	4	270	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	5	0	11	0	0	0	0	149	9	4	270	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	5	0	12	0	0	0	0	157	9	4	284	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	5	0	12	0	0	0	0	157	9	4	284	0

Critical Gap Module:

Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	454	454	162	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	166	xxxx	xxxxx
Potent Cap.:	567	505	889	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1424	xxxx	xxxxx
Move Cap.:	566	503	889	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1424	xxxx	xxxxx
Volume/Cap:	0.01	0.00	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	754	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	0.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx			
Shrd ConDel:	xxxxx	9.9	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx			
Shared LOS:	*	A	*	*	*	*	*	*	*	A	*	*			
ApproachDel:	9.9			xxxxxxx			xxxxxxx			xxxxxxx					
ApproachLOS:	A			*			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #30 Millbrae Ave/Labath Ave

Average Delay (sec/veh): 1.0 Worst Case Level Of Service: B[11.2]

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

Volume Module:

Base Vol:	25	0	8	0	0	0	0	155	9	11	250	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:	25	0	8	0	0	0	0	155	9	11	250	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	25	0	8	0	0	0	0	155	9	11	250	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	26	0	8	0	0	0	0	163	9	12	263	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	26	0	8	0	0	0	0	163	9	12	263	0

Critical Gap Module:

Critical Gp:	6.4	6.5	6.2	7.1	6.5	6.2	xxxxx	xxxxx	xxxxx	4.1	xxxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	xxxxx	xxxxx	xxxxx	2.2	xxxxx	xxxxx

Capacity Module:

Cnflict Vol:	454	454	168	458	459	263	xxxxx	xxxxx	xxxxx	173	xxxxx	xxxxx
Potent Cap.:	567	505	881	516	502	780	xxxxx	xxxxx	xxxxx	1416	xxxxx	xxxxx
Move Cap.:	564	501	881	508	498	780	xxxxx	xxxxx	xxxxx	1416	xxxxx	xxxxx
Volume/Cap:	0.05	0.00	0.01	0.00	0.00	0.00	xxxxx	xxxxx	xxxxx	0.01	xxxxx	xxxxx

Level Of Service Module:

2Way95thQ:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx			
Control Del:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	7.6	xxxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxxx	618	xxxxx	xxxxx	0	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
SharedQueue:	xxxxx	0.2	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shrd ConDel:	xxxxx	11.2	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	7.6	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shared LOS:	*	B	*	*	*	*	*	*	*	A	*	*	*	*	*
ApproachDel:	11.2			xxxxxxx			xxxxxxx			xxxxxxx					
ApproachLOS:	B			*			*			*					*

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

Level of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #31 Millbrae Ave/Dowdell Ave

Average Delay (sec/veh): 1.0 Worst Case Level Of Service: B[11.3]

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

Volume Module:

Base Vol:	37	0	0	0	0	0	0	135	22	0	235	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:	37	0	0	0	0	0	0	135	22	0	235	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	37	0	0	0	0	0	0	135	22	0	235	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	39	0	0	0	0	0	0	142	23	0	247	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	39	0	0	0	0	0	0	142	23	0	247	0

Critical Gap Module:

Critical Gp:	6.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	401	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	609	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	609	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.06	xxxx	xxxx	xxxxx	xxxx	xxxxx	xxxx	xxxx	xxxx	xxxxx	xxxx	xxxxx

Level of Service Module:

2Way95thQ:	0.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Control Del:	11.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
LOS by Move:	B	*	*	*	*	*	*	*	*	*	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	11.3			xxxxxxx			xxxxxxx			xxxxxxx			xxxxxxx		
ApproachLOS:	B			*			*			*			*		

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

**CUMULATIVE 2020 No ACTION
TRAFFIC CONDITIONS
(TRAFFIX)**

Impact Analysis Report
Level Of Service

Intersection		Base		Future		Change	
		Del/	V/	Del/	V/	in	
		LOS	Veh C	LOS	Veh C		
# 1	Wilfred Ave/Stony Point Rd	F	401.6 0.000	F	401.6 0.000	+	0.000 D/V
# 2	Wilfred Ave/Primrose Ave	B	12.4 0.000	B	12.4 0.000	+	0.000 D/V
# 3	Wilfred Ave/Whistler Ave	B	12.4 0.000	B	12.4 0.000	+	0.000 D/V
# 4	Langner Ave/Wilfred Ave	B	12.4 0.000	B	12.4 0.000	+	0.000 D/V
# 5	Wilfred Ave/Labath Ave	F	491.5 0.000	F	491.5 0.000	+	0.000 D/V
# 6	Dowell Ave/Wilfred Ave	F	OVRFL 0.000	F	OVRFL 0.000	+	0.000 D/V
# 7	Wilfred Ave/Redwood Dr	F	87.9 1.116	F	87.9 1.116	+	0.000 D/V
# 9	Wilfred Ave/101 SB Ramp	C	33.2 0.823	C	33.2 0.823	+	0.000 D/V
# 10	Golf Course Dr/Commerce Blvd	F	96.5 1.161	F	96.5 1.161	+	0.000 D/V
# 11	Roberts Lake Dr/Golf Course Dr	B	11.1 0.453	B	10.9 0.453	-	0.228 D/V
# 12	101 NB Ramps/Commerce Blvd	E	69.8 1.098	E	69.8 1.098	+	0.000 D/V
# 13	New Driveway/Stony Point Rd	A	0.0 0.000	A	0.0 0.000	+	0.000 D/V
# 14	New Driveway/Labath Ave		0.0 0.000		0.0 0.000	+	0.000 D/V
# 15	Redwood Dr/Business Park Dr	C	16.5 0.000	C	16.5 0.000	+	0.000 D/V
# 16	Rohnert Park Expwy/Stony Point	C	22.1 0.619	C	22.1 0.619	+	0.000 D/V
# 17	Rohnert Park Expwy/Labath Ave	C	30.7 0.522	C	33.0 0.522	+	2.273 D/V
# 18	Rohnert Park Expwy/Redwood Dr	D	36.0 0.697	D	36.0 0.697	+	0.000 D/V
# 19	Rohnert Park Expwy/101 SB Ramp	C	24.5 0.710	C	24.5 0.710	+	0.000 D/V
# 20	Rohnert Park Expwy/101 NB Ramp	B	17.1 0.449	B	17.1 0.449	+	0.000 D/V
# 21	Rohnert Park Expwy/Commerce Bl	C	34.9 0.802	C	34.9 0.802	+	0.000 D/V
# 22	Gravenstein Hwy (SR 116)/ Ston	D	39.9 0.829	D	39.9 0.829	+	0.000 D/V
# 23	Gravenstein Hwy (SR 116)/ Redw	C	34.6 0.882	C	34.6 0.882	+	0.000 D/V
# 24	Gravenstein Hwy and SB 101 Ram	B	17.0 0.585	B	17.0 0.585	+	0.000 D/V
# 25	Gravenstein Hwy and NB 101 Ram	B	18.7 0.767	B	18.7 0.767	+	0.000 D/V
# 26	Millbrae Ave/Stony Point Rd	F	70.6 0.000	F	70.6 0.000	+	0.000 D/V

Intersection		Base		Future		Change in	
		Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C		
# 27 Millbrae Ave/Primrose Ave	B	12.4	0.000	B 12.4	0.000	+ 0.000	D/V
# 28 Millbrae Ave/Whister Ave	B	12.4	0.000	B 12.4	0.000	+ 0.000	D/V
# 29 Millbrae Ave/Langner Ave	B	11.2	0.000	B 11.2	0.000	+ 0.000	D/V
# 30 Millbrae Ave/Labath Ave	B	13.5	0.000	B 13.5	0.000	+ 0.000	D/V
# 31 Millbrae Ave/Dowdell Ave	B	11.6	0.000	B 11.6	0.000	+ 0.000	D/V

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1 Wilfred Ave/Stony Point Rd

Average Delay (sec/veh): 71.6 Worst Case Level Of Service: F[401.6]

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:	1	0	0	1	0	0	0	0	0	1	0	0

Volume Module:

Base Vol:	14	677	74	102	508	3	0	13	16	143	22	134
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:	14	677	74	102	508	3	0	13	16	143	22	134
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	14	677	74	102	508	3	0	13	16	143	22	134
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	15	713	78	107	535	3	0	14	17	151	23	141
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	15	713	78	107	535	3	0	14	17	151	23	141

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflict Vol:	538	xxxx	xxxxx	791	xxxx	xxxxx	xxxx	1571	536	1547	1534	752
Potent Cap.:	1041	xxxx	xxxxx	839	xxxx	xxxxx	xxxx	112	548	94	118	414
Move Cap.:	1041	xxxx	xxxxx	839	xxxx	xxxxx	xxxx	96	548	73	101	414
Volume/Cap:	0.01	xxxx	xxxx	0.13	xxxx	xxxx	xxxx	0.14	0.03	2.07	0.23	0.34

Level Of Service Module:

2Way95thQ:	0.0	xxxx	xxxxx	0.4	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	1.5			
Control Del:	8.5	xxxx	xxxxx	9.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	18.1			
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	C			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	176	75	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	0.6	16.3	xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	29.7	713.1	xxxx	xxxxx			
Shared LOS:	*	*	*	*	*	*	*	*	D	F	*	*			
ApproachDel:	xxxxxx			xxxxxx				29.7				401.6			
ApproachLOS:	*			*				D				F			

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Wilfred Ave/Primrose Ave

Average Delay (sec/veh): 1.6 Worst Case Level Of Service: B[12.4]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 1! 0 0 0 0 1! 0 0

Volume Module:

Base Vol: 10 10 10 10 10 10 10 170 10 9 280 9
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: 10 10 10 10 10 10 10 170 10 9 280 9
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 10 10 10 10 10 10 10 170 10 9 280 9
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 11 11 11 11 11 11 11 179 11 9 295 9
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 11 11 11 11 11 11 11 179 11 9 295 9

Critical Gap Module:

Critical Gp: 7.1 6.5 6.2 7.1 6.5 6.2 4.1 xxxx xxxxx 4.1 xxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 3.5 4.0 3.3 2.2 xxxx xxxxx 2.2 xxxx xxxxx

Capacity Module:

Cnflict Vol: 534 528 184 534 529 299 304 xxxx xxxxx 189 xxxx xxxxx
Potent Cap.: 460 458 863 460 458 745 1268 xxxx xxxxx 1397 xxxx xxxxx
Move Cap.: 440 451 863 441 451 745 1268 xxxx xxxxx 1397 xxxx xxxxx
Volume/Cap: 0.02 0.02 0.01 0.02 0.02 0.01 0.01 xxxx xxxx 0.01 xxxx xxxx

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx 0.0 xxxx xxxxx 0.0 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx 7.9 xxxx xxxxx 7.6 xxxx xxxxx
LOS by Move: * * * * * A * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx 531 xxxxx xxxx 515 xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
SharedQueue:xxxxx 0.2 xxxxx xxxxx 0.2 xxxxx xxxxx xxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 12.2 xxxxx xxxxx 12.4 xxxxx xxxxx xxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS: * B * * B * * * * *
ApproachDel: 12.2 12.4 xxxxxxx xxxxxxx
ApproachLOS: B B * *

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 Wilfred Ave/Whistler Ave

Average Delay (sec/veh): 1.6 Worst Case Level Of Service: B[12.4]

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

Volume Module:

Base Vol:	10	10	10	10	10	10	10	170	10	9	280	9
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:	10	10	10	10	10	10	10	170	10	9	280	9
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	10	10	10	10	10	10	170	10	9	280	9
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	11	11	11	11	11	11	179	11	9	295	9
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	11	11	11	11	11	11	11	179	11	9	295	9

Critical Gap Module:

Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	534	528	184	534	529	299	304	xxxx	xxxxx	189	xxxx	xxxxx
Potent Cap.:	460	458	863	460	458	745	1268	xxxx	xxxxx	1397	xxxx	xxxxx
Move Cap.:	440	451	863	441	451	745	1268	xxxx	xxxxx	1397	xxxx	xxxxx
Volume/Cap:	0.02	0.02	0.01	0.02	0.02	0.01	0.01	xxxx	xxxx	0.01	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.9	xxxx	xxxxx	7.6	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	531	xxxxx	xxxx	515	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	0.2	xxxxx	xxxxx	0.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	12.2	xxxxx	xxxxx	12.4	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	B	*	*	B	*	*	*	*	*	*	*			
ApproachDel:	12.2			12.4			xxxxxx			xxxxxx					
ApproachLOS:	B			B			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Langner Ave/Wilfred Ave

Average Delay (sec/veh): 1.6 Worst Case Level Of Service: B[12.4]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 1! 0 0 0 0 1 0 1 0 1

Volume Module:

Base Vol: 10 10 10 10 10 10 10 170 10 9 280 9
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: 10 10 10 10 10 10 10 170 10 9 280 9
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 10 10 10 10 10 10 10 170 10 9 280 9
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 11 11 11 11 11 11 11 179 11 9 295 9
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 11 11 11 11 11 11 11 179 11 9 295 9

Critical Gap Module:

Critical Gp: 7.1 6.5 6.2 7.1 6.5 6.2 4.1 xxxx xxxxx 4.1 xxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 3.5 4.0 3.3 2.2 xxxx xxxxx 2.2 xxxx xxxxx

Capacity Module:

Cnflict Vol: 534 528 184 529 524 295 304 xxxx xxxxx 189 xxxx xxxxx
Potent Cap.: 460 458 863 463 461 749 1268 xxxx xxxxx 1397 xxxx xxxxx
Move Cap.: 440 451 863 444 454 749 1268 xxxx xxxxx 1397 xxxx xxxxx
Volume/Cap: 0.02 0.02 0.01 0.02 0.02 0.01 0.01 xxxx xxxx 0.01 xxxx xxxx

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx 0.0 xxxx xxxxx 0.0 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx 7.9 xxxx xxxxx 7.6 xxxx xxxxx
LOS by Move: * * * * * A * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx 531 xxxxx xxxx 518 xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
SharedQueue:xxxxx 0.2 xxxxx xxxxx 0.2 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 12.2 xxxxx xxxxx 12.4 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS: * B * * B * * * * *
ApproachDel: 12.2 12.4 xxxxxxx xxxxxxx
ApproachLOS: B B * *

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #5 Wilfred Ave/Labath Ave

Average Delay (sec/veh): 81.5 Worst Case Level Of Service: F[491.5]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 1! 0 0 1 0 1 1 0 1 0 1 1 0

Volume Module:

Base Vol: 44 14 396 180 31 11 40 109 41 188 245 189
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 14 396 180 31 11 40 109 41 188 245 189
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 44 14 396 180 31 11 40 109 41 188 245 189
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 46 15 417 189 33 12 42 115 43 198 258 199
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 46 15 417 189 33 12 42 115 43 198 258 199

Critical Gap Module:

Critical Gp: 7.5 6.5 6.9 7.5 6.5 6.9 4.1 xxxx xxxxx 4.1 xxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 3.5 4.0 3.3 2.2 xxxx xxxxx 2.2 xxxx xxxxx

Capacity Module:

Cnflict Vol: 762 1073 79 902 995 228 457 xxxx xxxxx 158 xxxx xxxxx
Potent Cap.: 298 222 972 236 247 780 1115 xxxx xxxxx 1434 xxxx xxxxx
Move Cap.: 225 184 972 110 205 780 1115 xxxx xxxxx 1434 xxxx xxxxx
Volume/Cap: 0.21 0.08 0.43 1.72 0.16 0.01 0.04 xxxx xxxx 0.14 xxxx xxxx

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx 0.1 xxxx xxxxx 0.5 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx 8.4 xxxx xxxxx 7.9 xxxx xxxxx
LOS by Move: * * * * * A * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx 668 xxxxx xxxx 123 xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
SharedQueue:xxxxx 6.0 xxxxx xxxxx 18.5 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 22.7 xxxxx xxxxx 491 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS: * C * * F * * * * *
ApproachDel: 22.7 491.5 xxxxxxx xxxxxxx
ApproachLOS: C F * *

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #6 Dowell Ave/Wilfred Ave

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

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 1! 0 0 1 0 1 1 0 1 0 1 1 0

Volume Module:

Base Vol: 143 105 559 217 41 119 53 359 273 509 360 273
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: 143 105 559 217 41 119 53 359 273 509 360 273
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 143 105 559 217 41 119 53 359 273 509 360 273
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 151 111 588 228 43 125 56 378 287 536 379 287
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 151 111 588 228 43 125 56 378 287 536 379 287

Critical Gap Module:

Critical Gp: 7.5 6.5 6.9 7.5 6.5 6.9 4.1 xxxx xxxxx 4.1 xxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 3.5 4.0 3.3 2.2 xxxx xxxxx 2.2 xxxx xxxxx

Capacity Module:

Cnflict Vol: 1916 2371 333 1950 2371 333 666 xxxx xxxxx 665 xxxx xxxxx
Potent Cap.: 42 35 669 39 35 668 933 xxxx xxxxx 934 xxxx xxxxx
Move Cap.: 0 14 669 0 14 668 933 xxxx xxxxx 934 xxxx xxxxx
Volume/Cap: xxxx 7.81 0.88 xxxx 3.05 0.19 0.06 xxxx xxxx 0.57 xxxx xxxx

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx 0.2 xxxx xxxxx 3.8 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx 9.1 xxxx xxxxx 13.9 xxxx xxxxx
LOS by Move: * * * * * A * * B * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx 0 xxxxx xxxx 0 xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS: * * * * * * * * * * * * *
ApproachDel: xxxxxx xxxxxx xxxxxx xxxxxx
ApproachLOS: F F * *

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

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

Intersection #7 Wilfred Ave/Redwood Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 1.116
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 87.9
Optimal Cycle: 180 Level Of Service: F

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Protected, Split Phase), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns for different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns for different traffic movements. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns for different traffic movements. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2k95thQ.

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

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

Intersection #9 Wilfred Ave/101 SB Ramp

Cycle (sec): 145 Critical Vol./Cap.(X): 0.823
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 33.2
Optimal Cycle: 81 Level Of Service: C

Street Name: US-101 SB Ramp Wilfred Avenue
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Permitted Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 0 0 0 1 0 1 1 0 0 0 1 1 0 2 0 2 0 0

Volume Module:
Base Vol: 0 0 0 355 288 482 0 1257 283 77 682 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: 0 0 0 355 288 482 0 1257 283 77 682 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 355 288 482 0 1257 283 77 682 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 0 0 0 374 303 507 0 1323 298 81 718 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 0 0 374 303 507 0 1323 298 81 718 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 0 0 0 374 303 507 0 1323 298 81 718 0

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 1.00 1.00 1.00 0.83 0.89 0.89 1.00 0.95 0.95 0.93 0.98 1.00
Lanes: 0.00 0.00 0.00 1.00 1.00 1.00 0.00 1.63 0.37 2.00 2.00 0.00
Final Sat.: 0 0 0 1583 1687 1687 0 2955 665 3538 3724 0

Capacity Analysis Module:
Vol/Sat: 0.00 0.00 0.00 0.24 0.18 0.30 0.00 0.45 0.45 0.02 0.19 0.00
Crit Moves: ****
Green/Cycle: 0.00 0.00 0.00 0.37 0.37 0.37 0.00 0.54 0.54 0.03 0.57 0.00
Volume/Cap: 0.00 0.00 0.00 0.65 0.49 0.82 0.00 0.82 0.82 0.82 0.34 0.00
Uniform Del: 0.0 0.0 0.0 38.2 35.6 41.7 0.0 27.3 27.3 70.1 16.4 0.0
IncrcmntDel: 0.0 0.0 0.0 2.5 0.2 5.7 0.0 2.9 2.9 39.9 0.1 0.0
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 0.00 0.00 0.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 0.00
Delay/Veh: 0.0 0.0 0.0 40.7 35.8 47.4 0.0 30.2 30.2 110.1 16.5 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 0.0 0.0 40.7 35.8 47.4 0.0 30.2 30.2 110.1 16.5 0.0
LOS by Move: A A A D D D A C C F B A
HCM2k95thQ: 0 0 0 25 19 37 0 50 50 7 15 0

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

Intersection #10 Golf Course Dr/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 1.161
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 96.5
Optimal Cycle: 180 Level Of Service: F

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Protected), Rights (Include), Min. Green (0-0-0), and Lanes (1-0-0-1-1).

Volume Module: Table with 13 columns for volume metrics. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns for saturation flow metrics. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns for capacity analysis metrics. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2k95thQ.

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

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

 Intersection #11 Roberts Lake Dr/Golf Course Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.453
 Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 10.9
 Optimal Cycle: 25 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Protected			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	1	0	0	1	0	2	0	0	1

Volume Module:

Base Vol:	0	0	0	102	0	103	137	1205	0	0	855	64
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	102	0	103	137	1205	0	0	855	64
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	102	0	103	137	1205	0	0	855	64
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	107	0	108	144	1268	0	0	900	67
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	107	0	108	144	1268	0	0	900	67
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	107	0	108	144	1268	0	0	900	67

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.93	1.00	0.83	0.93	0.93	1.00	1.00	0.92	0.92
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	2.00	0.00	0.00	1.86	0.14
Final Sat.:	0	0	0	1769	0	1583	1769	3538	0	0	3259	244

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.06	0.00	0.07	0.08	0.36	0.00	0.00	0.28	0.28
Crit Moves:						****	****			****		
Green/Cycle:	0.00	0.00	0.00	0.15	0.00	0.15	0.18	0.79	0.00	0.00	0.62	0.62
Volume/Cap:	0.00	0.00	0.00	0.40	0.00	0.46	0.45	0.45	0.00	0.00	0.45	0.45
Uniform Del:	0.0	0.0	0.0	38.5	0.0	38.8	36.6	3.4	0.0	0.0	10.0	10.0
IncrcmntDel:	0.0	0.0	0.0	1.0	0.0	1.4	1.0	0.1	0.0	0.0	0.1	0.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Delay/Veh:	0.0	0.0	0.0	39.5	0.0	40.2	37.6	3.6	0.0	0.0	10.1	10.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	39.5	0.0	40.2	37.6	3.6	0.0	0.0	10.1	10.1
LOS by Move:	A	A	A	D	A	D	D	A	A	A	B	B
HCM2k95thQ:	0	0	0	7	0	7	9	13	0	0	15	15

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

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

Intersection #12 101 NB Ramps/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 1.098
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 69.8
Optimal Cycle: 180 Level Of Service: E

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic volumes and adjustment factors.

Saturation Flow Module: Table with 13 columns representing saturation flow rates and adjustments.

Capacity Analysis Module: Table with 13 columns representing capacity analysis metrics like Vol/Sat, Crit Moves, Green/Cycle, etc.

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #13 New Driveway/Stony Point Rd

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

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	1	0	0	1	0	0	0	0	0	0

Volume Module:

Base Vol:	0	765	0	0	664	0	0	0	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
Initial Bse:	0	765	0	0	664	0	0	0	0	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	765	0	0	664	0	0	0	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
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	805	0	0	699	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	805	0	0	699	0	0	0	0	0	0	0

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3

Capacity Module:

Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	805
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	385
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	385
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.00

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*			
ApproachDel:	xxxxxxx			xxxxxxx			xxxxxxx			xxxxxxx					
ApproachLOS:	*			*			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #14 New Driveway/Labath Ave

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

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

Volume Module:

Base Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Growth Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Bse:	0	0	0	0	0	0	0	0	0	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	0	0	0	0	0	0	0	0	0
User Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHF Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHF Volume:	0	0	0	0	0	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	0	0	0	0	0	0	0	0	0

Capacity Module:

Cnflict Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Potent Cap.:	0	0	0	0	0	0	0	0	0	0	0	0
Move Cap.:	1	1	1	1	1	1	1	1	1	1	1	1
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Level Of Service Module:

2Way95thQ:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Del:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LOS by Move:												
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	0	0	0	0	0	0	0	0	0	0	0	0
SharedQueue:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Shrd ConDel:	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Shared LOS:												
ApproachDel:	0.0			0.0			0.0			0.0		
ApproachLOS:												

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #15 Redwood Dr/Business Park Dr

Average Delay (sec/veh): 3.2 Worst Case Level Of Service: C[16.5]

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:	1	0	2	0	0	1	1	0	0	0	0	0

Volume Module:

Base Vol:	12	359	0	0	363	25	144	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:	12	359	0	0	363	25	144	0	31	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	12	359	0	0	363	25	144	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	13	378	0	0	382	26	152	0	33	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	13	378	0	0	382	26	152	0	33	0	0	0

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.8	xxxx	6.9	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	408	xxxx	xxxxx	xxxxx	xxxx	xxxxx	609	xxxx	204	xxxx	xxxx	xxxxx
Potent Cap.:	1161	xxxx	xxxxx	xxxxx	xxxx	xxxxx	431	xxxx	809	xxxx	xxxx	xxxxx
Move Cap.:	1161	xxxx	xxxxx	xxxxx	xxxx	xxxxx	428	xxxx	809	xxxx	xxxx	xxxxx
Volume/Cap:	0.01	xxxx	xxxx	xxxxx	xxxx	xxxxx	0.35	xxxx	0.04	xxxx	xxxx	xxxxx

Level Of Service Module:

2Way95thQ:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	1.6	xxxx	0.1	xxxx	xxxx	xxxxx
Control Del:	8.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	18.0	xxxx	9.6	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	*	*	*	C	*	A	*	*	*
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			16.5			xxxxxx		
ApproachLOS:	*			*			C			*		

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #16 Rohnert Park Expwy/Stony Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.619

Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 22.1

Optimal Cycle: 34 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Protected			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1	0	1	0	1	0	0	1	0	0

Volume Module:

Base Vol:	0	547	253	205	460	0	0	0	0	253	0	217
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	547	253	205	460	0	0	0	0	253	0	217
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	547	253	205	460	0	0	0	0	253	0	217
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	576	266	216	484	0	0	0	0	266	0	228
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	576	266	216	484	0	0	0	0	266	0	228
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	576	266	216	484	0	0	0	0	266	0	228

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.98	0.83	0.93	0.98	1.00	1.00	1.00	1.00	0.93	1.00	0.83
Lanes:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	1862	1583	1769	1862	0	0	0	0	1769	0	1583

Capacity Analysis Module:

Vol/Sat:	0.00	0.31	0.17	0.12	0.26	0.00	0.00	0.00	0.00	0.15	0.00	0.14
Crit Moves:	****			****						****		
Green/Cycle:	0.00	0.50	0.50	0.20	0.70	0.00	0.00	0.00	0.00	0.24	0.00	0.24
Volume/Cap:	0.00	0.62	0.34	0.62	0.37	0.00	0.00	0.00	0.00	0.62	0.00	0.59
Uniform Del:	0.0	18.1	15.1	36.7	6.2	0.0	0.0	0.0	0.0	33.7	0.0	33.5
IncrcmntDel:	0.0	1.3	0.3	3.4	0.2	0.0	0.0	0.0	0.0	2.7	0.0	2.5
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Delay/Veh:	0.0	19.4	15.3	40.1	6.4	0.0	0.0	0.0	0.0	36.4	0.0	35.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	19.4	15.3	40.1	6.4	0.0	0.0	0.0	0.0	36.4	0.0	35.9
LOS by Move:	A	B	B	D	A	A	A	A	A	D	A	D
HCM2k95thQ:	0	24	10	13	12	0	0	0	0	15	0	13

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

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

 Intersection #17 Rohnert Park Expwy/Labath Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.522
 Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 33.0
 Optimal Cycle: 42 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	0	1	1	1	1	0	0	1	0	1

Volume Module:

Base Vol:	69	26	153	281	40	97	83	585	53	116	492	92
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:	69	26	153	281	40	97	83	585	53	116	492	92
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	69	26	153	281	40	97	83	585	53	116	492	92
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	73	27	161	296	42	102	87	616	56	122	518	97
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	73	27	161	296	42	102	87	616	56	122	518	97
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	73	27	161	296	42	102	87	616	56	122	518	97

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.85	0.85	0.93	0.88	0.88	0.93	0.98	0.83	0.93	0.98	0.83
Lanes:	2.00	0.29	1.71	1.00	0.29	0.71	1.00	2.00	1.00	1.00	3.00	1.00
Final Sat.:	3538	472	2776	1769	486	1179	1769	3724	1583	1769	5586	1583

Capacity Analysis Module:

Vol/Sat:	0.02	0.06	0.06	0.17	0.09	0.09	0.05	0.17	0.04	0.07	0.09	0.06
Crit Moves:	****			****			****			****		
Green/Cycle:	0.07	0.12	0.12	0.25	0.29	0.29	0.26	0.28	0.28	0.24	0.26	0.26
Volume/Cap:	0.29	0.48	0.48	0.67	0.30	0.30	0.19	0.59	0.13	0.29	0.36	0.24
Uniform Del:	44.2	41.1	41.1	33.8	27.6	27.6	28.8	31.1	26.9	31.0	30.2	29.2
IncrcmntDel:	0.7	0.9	0.9	3.9	0.3	0.3	0.2	0.9	0.1	0.4	0.2	0.3
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	44.8	42.1	42.1	37.7	27.9	27.9	29.0	32.0	27.0	31.4	30.3	29.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	44.8	42.1	42.1	37.7	27.9	27.9	29.0	32.0	27.0	31.4	30.3	29.5
LOS by Move:	D	D	D	D	C	C	C	C	C	C	C	C
HCM2k95thQ:	3	7	7	17	7	7	4	16	3	6	9	5

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

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

 Intersection #18 Rohnert Park Expwy/Redwood Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.697
 Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 36.0
 Optimal Cycle: 59 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound					
Movement:	L	T	R	L	T	R	L	T	R	L	T	R			
Control:	Protected			Protected			Protected			Protected					
Rights:	Include			Include			Include			Include					
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0			
Lanes:	1	0	1	1	1	1	2	0	1	0	3	0	1	2	0

Volume Module:

Base Vol:	173	326	510	339	301	236	216	700	163	377	603	318
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:	173	326	510	339	301	236	216	700	163	377	603	318
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	173	326	510	339	301	236	216	700	163	377	603	318
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	182	343	537	357	317	248	227	737	172	397	635	335
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	182	343	537	357	317	248	227	737	172	397	635	335
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	182	343	537	357	317	248	227	737	172	397	635	335

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.89	0.89	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.83
Lanes:	1.00	1.17	1.83	2.00	1.00	1.00	1.00	3.00	1.00	2.00	2.00	1.00
Final Sat.:	1769	1980	3098	3538	1862	1583	1769	5586	1583	3538	3724	1583

Capacity Analysis Module:

Vol/Sat:	0.10	0.17	0.17	0.10	0.17	0.16	0.13	0.13	0.11	0.11	0.17	0.21
Crit Moves:	****			****			****				****	
Green/Cycle:	0.15	0.25	0.25	0.14	0.24	0.24	0.18	0.26	0.26	0.22	0.30	0.30
Volume/Cap:	0.70	0.70	0.70	0.70	0.70	0.64	0.70	0.50	0.41	0.50	0.56	0.70
Uniform Del:	40.5	34.2	34.2	40.7	34.4	33.9	38.2	31.2	30.4	33.9	29.2	30.8
IncrcmntDel:	8.0	1.8	1.8	4.3	4.7	3.7	6.5	0.3	0.7	0.5	0.6	4.5
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	48.5	36.0	36.0	45.0	39.1	37.5	44.6	31.5	31.1	34.4	29.9	35.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	48.5	36.0	36.0	45.0	39.1	37.5	44.6	31.5	31.1	34.4	29.9	35.2
LOS by Move:	D	D	D	D	D	D	D	C	C	C	C	D
HCM2k95thQ:	13	18	18	13	19	15	15	13	9	11	16	19

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #19 Rohnert Park Expwy/101 SB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.710
 Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 24.5
 Optimal Cycle: 61 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Protected		
Rights:	Include			Include			Include			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1	0	0	1	0	0	2	1	0	1

Volume Module:

Base Vol:	6	0	17	611	1	427	0	1252	297	68	862	255
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:	6	0	17	611	1	427	0	1252	297	68	862	255
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	6	0	17	611	1	427	0	1252	297	68	862	255
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00
PHF Volume:	6	0	18	643	1	449	0	1318	313	72	907	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	6	0	18	643	1	449	0	1318	313	72	907	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Final Vol.:	6	0	18	643	1	449	0	1318	313	72	907	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.85	1.00	0.85	0.69	0.69	0.83	1.00	0.95	0.95	0.93	0.98	1.00
Lanes:	0.26	0.00	0.74	1.99	0.01	1.00	0.00	2.42	0.58	1.00	2.00	1.00
Final Sat.:	423	0	1198	2632	4	1583	0	4384	1040	1769	3724	1900

Capacity Analysis Module:

Vol/Sat:	0.01	0.00	0.01	0.24	0.24	0.28	0.00	0.30	0.30	0.04	0.24	0.00
Crit Moves:						****		****		****		
Green/Cycle:	0.40	0.00	0.40	0.40	0.40	0.40	0.00	0.42	0.42	0.06	0.48	0.00
Volume/Cap:	0.04	0.00	0.04	0.61	0.61	0.71	0.00	0.71	0.71	0.71	0.51	0.00
Uniform Del:	18.3	0.0	18.3	23.8	23.8	25.2	0.0	23.8	23.8	46.3	17.9	0.0
IncrcmntDel:	0.0	0.0	0.0	1.1	1.1	3.8	0.0	1.1	1.1	20.9	0.2	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	18.3	0.0	18.3	24.9	24.9	28.9	0.0	24.8	24.8	67.2	18.1	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	18.3	0.0	18.3	24.9	24.9	28.9	0.0	24.8	24.8	67.2	18.1	0.0
LOS by Move:	B	A	B	C	C	C	A	C	C	E	B	A
HCM2k95thQ:	1	0	1	16	16	23	0	26	26	7	18	0

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #20 Rohnert Park Expwy/101 NB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.449
 Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 17.1
 Optimal Cycle: 25 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound						
Movement:	L	T	R	L	T	R	L	T	R	L	T	R				
Control:	Protected			Protected			Permitted			Permitted						
Rights:	Include			Include			Ignore			Ignore						
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0				
Lanes:	1	0	0	1	0	0	1	0	4	0	1	0	0	3	0	1

Volume Module:

Base Vol:	339	0	345	14	0	3	21	1556	298	0	841	383
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:	339	0	345	14	0	3	21	1556	298	0	841	383
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	339	0	345	14	0	3	21	1556	298	0	841	383
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00	0.95	0.95	0.00
PHF Volume:	357	0	363	15	0	3	22	1638	0	0	885	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	357	0	363	15	0	3	22	1638	0	0	885	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Final Vol.:	357	0	363	15	0	3	22	1638	0	0	885	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	1.00	0.83	0.93	1.00	0.83	0.27	0.98	1.00	1.00	0.98	1.00
Lanes:	1.00	0.00	2.00	1.00	0.00	1.00	1.00	4.00	1.00	0.00	3.00	1.00
Final Sat.:	1769	0	3165	1769	0	1583	518	7448	1900	0	5586	1900

Capacity Analysis Module:

Vol/Sat:	0.20	0.00	0.11	0.01	0.00	0.00	0.04	0.22	0.00	0.00	0.16	0.00
Crit Moves:	****				****			****				
Green/Cycle:	0.45	0.00	0.42	0.03	0.00	0.00	0.49	0.49	0.00	0.00	0.49	0.00
Volume/Cap:	0.45	0.00	0.27	0.27	0.00	xxxx	0.09	0.45	0.00	0.00	0.32	0.00
Uniform Del:	19.0	0.0	19.0	47.4	0.0	0.0	13.6	16.7	0.0	0.0	15.4	0.0
IncrcmntDel:	0.4	0.0	0.1	2.7	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.0
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00
Delay/Veh:	19.4	0.0	19.2	50.1	0.0	0.0	13.7	16.7	0.0	0.0	15.5	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	19.4	0.0	19.2	50.1	0.0	0.0	13.7	16.7	0.0	0.0	15.5	0.0
LOS by Move:	B	A	B	D	A	A	B	B	A	A	B	A
HCM2k95thQ:	14	0	7	2	0	2	1	15	0	0	11	0

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #21 Rohnert Park Expwy/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.802

Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 34.9

Optimal Cycle: 77 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound										
Movement:	L	T	R	L	T	R	L	T	R	L	T	R								
Control:	Split Phase			Split Phase			Protected			Protected										
Rights:	Include			Include			Include			Include										
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0								
Lanes:	1	1	1	0	1	1	1	1	0	1	2	0	2	0	1	1	0	2	1	0

Volume Module:

Base Vol:	384	293	241	179	354	152	235	1221	462	165	682	202
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:	384	293	241	179	354	152	235	1221	462	165	682	202
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	384	293	241	179	354	152	235	1221	462	165	682	202
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	404	308	254	188	373	160	247	1285	486	174	718	213
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	404	308	254	188	373	160	247	1285	486	174	718	213
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	404	308	254	188	373	160	247	1285	486	174	718	213

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.83	0.96	0.96	0.83	0.93	0.98	0.83	0.93	0.95	0.95
Lanes:	1.70	1.30	1.00	1.01	1.99	1.00	2.00	2.00	1.00	1.00	2.31	0.69
Final Sat.:	3080	2350	1583	1844	3647	1583	3538	3724	1583	1769	4163	1233

Capacity Analysis Module:

Vol/Sat:	0.13	0.13	0.16	0.10	0.10	0.10	0.07	0.35	0.31	0.10	0.17	0.17
Crit Moves:			****			****		****		****		
Green/Cycle:	0.20	0.20	0.20	0.13	0.13	0.13	0.16	0.43	0.43	0.12	0.39	0.39
Volume/Cap:	0.66	0.66	0.80	0.80	0.80	0.79	0.44	0.80	0.71	0.80	0.44	0.44
Uniform Del:	36.8	36.8	38.1	42.4	42.4	42.4	38.0	24.8	23.4	42.7	22.2	22.2
IncrcmntDel:	1.5	1.5	13.7	6.6	6.6	19.1	0.5	3.0	3.6	19.0	0.1	0.1
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	38.3	38.3	51.8	49.0	49.0	61.4	38.5	27.8	27.0	61.7	22.4	22.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	38.3	38.3	51.8	49.0	49.0	61.4	38.5	27.8	27.0	61.7	22.4	22.4
LOS by Move:	D	D	D	D	D	E	D	C	C	E	C	C
HCM2k95thQ:	15	15	18	15	15	13	8	32	24	14	13	13

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

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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)
*****
Intersection #22 Gravenstein Hwy (SR 116)/ Stoney Point Rd
*****
Cycle (sec):          100          Critical Vol./Cap.(X):          0.829
Loss Time (sec):      12 (Y+R=4.0 sec) Average Delay (sec/veh):          39.9
Optimal Cycle:        84          Level Of Service:          D
*****
Approach:      North Bound      South Bound      East Bound      West Bound
Movement:      L - T - R      L - T - R      L - T - R      L - T - R
-----|-----|-----|-----|
Control:      Protected      Protected      Protected      Protected
Rights:      Include      Include      Include      Include
Min. Green:    0 0 0 0      0 0 0 0      0 0 0 0      0 0 0 0
Lanes:        1 0 1 0 1      1 0 1 0 1      1 0 1 1 0      1 0 2 0 1
-----|-----|-----|-----|
Volume Module:
Base Vol:      323 483 113 107 358 235 149 583 228 140 661 113
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:    323 483 113 107 358 235 149 583 228 140 661 113
Added Vol:     0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol:   0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut:    323 483 113 107 358 235 149 583 228 140 661 113
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:        0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume:     340 508 119 113 377 247 157 614 240 147 696 119
Reduct Vol:    0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol:   340 508 119 113 377 247 157 614 240 147 696 119
PCE Adj:        1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj:        1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.:    340 508 119 113 377 247 157 614 240 147 696 119
-----|-----|-----|-----|
Saturation Flow Module:
Sat/Lane:      1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment:    0.93 0.98 0.83 0.93 0.98 0.83 0.93 0.89 0.89 0.93 0.93 0.83
Lanes:         1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.44 0.56 1.00 2.00 1.00
Final Sat.:    1769 1862 1583 1769 1862 1583 1769 2436 953 1769 3538 1583
-----|-----|-----|-----|
Capacity Analysis Module:
Vol/Sat:       0.19 0.27 0.08 0.06 0.20 0.16 0.09 0.25 0.25 0.08 0.20 0.08
Crit Moves:    ****          ****          ****
Green/Cycle:   0.23 0.39 0.39 0.09 0.24 0.24 0.13 0.30 0.30 0.10 0.28 0.28
Volume/Cap:    0.83 0.71 0.19 0.71 0.83 0.64 0.71 0.83 0.83 0.83 0.71 0.27
Uniform Del:   36.5 25.9 20.4 44.2 35.8 33.9 41.9 32.4 32.4 44.1 32.4 28.1
IncrcmntDel:   13.2 3.3 0.2 13.7 12.1 3.6 9.9 5.7 5.7 26.6 2.4 0.3
InitQueuDel:   0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj:     1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Delay/Veh:     49.8 29.2 20.5 57.9 47.9 37.5 51.9 38.1 38.1 70.7 34.8 28.5
User DelAdj:   1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh:    49.8 29.2 20.5 57.9 47.9 37.5 51.9 38.1 38.1 70.7 34.8 28.5
LOS by Move:   D C C E D D D D D E C C
HCM2k95thQ:    22 25 5 10 24 15 12 27 27 13 21 6
*****

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #23 Gravenstein Hwy (SR 116)/ Redwood Rd

Cycle (sec): 80 Critical Vol./Cap.(X): 0.882
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 34.6
Optimal Cycle: 91 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns for different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueueDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2k95thQ.

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


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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)
*****
Intersection #24 Gravenstein Hwy and SB 101 Ramps
*****
Cycle (sec):          80          Critical Vol./Cap.(X):          0.585
Loss Time (sec):     9 (Y+R=4.0 sec) Average Delay (sec/veh):          17.0
Optimal Cycle:       39          Level Of Service:          B
*****
Street Name:          SB 101 Ramps          Gravenstein Hwy
Approach:             North Bound          South Bound          East Bound          West Bound
Movement:             L - T - R          L - T - R          L - T - R          L - T - R
-----|-----|-----|-----|
Control:              Permitted          Protected          Permitted          Protected
Rights:               Include          Include          Ignore          Include
Min. Green:           0 0 0 0 0          0 0 0 0 0          0 0 0 0 0          0 0 0 0 0
Lanes:                0 0 0 0 0          2 0 0 1 0          0 0 2 0 1          1 0 2 0 0
-----|-----|-----|-----|
Volume Module:
Base Vol:             0 0 0 640 0 258          0 953 412 66 998 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:          0 0 0 640 0 258          0 953 412 66 998 0
Added Vol:            0 0 0 0 0 0          0 0 0 0 0 0
PasserByVol:         0 0 0 0 0 0          0 0 0 0 0 0
Initial Fut:          0 0 0 640 0 258          0 953 412 66 998 0
User Adj:             1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
PHF Adj:              0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.00 0.95 0.95 0.95
PHF Volume:           0 0 0 674 0 272          0 1003 0 69 1051 0
Reduct Vol:           0 0 0 0 0 0          0 0 0 0 0 0
Reduced Vol:          0 0 0 674 0 272          0 1003 0 69 1051 0
PCE Adj:              1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
MLF Adj:              1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
Final Vol.:           0 0 0 674 0 272          0 1003 0 69 1051 0
-----|-----|-----|-----|
Saturation Flow Module:
Sat/Lane:             1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment:           1.00 1.00 1.00 0.90 1.00 0.83 1.00 0.93 1.00 0.93 0.93 1.00
Lanes:                0.00 0.00 0.00 2.00 0.00 1.00 0.00 2.00 1.00 1.00 2.00 0.00
Final Sat.:           0 0 0 3432 0 1583          0 3538 1900 1769 3538 0
-----|-----|-----|-----|
Capacity Analysis Module:
Vol/Sat:              0.00 0.00 0.00 0.20 0.00 0.17 0.00 0.28 0.00 0.04 0.30 0.00
Crit Moves:          ****          ****          ****
Green/Cycle:          0.00 0.00 0.00 0.34 0.00 0.34 0.00 0.48 0.00 0.07 0.55 0.00
Volume/Cap:           0.00 0.00 0.00 0.58 0.00 0.51 0.00 0.59 0.00 0.59 0.54 0.00
Uniform Del:          0.0 0.0 0.0 22.0 0.0 21.3 0.0 14.8 0.0 36.2 11.4 0.0
IncrmntDel:           0.0 0.0 0.0 0.8 0.0 0.8 0.0 0.5 0.0 7.3 0.3 0.0
InitQueuDel:          0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj:            0.00 0.00 0.00 1.00 0.00 1.00 0.00 1.00 0.00 1.00 1.00 0.00
Delay/Veh:            0.0 0.0 0.0 22.8 0.0 22.2 0.0 15.4 0.0 43.6 11.7 0.0
User DelAdj:          1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh:           0.0 0.0 0.0 22.8 0.0 22.2 0.0 15.4 0.0 43.6 11.7 0.0
LOS by Move:          A A A C A C A B A D B A
HCM2k95thQ:           0 0 0 15 0 11 0 18 0 5 17 0
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Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #25 Gravenstein Hwy and NB 101 Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.767
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 18.7
Optimal Cycle: 62 Level Of Service: B

Street Name: NB 101 Ramps Gravenstein Hwy
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Permitted Permitted Permitted
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 0 0 1 0 0 0 0 0 0 2 0 0 0 0 2 0 0

Volume Module:

Base Vol: 375 0 273 0 0 0 0 1596 0 0 683 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: 375 0 273 0 0 0 0 1596 0 0 683 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 375 0 273 0 0 0 0 1596 0 0 683 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 395 0 287 0 0 0 0 1680 0 0 719 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 395 0 287 0 0 0 0 1680 0 0 719 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 395 0 287 0 0 0 0 1680 0 0 719 0

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.93 1.00 0.83 1.00 1.00 1.00 1.00 0.93 1.00 1.00 0.93 1.00
Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 2.00 0.00 0.00 2.00 0.00
Final Sat.: 1769 0 1583 0 0 0 0 3538 0 0 3538 0

Capacity Analysis Module:

Vol/Sat: 0.22 0.00 0.18 0.00 0.00 0.00 0.00 0.47 0.00 0.00 0.20 0.00
Crit Moves: ****
Green/Cycle: 0.29 0.00 0.29 0.00 0.00 0.00 0.00 0.62 0.00 0.00 0.62 0.00
Volume/Cap: 0.77 0.00 0.62 0.00 0.00 0.00 0.00 0.77 0.00 0.00 0.33 0.00
Uniform Del: 32.4 0.0 30.7 0.0 0.0 0.0 0.0 13.8 0.0 0.0 9.1 0.0
IncrmntDel: 6.9 0.0 2.7 0.0 0.0 0.0 0.0 1.7 0.0 0.0 0.1 0.0
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 1.00 0.00 0.00 1.00 0.00
Delay/Veh: 39.2 0.0 33.4 0.0 0.0 0.0 0.0 15.5 0.0 0.0 9.2 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 39.2 0.0 33.4 0.0 0.0 0.0 0.0 15.5 0.0 0.0 9.2 0.0
LOS by Move: D A C A A A A B A A A A
HCM2k95thQ: 23 0 16 0 0 0 0 35 0 0 11 0

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #26 Millbrae Ave/Stony Point Rd

Average Delay (sec/veh): 6.2 Worst Case Level Of Service: F[70.6]

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:	1	0	2	0	1	1	0	0	1!	0	0	1

Volume Module:

Base Vol:	7	728	26	132	585	7	11	5	8	23	25	219
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:	7	728	26	132	585	7	11	5	8	23	25	219
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	7	728	26	132	585	7	11	5	8	23	25	219
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	7	766	27	139	616	7	12	5	8	24	26	231
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	7	766	27	139	616	7	12	5	8	24	26	231

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.5	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflict Vol:	623	xxxx	xxxxx	794	xxxx	xxxxx	1308	1706	312	1369	1682	383
Potent Cap.:	968	xxxx	xxxxx	836	xxxx	xxxxx	119	92	690	107	95	621
Move Cap.:	968	xxxx	xxxxx	836	xxxx	xxxxx	49	76	690	87	79	621
Volume/Cap:	0.01	xxxx	xxxx	0.17	xxxx	xxxx	0.24	0.07	0.01	0.28	0.33	0.37

Level Of Service Module:

2Way95thQ:	0.0	xxxx	xxxxx	0.6	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	1.7			
Control Del:	8.7	xxxx	xxxxx	10.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	14.2			
LOS by Move:	A	*	*	B	*	*	*	*	*	*	*	B			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	79	xxxxx	83	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	1.2	xxxxx	2.8	xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	70.6	xxxxx	101.0	xxxx	xxxxx			
Shared LOS:	*	*	*	*	*	*	*	F	*	F	*	*			
ApproachDel:	xxxxxx			xxxxxx				70.6				29.8			
ApproachLOS:	*			*				F				D			

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #27 Millbrae Ave/Primrose Ave

Average Delay (sec/veh): 0.2 Worst Case Level Of Service: B[12.4]

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, and Lanes.

Volume Module: Table with 12 columns for traffic volumes. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Vol.

Critical Gap Module: Table with 12 columns for gap times. Rows include Critical Gp and FollowUpTim.

Capacity Module: Table with 12 columns for capacity values. Rows include Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap.

Level Of Service Module: Table with 12 columns for LOS metrics. Rows include 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #28 Millbrae Ave/Whister Ave

Average Delay (sec/veh): 0.5 Worst Case Level Of Service: B[12.4]

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, and Lanes.

Volume Module: Table with 13 columns for traffic volume metrics like Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Vol.

Critical Gap Module: Table with 13 columns for gap metrics like Critical Gp, FollowUpTim.

Capacity Module: Table with 13 columns for capacity metrics like Cnflct Vol, Potent Cap., Move Cap., Volume/Cap.

Level Of Service Module: Table with 13 columns for LOS metrics like 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS.

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

Level of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #29 Millbrae Ave/Langner Ave

Average Delay (sec/veh): 1.1 Worst Case Level Of Service: B[11.2]

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, and Lanes.

Volume Module: Table with 13 columns for traffic flow metrics. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Vol.

Critical Gap Module: Table with 13 columns for gap metrics. Rows include Critical Gp and FollowUpTim.

Capacity Module: Table with 13 columns for capacity metrics. Rows include Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap.

Level of Service Module: Table with 13 columns for LOS metrics. Rows include 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #30 Millbrae Ave/Labath Ave

Average Delay (sec/veh): 3.7 Worst Case Level Of Service: B[13.5]

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

Volume Module:

Base Vol:	114	0	26	0	0	0	0	160	23	36	225	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:	114	0	26	0	0	0	0	160	23	36	225	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	114	0	26	0	0	0	0	160	23	36	225	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	120	0	27	0	0	0	0	168	24	38	237	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	120	0	27	0	0	0	0	168	24	38	237	0

Critical Gap Module:

Critical Gp:	6.4	6.5	6.2	7.1	6.5	6.2	xxxxx	xxxxx	xxxxx	4.1	xxxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	xxxxx	xxxxx	xxxxx	2.2	xxxxx	xxxxx

Capacity Module:

Cnflict Vol:	493	493	181	507	505	237	xxxxx	xxxxx	xxxxx	193	xxxxx	xxxxx
Potent Cap.:	539	480	867	479	472	807	xxxxx	xxxxx	xxxxx	1393	xxxxx	xxxxx
Move Cap.:	527	467	867	454	459	807	xxxxx	xxxxx	xxxxx	1393	xxxxx	xxxxx
Volume/Cap:	0.23	0.00	0.03	0.00	0.00	0.00	xxxxx	xxxxx	xxxxx	0.03	xxxxx	xxxxx

Level Of Service Module:

2Way95thQ:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.1	xxxxx	xxxxx			
Control Del:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	7.7	xxxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxxx	569	xxxxx	xxxxx	0	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx			
SharedQueue:	xxxxx	1.0	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.1	xxxxx	xxxxx			
Shrd ConDel:	xxxxx	13.5	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	7.7	xxxxx	xxxxx			
Shared LOS:	*	B	*	*	*	*	*	*	*	A	*	*			
ApproachDel:	13.5			xxxxxxx			xxxxxxx			xxxxxxx					
ApproachLOS:	B			*			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #31 Millbrae Ave/Dowdell Ave

Average Delay (sec/veh): 1.4 Worst Case Level Of Service: B[11.6]

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, and Lanes.

Volume Module: Table with 13 columns representing different traffic volumes and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Critical Gap Module: Table with 13 columns showing critical gap and follow-up time values.

Capacity Module: Table with 13 columns showing capacity-related metrics like Cnflict Vol, Potent Cap., Move Cap., etc.

Level Of Service Module: Table with 13 columns showing level of service metrics like 2Way95thQ, Control Del, LOS by Move, etc.

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

TRIP GENERATION – ALTERNATIVES A, B, & C

LAND USE	Trips						
	Daily	AM Peak Hour			PM Peak Hour		
	Total	Entering	Exiting	Total	Entering	Exiting	Total
Casino 450,000 s.f.	17,744	930	398	1,328	1,181	1,047	2,228
Hotel 300 Room*	817	34	22	56	31	28	59
Net New Vehicle Trips	18,261	964	420	1,384	1,212	1,075	2,287

*Trip rate is ITE Land Use Code 310 – Hotel. Rate reduced by 2/3 to account for internal capture to/from casino.

TRIP GENERATION – ALTERNATIVE D

LAND USE	Trips						
	Daily	AM Peak Hour			PM Peak Hour		
	Total	Entering	Exiting	Total	Entering	Exiting	Total
Casino 315,100 s.f.	12,424	651	279	930	827	733	1,560
Hotel 100 Room*	272	12	7	19	11	9	20
Net New Vehicle Trips	12,696	663	286	949	838	742	1,580

*Trip rate is ITE Land Use Code 310 – Hotel. Rate reduced by 2/3 to account for internal capture to/from casino.

TRIP GENERATION – ALTERNATIVE E

LAND USE	Trips						
	Daily	AM Peak Hour			PM Peak Hour		
	Total	Entering	Exiting	Total	Entering	Exiting	Total
Light Industrial 400,000 s.f.	2,788	324	44	368	47	345	392
Commercial 100,000 s.f.	4,294	63	40	103	180	195	375
Subtotal	7,082	387	84	471	227	540	767
Commercial Pass-by Reduction	N/A	N/A	N/A	N/A	-70	-76	-146
Net New Vehicle Trips	7,082	387	84	471	157	464	621

**NEAR-TERM 2008 + ALTERNATIVE A
TRAFFIC CONDITIONS
(TRAFFIX)**

 Impact Analysis Report
 Level Of Service

Intersection	Base		Future		Change in		
	LOS	Del/ Veh	V/ C	LOS			Del/ Veh	V/ C
# 1 Wilfred Ave/Stony Point Rd	F	154.7	0.000	F	718.6	0.000	+563.902 D/V
# 2 Wilfred Ave/Primrose Ave	B	10.7	0.000	B	13.7	0.000	+ 3.008 D/V
# 3 Wilfred Ave/Whistler Ave	B	10.7	0.000	B	13.7	0.000	+ 3.005 D/V
# 4 Langner Ave/Wilfred Ave	B	10.8	0.000	F	51.5	0.000	+40.725 D/V
# 5 Wilfred Ave/Labath Ave	B	13.4	0.000	F	OVRFL	0.000	+ 1.8E+0308
# 6 Dowell Ave/Wilfred Ave	B	14.7	0.000	F	221.7	0.000	+206.971 D/V
# 7 Wilfred Ave/Redwood Dr	C	33.1	0.588	F	106.6	1.188	+73.560 D/V
# 8 Redwood Dr/Commerce Blvd	C	26.9	0.297	C	26.9	0.301	+ 0.019 D/V
# 9 Wilfred Ave/101 SB Ramp	C	29.7	0.539	D	37.8	0.883	+ 8.044 D/V
# 10 Golf Course Dr/Commerce Blvd	D	40.0	0.879	F	91.3	1.206	+51.338 D/V
# 11 Roberts Lake Dr/Golf Course Dr	B	15.2	0.483	B	15.1	0.487	-0.064 D/V
# 12 101 NB Ramps/Commerce Blvd	C	33.3	0.852	F	92.3	1.162	+59.004 D/V
# 13 New Driveway/Stony Point Rd	A	0.0	0.000	A	0.0	0.000	+ 0.000 D/V
# 14 New Driveway/Labath Ave	A	0.0	0.000	B	10.5	0.000	+10.531 D/V
# 15 Redwood Dr/Business Park Dr	D	26.5	0.000	D	26.5	0.000	+ 0.000 D/V
# 16 Rohnert Park Expwy/Stony Point	C	24.0	0.665	C	24.0	0.700	+ 0.040 D/V
# 17 Rohnert Park Expwy/Labath Ave	C	29.8	0.576	F	90.8	0.845	+61.055 D/V
# 18 Rohnert Park Expwy/Redwood Dr	D	35.6	0.711	D	43.0	0.749	+ 7.399 D/V
# 19 Rohnert Park Expwy/101 SB Ramp	C	21.1	0.716	C	22.4	0.798	+ 1.268 D/V
# 20 Rohnert Park Expwy/101 NB Ramp	B	15.8	0.437	C	22.8	0.624	+ 7.071 D/V
# 21 Rohnert Park Expwy/Commerce Bl	C	33.9	0.815	C	33.9	0.815	-0.003 D/V
# 22 Gravenstein Hwy (SR 116)/ Ston	D	37.1	0.766	D	38.1	0.766	+ 0.949 D/V
# 23 Gravenstein Hwy (SR 116)/ Redw	C	28.6	0.734	C	28.5	0.755	-0.050 D/V
# 24 Gravenstein Hwy and SB 101 Ram	B	17.6	0.562	B	17.9	0.597	+ 0.357 D/V
# 25 Gravenstein Hwy and NB 101 Ram	B	17.3	0.707	B	19.2	0.746	+ 1.845 D/V

Intersection		Base		Future		Change in	
		Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C		
# 26 Millbrae Ave/Stony Point Rd	E	38.8	0.000	F 59.0	0.000	+20.212	D/V
# 27 Millbrae Ave/Primrose Ave	B	11.3	0.000	B 11.6	0.000	+ 0.281	D/V
# 28 Millbrae Ave/Whistler Ave	B	11.4	0.000	B 11.7	0.000	+ 0.295	D/V
# 29 Millbrae Ave/Langner Ave	A	9.8	0.000	B 10.9	0.000	+ 1.088	D/V
# 30 Millbrae Ave/Labath Ave	B	10.7	0.000	B 11.4	0.000	+ 0.709	D/V
# 31 Millbrae Ave/Dowdell Ave	B	11.3	0.000	B 11.3	0.000	+ 0.000	D/V

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1 Wilfred Ave/Stony Point Rd

Average Delay (sec/veh): 116.2 Worst Case Level Of Service: F[718.6]

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:	1	0	0	1	0	0	0	0	0	1	0	0

Volume Module:

Base Vol:	11	754	57	64	514	6	0	8	14	87	11	80
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:	11	754	57	64	514	6	0	8	14	87	11	80
Added Vol:	0	0	59	121	0	0	0	0	0	52	0	75
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	11	754	116	185	514	6	0	8	14	139	11	155
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	12	794	122	195	541	6	0	8	15	146	12	163
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	12	794	122	195	541	6	0	8	15	146	12	163

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflct Vol:	547	xxxx	xxxxx	916	xxxx	xxxxx	xxxx	1873	544	1823	1815	855
Potent Cap.:	1032	xxxx	xxxxx	753	xxxx	xxxxx	xxxx	73	543	60	79	361
Move Cap.:	1032	xxxx	xxxxx	753	xxxx	xxxxx	xxxx	53	543	41	58	361
Volume/Cap:	0.01	xxxx	xxxx	0.26	xxxx	xxxx	xxxx	0.16	0.03	3.55	0.20	0.45

Level Of Service Module:

2Way95thQ:	0.0	xxxx	xxxxx	1.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	2.3			
Control Del:	8.5	xxxx	xxxxx	11.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	22.9			
LOS by Move:	A	*	*	B	*	*	*	*	*	*	*	C			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	125	42	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	0.6	17.8	xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	40.2	1437	xxxx	xxxxx			
Shared LOS:	*	*	*	*	*	*	*	*	E	F	*	*			
ApproachDel:	xxxxxx			xxxxxx				40.2				718.6			
ApproachLOS:	*			*				E				F			

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Wilfred Ave/Primrose Ave

Average Delay (sec/veh): 1.4 Worst Case Level Of Service: B[13.7]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 1! 0 0 0 0 1! 0 0

Volume Module:

Base Vol: 10 10 10 10 10 10 10 109 10 8 157 8
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 10 10 10 10 10 10 10 109 10 8 157 8
Added Vol: 0 0 0 0 0 0 0 0 180 0 0 127 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 10 10 10 10 10 10 10 289 10 8 284 8
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 11 11 11 11 11 11 11 304 11 8 299 8
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 11 11 11 11 11 11 11 304 11 8 299 8

Critical Gap Module:

Critical Gp: 7.1 6.5 6.2 7.1 6.5 6.2 4.1 xxxx xxxxx 4.1 xxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 3.5 4.0 3.3 2.2 xxxx xxxxx 2.2 xxxx xxxxx

Capacity Module:

Cnflct Vol: 661 655 309 661 656 303 307 xxxx xxxxx 315 xxxx xxxxx
Potent Cap.: 379 388 735 379 388 741 1265 xxxx xxxxx 1257 xxxx xxxxx
Move Cap.: 361 383 735 361 382 741 1265 xxxx xxxxx 1257 xxxx xxxxx
Volume/Cap: 0.03 0.03 0.01 0.03 0.03 0.01 0.01 xxxx xxxx 0.01 xxxx xxxx

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx 0.0 xxxx xxxxx 0.0 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx 7.9 xxxx xxxxx 7.9 xxxx xxxxx
LOS by Move: * * * * * A * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx 445 xxxxx xxxx 445 xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
SharedQueue:xxxxx 0.2 xxxxx xxxxx 0.2 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 13.7 xxxxx xxxxx 13.7 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS: * B * * B * * * * *
ApproachDel: 13.7 13.7 xxxxxxx xxxxxxx
ApproachLOS: B B * *

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 Wilfred Ave/Whistler Ave

Average Delay (sec/veh): 1.4 Worst Case Level Of Service: B[13.7]

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

Volume Module:

Base Vol:	10	10	10	10	10	10	10	108	10	7	153	15
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:	10	10	10	10	10	10	10	108	10	7	153	15
Added Vol:	0	0	0	0	0	0	0	180	0	0	127	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	10	10	10	10	10	10	288	10	7	280	15
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	11	11	11	11	11	11	303	11	7	295	16
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	11	11	11	11	11	11	11	303	11	7	295	16
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	657	655	308	657	652	303	311	xxxx	xxxxx	314	xxxx	xxxxx
Potent Cap.:	381	388	736	381	390	742	1261	xxxx	xxxxx	1258	xxxx	xxxxx
Move Cap.:	363	383	736	363	384	742	1261	xxxx	xxxxx	1258	xxxx	xxxxx
Volume/Cap:	0.03	0.03	0.01	0.03	0.03	0.01	0.01	xxxx	xxxx	0.01	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.9	xxxx	xxxxx	7.9	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	446	xxxxx	xxxx	448	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	0.2	xxxxx	xxxxx	0.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	13.7	xxxxx	xxxxx	13.7	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	B	*	*	B	*	*	*	*	*	*	*			
ApproachDel:		13.7			13.7		xxxxxxx		xxxxxxx		xxxxxxx				
ApproachLOS:		B			B		*		*		*				

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Langner Ave/Wilfred Ave

Average Delay (sec/veh): 17.4 Worst Case Level Of Service: F[51.5]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 1! 0 0 0 0 1! 0 0 0 0 1! 0 0

Volume Module:

Base Vol: 10 10 10 10 10 10 10 108 10 8 166 8
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 10 10 10 10 10 10 10 108 10 8 166 8
Added Vol: 108 11 150 0 0 0 0 30 149 186 19 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 118 21 160 10 10 10 10 138 159 194 185 8
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 124 22 168 11 11 11 11 145 167 204 195 8
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 124 22 168 11 11 11 11 145 167 204 195 8

Critical Gap Module:

Critical Gp: 7.1 6.5 6.2 7.1 6.5 6.2 4.1 xxxx xxxxx 4.1 xxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 3.5 4.0 3.3 2.2 xxxx xxxxx 2.2 xxxx xxxxx

Capacity Module:

Cnflct Vol: 868 862 229 953 941 199 203 xxxx xxxxx 313 xxxx xxxxx
Potent Cap.: 275 295 815 241 265 847 1381 xxxx xxxxx 1259 xxxx xxxxx
Move Cap.: 224 239 815 152 215 847 1381 xxxx xxxxx 1259 xxxx xxxxx
Volume/Cap: 0.56 0.09 0.21 0.07 0.05 0.01 0.01 xxxx xxxx 0.16 xxxx xxxx

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx 0.0 xxxx xxxxx 0.6 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx 7.6 xxxx xxxxx 8.4 xxxx xxxxx
LOS by Move: * * * * * A * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx 368 xxxxx xxxx 242 xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
SharedQueue:xxxxx 8.0 xxxxx xxxxx 0.4 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 51.5 xxxxx xxxxx 22.1 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS: * F * * C * * * * *
ApproachDel: 51.5 22.1 xxxxxxx xxxxxxx
ApproachLOS: F C * *

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #5 Wilfred Ave/Labath Ave

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

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

Volume Module:

Base Vol:	7	2	89	17	3	1	15	79	33	50	175	25
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:	7	2	89	17	3	1	15	79	33	50	175	25
Added Vol:	19	22	443	0	0	0	0	150	30	541	186	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	26	24	532	17	3	1	15	229	63	591	361	25
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	27	25	560	18	3	1	16	241	66	622	380	26
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	27	25	560	18	3	1	16	241	66	622	380	26

Critical Gap Module:

Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	1945	1956	274	2236	1976	393	406	xxxx	xxxxx	307	xxxx	xxxxx
Potent Cap.:	49	65	769	31	63	660	1163	xxxx	xxxxx	1265	xxxx	xxxxx
Move Cap.:	16	16	769	0	15	660	1163	xxxx	xxxxx	1265	xxxx	xxxxx
Volume/Cap:	1.68	1.60	0.73	xxxx	0.21	0.00	0.01	xxxx	xxxx	0.49	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	2.8	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.1	xxxx	xxxxx	10.6	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	A	*	*	B	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	153	xxxxx	xxxx	0	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	61.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	1412	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	F	*	*	*	*	*	*	*	*	*	*			
ApproachDel:	1411.8			xxxxxx			xxxxxx			xxxxxx					
ApproachLOS:	F			F			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #6 Dowell Ave/Wilfred Ave

Average Delay (sec/veh): 12.3 Worst Case Level Of Service: F[221.7]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 1! 0 0 0 0 1! 0 0

Volume Module:

Base Vol: 21 14 75 14 2 6 11 115 59 82 223 23
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 21 14 75 14 2 6 11 115 59 82 223 23
Added Vol: 0 0 0 0 0 0 0 593 0 0 727 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 21 14 75 14 2 6 11 708 59 82 950 23
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 22 15 79 15 2 6 12 745 62 86 1000 24
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 22 15 79 15 2 6 12 745 62 86 1000 24

Critical Gap Module:

Critical Gp: 7.1 6.5 6.2 7.1 6.5 6.2 4.1 xxxx xxxxx 4.1 xxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 3.5 4.0 3.3 2.2 xxxx xxxxx 2.2 xxxx xxxxx

Capacity Module:

Cnflict Vol: 1988 1996 776 2031 2015 1012 1024 xxxx xxxxx 807 xxxx xxxxx
Potent Cap.: 46 61 400 43 59 293 686 xxxx xxxxx 827 xxxx xxxxx
Move Cap.: 40 53 400 25 52 293 686 xxxx xxxxx 827 xxxx xxxxx
Volume/Cap: 0.56 0.28 0.20 0.60 0.04 0.02 0.02 xxxx xxxx 0.10 xxxx xxxx

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx 0.1 xxxx xxxxx 0.3 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx 10.3 xxxx xxxxx 9.9 xxxx xxxxx
LOS by Move: * * * * * B * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx 112 xxxxx xxxx 35 xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
SharedQueue:xxxxx 6.8 xxxxx xxxxx 2.3 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 167 xxxxx xxxxx 222 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS: * F * * F * * * * *
ApproachDel: 166.9 221.7 xxxxxxx xxxxxxx
ApproachLOS: F F * *

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

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

Intersection #7 Wilfred Ave/Redwood Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 1.188
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 106.6
Optimal Cycle: 180 Level Of Service: F

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module:

Table with 13 columns representing different traffic metrics and 13 rows of data including Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module:

Table with 13 columns representing saturation flow metrics and 4 rows of data including Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with 13 columns representing capacity analysis metrics and 13 rows of data including Vol/Sat, Crit Moves, Green/Cycle, etc.

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 Redwood Dr/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.301
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 26.9
Optimal Cycle: 31 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module:

Table with 13 columns representing different volume and adjustment factors. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module:

Table with 13 columns representing saturation flow and adjustment factors. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with 13 columns representing capacity analysis metrics. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2k95thQ.

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

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

Intersection #9 Wilfred Ave/101 SB Ramp

Cycle (sec): 145 Critical Vol./Cap.(X): 0.883
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 37.8
Optimal Cycle: 108 Level Of Service: D

Street Name: US-101 SB Ramp Wilfred Avenue
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Permitted Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 0 0 0 1 0 1 1 0 0 0 1 1 0 2 0 2 0 0

Volume Module:
Base Vol: 0 0 0 327 327 401 0 610 179 93 383 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: 0 0 0 327 327 401 0 610 179 93 383 0
Added Vol: 0 0 0 0 0 218 0 204 378 0 497 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 327 327 619 0 814 557 93 880 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 0 0 0 344 344 652 0 857 586 98 926 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 0 0 344 344 652 0 857 586 98 926 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 0 0 0 344 344 652 0 857 586 98 926 0

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 1.00 1.00 1.00 0.83 0.88 0.88 1.00 0.92 0.92 0.93 0.98 1.00
Lanes: 0.00 0.00 0.00 1.00 1.00 1.00 0.00 1.19 0.81 2.00 2.00 0.00
Final Sat.: 0 0 0 1583 1680 1680 0 2076 1421 3538 3724 0

Capacity Analysis Module:
Vol/Sat: 0.00 0.00 0.00 0.22 0.20 0.39 0.00 0.41 0.41 0.03 0.25 0.00
Crit Moves: ****
Green/Cycle: 0.00 0.00 0.00 0.44 0.44 0.44 0.00 0.47 0.47 0.03 0.50 0.00
Volume/Cap: 0.00 0.00 0.00 0.50 0.47 0.88 0.00 0.88 0.88 0.88 0.50 0.00
Uniform Del: 0.0 0.0 0.0 29.1 28.7 37.2 0.0 35.0 35.0 70.0 24.3 0.0
IncrcmntDel: 0.0 0.0 0.0 0.6 0.2 8.4 0.0 6.1 6.1 51.0 0.2 0.0
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 0.00 0.00 0.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 0.00
Delay/Veh: 0.0 0.0 0.0 29.7 28.8 45.7 0.0 41.1 41.1 121.0 24.5 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 0.0 0.0 29.7 28.8 45.7 0.0 41.1 41.1 121.0 24.5 0.0
LOS by Move: A A A C C D A D D F C A
HCM2k95thQ: 0 0 0 20 19 47 0 51 51 8 24 0

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

Intersection #10 Golf Course Dr/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 1.206
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 91.3
Optimal Cycle: 180 Level Of Service: F

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module:

Table with 13 columns representing different traffic volumes and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module:

Table with 13 columns for saturation flow metrics: Sat/Lane, Adjustment, Lanes, Final Sat., etc.

Capacity Analysis Module:

Table with 13 columns for capacity analysis metrics: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, etc.

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

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

Intersection #11 Roberts Lake Dr/Golf Course Dr

Cycle (sec): 80 Critical Vol./Cap.(X): 0.487
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 15.1
Optimal Cycle: 26 Level Of Service: B

Table with columns: Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Permitted, Protected), Rights (Include), Min. Green, Lanes.

Volume Module:
Base Vol: 0 0 0 93 0 217 187 915 0 0 602 35
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 0 93 0 217 187 915 0 0 602 35
Added Vol: 0 0 0 0 0 0 0 11 0 0 12 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 93 0 217 187 926 0 0 614 35
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 0 0 0 98 0 228 197 975 0 0 646 37
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 0 0 98 0 228 197 975 0 0 646 37
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 0 0 0 98 0 228 197 975 0 0 646 37

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 1.00 1.00 1.00 0.93 1.00 0.83 0.93 0.93 1.00 1.00 0.92 0.92
Lanes: 0.00 0.00 0.00 1.00 0.00 1.00 1.00 2.00 0.00 0.00 1.89 0.11
Final Sat.: 0 0 0 1769 0 1583 1769 3538 0 0 3320 189

Capacity Analysis Module:
Vol/Sat: 0.00 0.00 0.00 0.06 0.00 0.14 0.11 0.28 0.00 0.00 0.19 0.19
Crit Moves: *****
Green/Cycle: 0.00 0.00 0.00 0.30 0.00 0.30 0.23 0.63 0.00 0.00 0.40 0.40
Volume/Cap: 0.00 0.00 0.00 0.19 0.00 0.49 0.49 0.44 0.00 0.00 0.49 0.49
Uniform Del: 0.0 0.0 0.0 21.0 0.0 23.1 26.8 7.6 0.0 0.0 17.9 17.9
IncrcmntDel: 0.0 0.0 0.0 0.2 0.0 0.8 0.9 0.1 0.0 0.0 0.3 0.3
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 0.00 0.00 0.00 1.00 0.00 1.00 1.00 1.00 0.00 0.00 1.00 1.00
Delay/Veh: 0.0 0.0 0.0 21.1 0.0 23.9 27.7 7.8 0.0 0.0 18.2 18.2
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 0.0 0.0 21.1 0.0 23.9 27.7 7.8 0.0 0.0 18.2 18.2
LOS by Move: A A A C A C C A A B B
HCM2k95thQ: 0 0 0 4 0 10 9 13 0 0 13 13

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

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

Intersection #12 101 NB Ramps/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 1.162
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 92.3
Optimal Cycle: 180 Level Of Service: F

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different volume categories and 13 rows of data including Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 13 columns and 4 rows of data including Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns and 13 rows of data including Vol/Sat, Crit Moves, Green/Cycle, etc.

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #13 New Driveway/Stony Point Rd

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

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 1 0 0 0 0 1 0 0 0 0 0 0 0 0 1

Volume Module:

Base Vol: 0 832 0 0 634 0 0 0 0 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
Initial Bse: 0 832 0 0 634 0 0 0 0 0 0 0 0
Added Vol: 0 59 0 0 52 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 891 0 0 686 0 0 0 0 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
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 0 938 0 0 722 0 0 0 0 0 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 0 938 0 0 722 0 0 0 0 0 0 0 0

Critical Gap Module:

Critical Gp:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 6.2
FollowUpTim:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 3.3

Capacity Module:

Cnflict Vol: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 938
Potent Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 323
Move Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 323
Volume/Cap: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.00

Level Of Service Module:

2Way95thQ: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Control Del:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
LOS by Move: * * * * * * * * * * * * * * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue:xxxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd ConDel:xxxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: * * * * * * * * * * * * * * * *
ApproachDel: xxxxxxx xxxxxxx xxxxxxx xxxxxxx
ApproachLOS: * * * *

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #14 New Driveway/Labath Ave

Average Delay (sec/veh): 7.2 Worst Case Level Of Service: B[10.5]

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

Volume Module:

Base Vol:	0	0	0	0	0	0	0	105	0	0	74	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:	0	0	0	0	0	0	0	105	0	0	74	0
Added Vol:	0	0	0	0	0	322	305	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	0	0	322	305	105	0	0	74	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	0	0	339	321	111	0	0	78	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	0	0	339	321	111	0	0	78	0

Critical Gap Module:

Critical Gp:	xxxx	xxxx	xxxx	xxxx	xxxx	6.2	4.1	xxxx	xxxx	xxxx	xxxx	xxxx
FollowUpTim:	xxxx	xxxx	xxxx	xxxx	xxxx	3.3	2.2	xxxx	xxxx	xxxx	xxxx	xxxx

Capacity Module:

Cnflict Vol:	xxxx	xxxx	xxxx	xxxx	xxxx	78	78	xxxx	xxxx	xxxx	xxxx	xxxx
Potent Cap.:	xxxx	xxxx	xxxx	xxxx	xxxx	988	1533	xxxx	xxxx	xxxx	xxxx	xxxx
Move Cap.:	xxxx	xxxx	xxxx	xxxx	xxxx	988	1533	xxxx	xxxx	xxxx	xxxx	xxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	0.34	0.21	xxxx	xxxx	xxxx	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxx	xxxx	xxxx	1.5	0.8	xxxx	xxxx	xxxx	xxxx	xxxx
Control Del:	xxxx	xxxx	xxxx	xxxx	xxxx	10.5	8.0	xxxx	xxxx	xxxx	xxxx	xxxx
LOS by Move:	*	*	*	*	*	B	A	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
SharedQueue:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.8	xxxx	xxxx	xxxx	xxxx	xxxx
Shrd ConDel:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	8.0	xxxx	xxxx	xxxx	xxxx	xxxx
Shared LOS:	*	*	*	*	*	*	A	*	*	*	*	*
ApproachDel:	xxxxxx					10.5	xxxxxx			xxxxxx		
ApproachLOS:	*					B	*			*		

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #15 Redwood Dr/Business Park Dr

Average Delay (sec/veh): 5.6 Worst Case Level Of Service: D[26.5]

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:	1	0	2	0	0	1	1	0	0	1	0	0

Volume Module:

Base Vol:	33	464	0	0	489	41	172	0	89	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:	33	464	0	0	489	41	172	0	89	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	33	464	0	0	489	41	172	0	89	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	35	488	0	0	515	43	181	0	94	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	35	488	0	0	515	43	181	0	94	0	0	0

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.8	6.5	6.9	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	558	xxxx	xxxxx	xxxxx	xxxx	xxxxx	850	1094	279	xxxx	xxxx	xxxxx
Potent Cap.:	1023	xxxx	xxxxx	xxxxx	xxxx	xxxxx	303	216	724	xxxx	xxxx	xxxxx
Move Cap.:	1023	xxxx	xxxxx	xxxxx	xxxx	xxxxx	296	208	724	xxxx	xxxx	xxxxx
Volume/Cap:	0.03	xxxx	xxxx	xxxxx	xxxx	xxxxx	0.61	0.00	0.13	xxxx	xxxx	xxxxx

Level Of Service Module:

2Way95thQ:	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.8	xxxx	xxxxx	xxxx	xxxx	xxxxx			
Control Del:	8.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	34.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
LOS by Move:	A	*	*	*	*	*	D	*	*	*	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxx	xxxx	724	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	0.4	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	10.7	xxxxx	xxxx	xxxxx			
Shared LOS:	*	*	*	*	*	*	*	*	B	*	*	*			
ApproachDel:	xxxxxx			xxxxxx			26.5			xxxxxx					
ApproachLOS:	*			*			D			*					

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #16 Rohnert Park Expwy/Stony Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.700

Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 24.0

Optimal Cycle: 42 Level Of Service: C

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Permitted Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 1 0 1 1 0 1 0 0 0 0 0 0 0 1

Volume Module:

Base Vol: 0 546 251 212 421 0 0 0 0 257 0 286
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: 0 546 251 212 421 0 0 0 0 257 0 286
Added Vol: 0 59 0 0 52 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 605 251 212 473 0 0 0 0 257 0 286
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 0 637 264 223 498 0 0 0 0 271 0 301
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 637 264 223 498 0 0 0 0 271 0 301
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 0 637 264 223 498 0 0 0 0 271 0 301

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 1.00 0.98 0.83 0.93 0.98 1.00 1.00 1.00 1.00 0.93 1.00 0.83
Lanes: 0.00 1.00 1.00 1.00 1.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00
Final Sat.: 0 1862 1583 1769 1862 0 0 0 0 1769 0 1583

Capacity Analysis Module:

Vol/Sat: 0.00 0.34 0.17 0.13 0.27 0.00 0.00 0.00 0.00 0.15 0.00 0.19
Crit Moves: ****
Green/Cycle: 0.00 0.49 0.49 0.18 0.67 0.00 0.00 0.00 0.00 0.27 0.00 0.27
Volume/Cap: 0.00 0.70 0.34 0.70 0.40 0.00 0.00 0.00 0.00 0.56 0.00 0.70
Uniform Del: 0.0 19.9 15.7 38.5 7.5 0.0 0.0 0.0 0.0 31.3 0.0 32.8
IncrcmntDel: 0.0 2.5 0.3 6.8 0.2 0.0 0.0 0.0 0.0 1.5 0.0 5.1
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 0.00 1.00 1.00 1.00 1.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00
Delay/Veh: 0.0 22.4 16.0 45.3 7.7 0.0 0.0 0.0 0.0 32.9 0.0 37.9
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 22.4 16.0 45.3 7.7 0.0 0.0 0.0 0.0 32.9 0.0 37.9
LOS by Move: A C B D A A A A C A D
HCM2k95thQ: 0 28 10 15 13 0 0 0 0 15 0 18

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

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

Intersection #17 Rohnert Park Expwy/Labath Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.845
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 90.8
Optimal Cycle: 89 Level Of Service: F

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic flows. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2k95thQ.

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #18 Rohnert Park Expwy/Redwood Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.749

Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 43.0

Optimal Cycle: 67 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Control:	Protected			Protected			Protected			Protected											
Rights:	Include			Include			Include			Include											
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0									
Lanes:	1	0	1	1	1	1	2	0	1	0	1	1	0	3	0	1	2	0	2	0	1

Volume Module:

Base Vol:	137	252	422	364	264	243	233	701	146	371	656	358
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:	137	252	422	364	264	243	233	701	146	371	656	358
Added Vol:	0	0	0	0	0	0	0	322	0	0	305	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	137	252	422	364	264	243	233	1023	146	371	961	358
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	144	265	444	383	278	256	245	1077	154	391	1012	377
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	144	265	444	383	278	256	245	1077	154	391	1012	377
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	144	265	444	383	278	256	245	1077	154	391	1012	377

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.89	0.89	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.83
Lanes:	1.00	1.12	1.88	2.00	1.00	1.00	1.00	3.00	1.00	2.00	2.00	1.00
Final Sat.:	1769	1892	3169	3538	1862	1583	1769	5586	1583	3538	3724	1583

Capacity Analysis Module:

Vol/Sat:	0.08	0.14	0.14	0.11	0.15	0.16	0.14	0.19	0.10	0.11	0.27	0.24
Crit Moves:	****			****			****			****		
Green/Cycle:	0.12	0.21	0.21	0.16	0.25	0.25	0.10	0.32	0.32	0.18	0.41	0.41
Volume/Cap:	0.65	0.67	0.67	0.67	0.60	0.65	1.39	0.60	0.30	0.60	0.67	0.58
Uniform Del:	41.7	36.3	36.3	39.3	33.3	33.8	45.0	28.4	25.4	37.4	24.1	23.0
IncrcmntDel:	6.8	1.6	1.6	3.0	2.2	3.9	204.9	0.6	0.3	1.5	1.1	1.4
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	48.5	37.9	37.9	42.3	35.5	37.7	249.9	29.0	25.7	38.9	25.3	24.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	48.5	37.9	37.9	42.3	35.5	37.7	249.9	29.0	25.7	38.9	25.3	24.4
LOS by Move:	D	D	D	D	D	D	F	C	C	D	C	C
HCM2k95thQ:	11	15	15	13	16	15	31	18	7	12	24	18

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

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #19 Rohnert Park Expwy/101 SB Ramps

Cycle (sec): 80 Critical Vol./Cap.(X): 0.798
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 22.4
Optimal Cycle: 71 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Permitted, Protected), Rights (Include, Ignore), Min. Green, and Lanes.

Volume Module: Table with 13 columns for different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns for different traffic movements. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns for different traffic movements. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2k95thQ.

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

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

 Intersection #20 Rohnert Park Expwy/101 NB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.624
 Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 22.8
 Optimal Cycle: 35 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	0	1	0	4	0	3	0

Volume Module:

Base Vol:	303	0	306	14	0	3	17	1631	273	0	985	350
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:	303	0	306	14	0	3	17	1631	273	0	985	350
Added Vol:	293	0	0	0	0	0	0	11	0	0	12	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	596	0	306	14	0	3	17	1642	273	0	997	350
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00	0.95	0.95	0.00
PHF Volume:	627	0	322	15	0	3	18	1728	0	0	1049	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	627	0	322	15	0	3	18	1728	0	0	1049	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Final Vol.:	627	0	322	15	0	3	18	1728	0	0	1049	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	1.00	0.83	0.93	1.00	0.83	0.18	0.98	1.00	1.00	0.98	1.00
Lanes:	1.00	0.00	2.00	1.00	0.00	1.00	1.00	4.00	1.00	0.00	3.00	1.00
Final Sat.:	1769	0	3165	1769	0	1583	346	7448	1900	0	5586	1900

Capacity Analysis Module:

Vol/Sat:	0.35	0.00	0.10	0.01	0.00	0.00	0.05	0.23	0.00	0.00	0.19	0.00
Crit Moves:	****			****			****					
Green/Cycle:	0.57	0.00	0.53	0.04	0.00	0.00	0.37	0.37	0.00	0.00	0.37	0.00
Volume/Cap:	0.62	0.00	0.19	0.19	0.00	xxxx	0.14	0.62	0.00	0.00	0.51	0.00
Uniform Del:	14.4	0.0	12.5	46.2	0.0	0.0	20.8	25.7	0.0	0.0	24.3	0.0
IncrcmntDel:	1.2	0.0	0.1	1.2	0.0	0.0	0.5	0.5	0.0	0.0	0.2	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00
Delay/Veh:	15.7	0.0	12.6	47.4	0.0	0.0	21.3	26.1	0.0	0.0	24.5	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	15.7	0.0	12.6	47.4	0.0	0.0	21.3	26.1	0.0	0.0	24.5	0.0
LOS by Move:	B	A	B	D	A	A	C	C	A	A	C	A
HCM2k95thQ:	24	0	5	1	0	2	1	21	0	0	16	0

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

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

 Intersection #21 Rohnert Park Expwy/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.815
 Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 33.9
 Optimal Cycle: 81 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound										
Movement:	L	T	R	L	T	R	L	T	R	L	T	R								
Control:	Split Phase			Split Phase			Protected			Protected										
Rights:	Include			Include			Include			Include										
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0								
Lanes:	1	1	1	0	1	1	1	1	0	1	2	0	2	0	1	1	0	2	1	0

Volume Module:

Base Vol:	380	286	224	102	230	183	270	1138	545	141	771	170
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:	380	286	224	102	230	183	270	1138	545	141	771	170
Added Vol:	0	0	0	0	0	0	0	11	0	0	12	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	380	286	224	102	230	183	270	1149	545	141	783	170
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	400	301	236	107	242	193	284	1209	574	148	824	179
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	400	301	236	107	242	193	284	1209	574	148	824	179
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	400	301	236	107	242	193	284	1209	574	148	824	179

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.83	0.97	0.97	0.83	0.93	0.98	0.83	0.93	0.95	0.95
Lanes:	1.71	1.29	1.00	1.00	2.00	1.00	2.00	2.00	1.00	1.00	2.46	0.54
Final Sat.:	3098	2332	1583	1834	3668	1583	3538	3724	1583	1769	4466	970

Capacity Analysis Module:

Vol/Sat:	0.13	0.13	0.15	0.06	0.07	0.12	0.08	0.32	0.36	0.08	0.18	0.18
Crit Moves:	****			****			****			****		
Green/Cycle:	0.18	0.18	0.18	0.15	0.15	0.15	0.17	0.44	0.44	0.10	0.38	0.38
Volume/Cap:	0.71	0.71	0.81	0.39	0.44	0.81	0.48	0.73	0.81	0.81	0.48	0.48
Uniform Del:	38.3	38.3	39.2	38.4	38.7	41.2	37.8	22.8	24.2	43.9	23.4	23.4
IncrcmntDel:	2.3	2.3	16.1	0.3	0.4	19.2	0.6	1.7	7.3	23.8	0.2	0.2
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	40.7	40.7	55.4	38.7	39.1	60.4	38.4	24.5	31.5	67.7	23.6	23.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	40.7	40.7	55.4	38.7	39.1	60.4	38.4	24.5	31.5	67.7	23.6	23.6
LOS by Move:	D	D	E	D	D	E	D	C	C	E	C	C
HCM2k95thQ:	15	15	17	7	8	15	9	28	30	13	15	15

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #22 Gravenstein Hwy (SR 116)/ Stoney Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.766

Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 38.1

Optimal Cycle: 70 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	0	1	0	1	0	1	1	0	2

Volume Module:

Base Vol:	321	494	108	96	342	219	133	484	202	128	589	103
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	321	494	108	96	342	219	133	484	202	128	589	103
Added Vol:	0	0	0	52	0	0	0	0	0	0	0	59
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	321	494	108	148	342	219	133	484	202	128	589	162
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	338	520	114	156	360	231	140	509	213	135	620	171
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	338	520	114	156	360	231	140	509	213	135	620	171
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	338	520	114	156	360	231	140	509	213	135	620	171

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.89	0.89	0.93	0.93	0.83
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.41	0.59	1.00	2.00	1.00
Final Sat.:	1769	1862	1583	1769	1862	1583	1769	2386	996	1769	3538	1583

Capacity Analysis Module:

Vol/Sat:	0.19	0.28	0.07	0.09	0.19	0.15	0.08	0.21	0.21	0.08	0.18	0.11
Crit Moves:	****				****			****		****		
Green/Cycle:	0.25	0.38	0.38	0.12	0.25	0.25	0.12	0.28	0.28	0.10	0.26	0.26
Volume/Cap:	0.77	0.73	0.19	0.73	0.77	0.58	0.67	0.77	0.77	0.77	0.67	0.41
Uniform Del:	34.8	26.5	20.6	42.4	34.6	32.7	42.3	33.1	33.1	43.9	33.2	30.6
IncrcmntDel:	7.9	3.9	0.2	12.3	7.4	2.1	8.3	3.8	3.8	18.1	2.0	0.7
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	42.7	30.5	20.8	54.7	42.0	34.8	50.6	36.9	36.9	62.0	35.1	31.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	42.7	30.5	20.8	54.7	42.0	34.8	50.6	36.9	36.9	62.0	35.1	31.3
LOS by Move:	D	C	C	D	D	C	D	D	D	E	D	C
HCM2k95thQ:	21	26	5	12	22	13	11	22	22	11	18	9

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #23 Gravenstein Hwy (SR 116)/ Redwood Rd

Cycle (sec): 80 Critical Vol./Cap.(X): 0.755

Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 28.5

Optimal Cycle: 64 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	0	1	0	1	1	0	1

Volume Module:

Base Vol:	48	24	63	485	29	96	102	625	32	53	738	333
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	24	63	485	29	96	102	625	32	53	738	333
Added Vol:	0	0	0	0	0	0	0	52	0	0	59	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	48	24	63	485	29	96	102	677	32	53	797	333
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	51	25	66	511	31	101	107	713	34	56	839	351
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	51	25	66	511	31	101	107	713	34	56	839	351
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	51	25	66	511	31	101	107	713	34	56	839	351

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.87	0.87	0.93	0.87	0.87	0.93	0.92	0.92	0.93	0.93	0.83
Lanes:	1.00	0.28	0.72	1.00	0.23	0.77	1.00	1.91	0.09	1.00	2.00	1.00
Final Sat.:	1769	458	1201	1769	382	1266	1769	3354	159	1769	3538	1583

Capacity Analysis Module:

Vol/Sat:	0.03	0.06	0.06	0.29	0.08	0.08	0.06	0.21	0.21	0.03	0.24	0.22
Crit Moves:	****			****			****			****		
Green/Cycle:	0.12	0.07	0.07	0.38	0.34	0.34	0.08	0.34	0.34	0.05	0.31	0.31
Volume/Cap:	0.24	0.75	0.75	0.75	0.24	0.24	0.75	0.62	0.62	0.62	0.75	0.71
Uniform Del:	31.9	36.4	36.4	21.5	19.2	19.2	36.0	21.9	21.9	37.2	24.7	24.2
IncrcmntDel:	0.6	23.3	23.3	4.8	0.2	0.2	20.3	1.0	1.0	12.3	3.0	4.6
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	32.5	59.6	59.6	26.3	19.4	19.4	56.3	22.9	22.9	49.5	27.7	28.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	32.5	59.6	59.6	26.3	19.4	19.4	56.3	22.9	22.9	49.5	27.7	28.7
LOS by Move:	C	E	E	C	B	B	E	C	C	D	C	C
HCM2k95thQ:	3	8	8	23	5	5	9	16	16	5	21	17

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #24 Gravenstein Hwy and SB 101 Ramps

Cycle (sec): 80 Critical Vol./Cap.(X): 0.597
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 17.9
Optimal Cycle: 40 Level Of Service: B

Street Name: SB 101 Ramps Gravenstein Hwy
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Permitted Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 0 0 0 2 0 0 1 0 0 0 2 0 1 1 0 2 0 0

Volume Module:
Base Vol: 0 0 0 639 0 212 0 819 361 99 900 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: 0 0 0 639 0 212 0 819 361 99 900 0
Added Vol: 0 0 0 0 0 0 0 0 52 0 59 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 639 0 212 0 819 413 99 959 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 0 0 0 673 0 223 0 862 435 104 1009 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 0 0 673 0 223 0 862 435 104 1009 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 0 0 0 673 0 223 0 862 435 104 1009 0

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 1.00 1.00 1.00 0.90 1.00 0.83 1.00 0.93 0.83 0.93 0.93 1.00
Lanes: 0.00 0.00 0.00 2.00 0.00 1.00 0.00 2.00 1.00 1.00 2.00 0.00
Final Sat.: 0 0 0 3432 0 1583 0 3538 1583 1769 3538 0

Capacity Analysis Module:
Vol/Sat: 0.00 0.00 0.00 0.20 0.00 0.14 0.00 0.24 0.27 0.06 0.29 0.00
Crit Moves: ****
Green/Cycle: 0.00 0.00 0.00 0.35 0.00 0.35 0.00 0.43 0.43 0.10 0.54 0.00
Volume/Cap: 0.00 0.00 0.00 0.56 0.00 0.40 0.00 0.57 0.64 0.59 0.53 0.00
Uniform Del: 0.0 0.0 0.0 21.0 0.0 19.7 0.0 17.2 17.9 34.4 11.8 0.0
IncrcmntDel: 0.0 0.0 0.0 0.6 0.0 0.5 0.0 0.5 2.0 5.1 0.3 0.0
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 0.00 0.00 0.00 1.00 0.00 1.00 0.00 1.00 1.00 1.00 1.00 0.00
Delay/Veh: 0.0 0.0 0.0 21.6 0.0 20.2 0.0 17.7 20.0 39.6 12.1 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 0.0 0.0 21.6 0.0 20.2 0.0 17.7 20.0 39.6 12.1 0.0
LOS by Move: A A A C A C A B B D B A
HCM2k95thQ: 0 0 0 14 0 9 0 17 17 7 16 0

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

 Intersection #25 Gravenstein Hwy and NB 101 Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.746
 Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 19.2
 Optimal Cycle: 58 Level Of Service: B

Street Name: NB 101 Ramps Gravenstein Hwy
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	0	0	0	0	0	2	0	0	2

Volume Module:

Base Vol:	351	0	236	0	0	0	0	1461	0	0	617	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:	351	0	236	0	0	0	0	1461	0	0	617	0
Added Vol:	59	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	410	0	236	0	0	0	0	1461	0	0	617	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	432	0	248	0	0	0	0	1538	0	0	649	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	432	0	248	0	0	0	0	1538	0	0	649	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	432	0	248	0	0	0	0	1538	0	0	649	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	1.00	0.83	1.00	1.00	1.00	1.00	0.93	1.00	1.00	0.93	1.00
Lanes:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
Final Sat.:	1769	0	1583	0	0	0	0	3538	0	0	3538	0

Capacity Analysis Module:

Vol/Sat:	0.24	0.00	0.16	0.00	0.00	0.00	0.00	0.43	0.00	0.00	0.18	0.00
Crit Moves:	****							****				
Green/Cycle:	0.33	0.00	0.33	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.58	0.00
Volume/Cap:	0.75	0.00	0.48	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.31	0.00
Uniform Del:	29.9	0.0	26.9	0.0	0.0	0.0	0.0	15.4	0.0	0.0	10.7	0.0
IncrcmntDel:	5.3	0.0	0.7	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.1	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00
Delay/Veh:	35.2	0.0	27.6	0.0	0.0	0.0	0.0	16.9	0.0	0.0	10.7	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	35.2	0.0	27.6	0.0	0.0	0.0	0.0	16.9	0.0	0.0	10.7	0.0
LOS by Move:	D	A	C	A	A	A	A	B	A	A	B	A
HCM2k95thQ:	24	0	12	0	0	0	0	33	0	0	10	0

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #26 Millbrae Ave/Stony Point Rd

Average Delay (sec/veh): 3.5 Worst Case Level Of Service: F[59.0]

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: 1 0 2 0 1 1 0 1 1 0 0 0 1! 0 0 0 1 0 0 1

Volume Module:

Base Vol: 19 718 17 113 547 4 8 5 10 1 6 189
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: 19 718 17 113 547 4 8 5 10 1 6 189
Added Vol: 0 75 0 0 121 0 0 0 0 0 0 32
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 19 793 17 113 668 4 8 5 10 1 6 221
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 20 835 18 119 703 4 8 5 11 1 6 233
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 20 835 18 119 703 4 8 5 11 1 6 233

Critical Gap Module:

Critical Gp: 4.1 xxxx xxxxx 4.1 xxxx xxxxx 7.5 6.5 6.9 7.5 6.5 6.9
FollowUpTim: 2.2 xxxx xxxxx 2.2 xxxx xxxxx 3.5 4.0 3.3 3.5 4.0 3.3

Capacity Module:

Cnflct Vol: 707 xxxx xxxxx 853 xxxx xxxxx 1404 1836 354 1467 1820 417
Potent Cap.: 901 xxxx xxxxx 795 xxxx xxxxx 101 77 648 91 78 590
Move Cap.: 901 xxxx xxxxx 795 xxxx xxxxx 50 64 648 73 65 590
Volume/Cap: 0.02 xxxx xxxxx 0.15 xxxx xxxxx 0.17 0.08 0.02 0.01 0.10 0.39

Level Of Service Module:

2Way95thQ: 0.1 xxxx xxxxx 0.5 xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx 1.9
Control Del: 9.1 xxxx xxxxx 10.3 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx 15.0
LOS by Move: A * * B * * * * * C
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx 90 xxxxx 66 xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx 1.0 xxxxx 0.4 xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx 59.0 xxxxx 66.0 xxxx xxxxx
Shared LOS: * * * * * * * * * * F * F * *
ApproachDel: xxxxxx xxxxxx 59.0 16.6
ApproachLOS: * * F C

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #27 Millbrae Ave/Primrose Ave

Average Delay (sec/veh): 0.2 Worst Case Level Of Service: B[11.6]

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

Volume Module:

Base Vol:	1	0	1	0	1	0	1	134	3	3	194	2
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:	1	0	1	0	1	0	1	134	3	3	194	2
Added Vol:	0	0	0	0	0	0	0	0	0	0	32	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1	0	1	0	1	0	1	134	3	3	226	2
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	1	0	1	0	1	0	1	141	3	3	238	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	1	0	1	0	1	0	1	141	3	3	238	2

Critical Gap Module:

Critical Gp:	7.1	6.5	6.2	xxxxx	6.5	xxxxx	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	4.0	xxxxx	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	391	391	143	xxxx	392	xxxxx	240	xxxx	xxxxx	144	xxxx	xxxxx
Potent Cap.:	572	548	910	xxxx	547	xxxxx	1339	xxxx	xxxxx	1451	xxxx	xxxxx
Move Cap.:	570	546	910	xxxx	546	xxxxx	1339	xxxx	xxxxx	1451	xxxx	xxxxx
Volume/Cap:	0.00	0.00	0.00	xxxx	0.00	xxxx	0.00	xxxx	xxxx	0.00	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	0.0	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	11.6	xxxxx	7.7	xxxx	xxxxx	7.5	xxxx	xxxxx			
LOS by Move:	*	*	*	*	B	*	A	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	701	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	0.0	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	10.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	B	*	*	*	*	*	*	*	*	*	*			
ApproachDel:	10.2			11.6			xxxxxxx			xxxxxxx					
ApproachLOS:	B			B			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #28 Millbrae Ave/Whistler Ave

Average Delay (sec/veh): 0.5 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:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	1	0	0	0	1	0	0	1	0	0	1

Volume Module:

Base Vol:	1	9	0	4	0	1	1	119	2	4	203	8
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	9	0	4	0	1	1	119	2	4	203	8
Added Vol:	0	0	0	0	0	0	0	0	0	0	32	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1	9	0	4	0	1	1	119	2	4	235	8
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	1	9	0	4	0	1	1	125	2	4	247	8
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	1	9	0	4	0	1	1	125	2	4	247	8

Critical Gap Module:

Critical Gp:	7.1	6.5	xxxxx	7.1	6.5	6.2	4.1	xxxxx	xxxxx	4.1	xxxxx	xxxxx
FollowUpTim:	3.5	4.0	xxxxx	3.5	4.0	3.3	2.2	xxxxx	xxxxx	2.2	xxxxx	xxxxx

Capacity Module:

Cnflict Vol:	389	393	xxxxx	393	389	252	256	xxxxx	xxxxx	127	xxxxx	xxxxx
Potent Cap.:	574	547	xxxxx	570	549	792	1321	xxxxx	xxxxx	1471	xxxxx	xxxxx
Move Cap.:	571	545	xxxxx	561	547	792	1321	xxxxx	xxxxx	1471	xxxxx	xxxxx
Volume/Cap:	0.00	0.02	xxxxx	0.01	0.00	0.00	0.00	xxxxx	xxxxx	0.00	xxxxx	xxxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.7	xxxx	xxxxx	7.5	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	547	xxxx	xxxxx	xxxx	596	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.1	xxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	11.7	xxxx	xxxxx	xxxxx	11.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	B	*	*	*	B	*	*	*	*	*	*	*
ApproachDel:	11.7			11.1			xxxxxxx			xxxxxxx		
ApproachLOS:	B			B			*			*		

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #29 Millbrae Ave/Langner Ave

Average Delay (sec/veh): 0.5 Worst Case Level Of Service: B[10.9]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 0 0 0 1 0 0 1 0 0 0

Volume Module:

Base Vol: 3 0 6 0 0 0 0 150 5 2 265 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: 3 0 6 0 0 0 0 150 5 2 265 0
Added Vol: 11 0 0 0 0 0 0 0 0 0 22 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 14 0 6 0 0 0 0 150 5 2 287 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 15 0 6 0 0 0 0 158 5 2 302 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 15 0 6 0 0 0 0 158 5 2 302 0

Critical Gap Module:

Critical Gp: 6.4 6.5 6.2 xxxxx xxxx xxxxx xxxxx xxxxx xxxxx 4.1 xxxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 xxxxx xxxx xxxxx xxxxx xxxxx xxxxx 2.2 xxxxx xxxxx

Capacity Module:

Cnflict Vol: 467 467 161 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 163 xxxxx xxxxx
Potent Cap.: 558 497 890 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 1428 xxxxx xxxxx
Move Cap.: 557 496 890 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 1428 xxxxx xxxxx
Volume/Cap: 0.03 0.00 0.01 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.00 xxxxx xxxxx

Level Of Service Module:

2Way95thQ: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx
Control Del: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 7.5 xxxxx xxxxx
LOS by Move: * * * * * * * * * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx 628 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue: xxxxx 0.1 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx
Shrd ConDel: xxxxx 10.9 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 7.5 xxxxx xxxxx
Shared LOS: * B * * * * * * * * * A * *
ApproachDel: 10.9 xxxxxxx xxxxxxx xxxxxxx
ApproachLOS: B * * *

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #30 Millbrae Ave/Labath Ave

Average Delay (sec/veh): 1.3 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:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled										
Rights:	Include			Include			Include			Include										
Lanes:	0	0	1!	0	0	0	0	1!	0	0	0	0	0	1	0	0	1	0	0	0

Volume Module:

Base Vol:	16	0	11	0	0	0	0	155	4	10	252	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:	16	0	11	0	0	0	0	155	4	10	252	0
Added Vol:	22	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	38	0	11	0	0	0	0	155	4	10	252	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	40	0	12	0	0	0	0	163	4	11	265	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	40	0	12	0	0	0	0	163	4	11	265	0

Critical Gap Module:

Critical Gp:	6.4	6.5	6.2	7.1	6.5	6.2	xxxxx	xxxxx	xxxxx	4.1	xxxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	xxxxx	xxxxx	xxxxx	2.2	xxxxx	xxxxx

Capacity Module:

Cnflict Vol:	452	452	165	457	454	265	xxxxx	xxxxx	xxxxx	167	xxxxx	xxxxx
Potent Cap.:	569	506	884	517	505	778	xxxxx	xxxxx	xxxxx	1423	xxxxx	xxxxx
Move Cap.:	566	503	884	507	501	778	xxxxx	xxxxx	xxxxx	1423	xxxxx	xxxxx
Volume/Cap:	0.07	0.00	0.01	0.00	0.00	0.00	xxxxx	xxxxx	xxxxx	0.01	xxxxx	xxxxx

Level Of Service Module:

2Way95thQ:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx			
Control Del:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	7.5	xxxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxxx	616	xxxxx	xxxxx	0	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
SharedQueue:	xxxxx	0.3	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shrd ConDel:	xxxxx	11.4	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	7.5	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shared LOS:	*	B	*	*	*	*	*	*	*	A	*	*	*	*	*
ApproachDel:	11.4			xxxxxxx			xxxxxxx			xxxxxxx					
ApproachLOS:	B			*			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #31 Millbrae Ave/Dowdell Ave

Average Delay (sec/veh): 0.8 Worst Case Level Of Service: B[11.3]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 1 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 1 0 0

Volume Module:

Base Vol: 32 0 0 0 0 0 0 0 143 20 0 235 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: 32 0 0 0 0 0 0 0 143 20 0 235 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 32 0 0 0 0 0 0 0 143 20 0 235 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 34 0 0 0 0 0 0 0 151 21 0 247 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 34 0 0 0 0 0 0 0 151 21 0 247 0

Critical Gap Module:

Critical Gp: 6.4 xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
FollowUpTim: 3.5 xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Capacity Module:

Cnflict Vol: 408 xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Potent Cap.: 603 xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Move Cap.: 603 xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Volume/Cap: 0.06 xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Level Of Service Module:

2Way95thQ: 0.2 xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Control Del: 11.3 xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
LOS by Move: B * * * * * * * * * * * * * * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue:xxxxxx xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd ConDel:xxxxxx xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: * * * * * * * * * * * * * * * *
ApproachDel: 11.3 xxxxxxx xxxxxxx xxxxxxx
ApproachLOS: B * * *

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

**CUMULATIVE 2020 + ALTERNATIVE A
TRAFFIC CONDITIONS
(TRAFFIX)**

 Impact Analysis Report
 Level Of Service

Intersection	Base		Future		Change in
	Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C	
# 1 Wilfred Ave/Stony Point Rd	F	341.7 0.000	F	OVRFL 0.000	+998.917 D/V
# 2 Wilfred Ave/Primrose Ave	B	12.0 0.000	C	16.1 0.000	+ 4.056 D/V
# 3 Wilfred Ave/Whistler Ave	B	11.8 0.000	C	15.7 0.000	+ 3.901 D/V
# 4 Langner Ave/Wilfred Ave	B	12.3 0.000	F	110.8 0.000	+98.448 D/V
# 5 Wilfred Ave/Labath Ave	C	23.7 0.000	F	OVRFL 0.000	+ 1.8E+0308
# 6 Dowell Ave/Wilfred Ave	F	OVRFL 0.000	F	OVRFL 0.000	+ 1.8E+0308
# 7 Wilfred Ave/Redwood Dr	E	65.4 1.027	F	268.8 1.675	+203.355 D/V
# 9 Wilfred Ave/101 SB Ramp	C	34.9 0.815	F	84.0 1.160	+49.105 D/V
# 10 Golf Course Dr/Commerce Blvd	C	33.9 0.864	F	118.8 1.280	+84.925 D/V
# 11 Roberts Lake Dr/Golf Course Dr	B	17.7 0.469	B	11.8 0.465	-5.869 D/V
# 12 101 NB Ramps/Commerce Blvd	D	37.6 0.891	F	103.0 1.201	+65.378 D/V
# 13 New Driveway/Stony Point Rd	A	0.0 0.000	A	0.0 0.000	+ 0.000 D/V
# 14 New Driveway/Labath Ave	A	0.0 0.000	B	10.2 0.000	+10.219 D/V
# 15 Redwood Dr/Business Park Dr	C	21.8 0.000	C	21.8 0.000	+ 0.000 D/V
# 16 Rohnert Park Expwy/Stony Point	C	26.7 0.726	C	27.1 0.762	+ 0.395 D/V
# 17 Rohnert Park Expwy/Labath Ave	C	28.6 0.475	E	79.8 0.786	+51.151 D/V
# 18 Rohnert Park Expwy/Redwood Dr	D	36.4 0.764	D	35.9 0.764	-0.529 D/V
# 19 Rohnert Park Expwy/101 SB Ramp	C	24.4 0.696	C	24.9 0.800	+ 0.421 D/V
# 20 Rohnert Park Expwy/101 NB Ramp	B	17.6 0.405	C	23.7 0.593	+ 6.049 D/V
# 21 Rohnert Park Expwy/Commerce Bl	D	39.7 0.916	D	39.6 0.916	-0.030 D/V
# 22 Gravenstein Hwy (SR 116)/ Ston	E	61.0 1.020	E	63.5 1.020	+ 2.519 D/V
# 23 Gravenstein Hwy (SR 116)/ Redw	C	31.7 0.830	C	32.3 0.851	+ 0.591 D/V
# 24 Gravenstein Hwy and SB 101 Ram	B	18.0 0.621	B	18.0 0.621	-0.046 D/V
# 25 Gravenstein Hwy and NB 101 Ram	B	18.8 0.772	C	20.9 0.810	+ 2.106 D/V
# 26 Millbrae Ave/Stony Point Rd	F	59.2 0.000	F	113.3 0.000	+54.070 D/V

Intersection	Base			Future			Change in
	LOS	Del/ Veh	V/ C	LOS	Del/ Veh	V/ C	
# 27 Millbrae Ave/Primrose Ave	B	11.8	0.000	B	12.1	0.000	+ 0.331 D/V
# 28 Millbrae Ave/Whister Ave	B	12.0	0.000	B	12.3	0.000	+ 0.326 D/V
# 29 Millbrae Ave/Langner Ave	B	10.3	0.000	B	11.3	0.000	+ 1.021 D/V
# 30 Millbrae Ave/Labath Ave	B	12.3	0.000	B	12.8	0.000	+ 0.518 D/V
# 31 Millbrae Ave/Dowdell Ave	B	11.3	0.000	B	11.3	0.000	+ 0.000 D/V

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1 Wilfred Ave/Stony Point Rd

Average Delay (sec/veh): 212.4 Worst Case Level Of Service: F[1340.6]

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:	1	0	0	1	0	0	0	0	0	1	0	0

Volume Module:

Base Vol:	14	740	144	93	522	6	0	12	17	93	23	78
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:	14	740	144	93	522	6	0	12	17	93	23	78
Added Vol:	0	0	59	121	0	0	0	0	0	52	0	75
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	14	740	203	214	522	6	0	12	17	145	23	153
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	15	779	214	225	549	6	0	13	18	153	24	161
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	15	779	214	225	549	6	0	13	18	153	24	161

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflct Vol:	556	xxxx	xxxxx	993	xxxx	xxxxx	xxxx	2025	553	1934	1922	886
Potent Cap.:	1025	xxxx	xxxxx	705	xxxx	xxxxx	xxxx	58	537	50	68	347
Move Cap.:	1025	xxxx	xxxxx	705	xxxx	xxxxx	xxxx	39	537	28	45	347
Volume/Cap:	0.01	xxxx	xxxx	0.32	xxxx	xxxx	xxxx	0.32	0.03	5.52	0.53	0.46

Level Of Service Module:

2Way95thQ:	0.0	xxxx	xxxxx	1.4	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	2.4			
Control Del:	8.6	xxxx	xxxxx	12.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	24.1			
LOS by Move:	A	*	*	B	*	*	*	*	*	*	*	C			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	86	29	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	1.4	21.5	xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	68.5	2540	xxxx	xxxxx			
Shared LOS:	*	*	*	*	*	*	*	*	F	F	*	*			
ApproachDel:	xxxxxx			xxxxxx				68.5				1340.6			
ApproachLOS:	*			*				F				F			

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Wilfred Ave/Primrose Ave

Average Delay (sec/veh): 1.5 Worst Case Level Of Service: C[16.1]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 1! 0 0 0 0 1! 0 0 0 0 1! 0 0

Volume Module:

Base Vol: 10 10 10 9 9 10 25 204 20 8 175 10
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: 10 10 10 9 9 10 25 204 20 8 175 10
Added Vol: 0 0 0 0 0 0 0 180 0 0 127 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 10 10 10 9 9 10 25 384 20 8 302 10
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 11 11 11 9 9 11 26 404 21 8 318 11
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 11 11 11 9 9 11 26 404 21 8 318 11

Critical Gap Module:

Critical Gp: 7.1 6.5 6.2 7.1 6.5 6.2 4.1 xxxx xxxxx 4.1 xxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 3.5 4.0 3.3 2.2 xxxx xxxxx 2.2 xxxx xxxxx

Capacity Module:

Cnflct Vol: 817 813 415 818 818 323 328 xxxx xxxxx 425 xxxx xxxxx
Potent Cap.: 297 315 642 297 313 722 1242 xxxx xxxxx 1145 xxxx xxxxx
Move Cap.: 280 306 642 278 304 722 1242 xxxx xxxxx 1145 xxxx xxxxx
Volume/Cap: 0.04 0.03 0.02 0.03 0.03 0.01 0.02 xxxx xxxx 0.01 xxxx xxxx

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx 0.1 xxxx xxxxx 0.0 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx 8.0 xxxx xxxxx 8.2 xxxx xxxxx
LOS by Move: * * * * * A * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx 357 xxxxx xxxx 369 xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
SharedQueue:xxxxx 0.3 xxxxx xxxxx 0.3 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 16.1 xxxxx xxxxx 15.6 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS: * C * * C * * * * * * * *
ApproachDel: 16.1 15.6 xxxxxxx xxxxxxx
ApproachLOS: C C * *

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 Wilfred Ave/Whistler Ave

Average Delay (sec/veh): 1.4 Worst Case Level Of Service: C[15.7]

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

Volume Module:

Base Vol:	10	10	10	10	10	10	11	201	11	11	175	25
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:	10	10	10	10	10	10	11	201	11	11	175	25
Added Vol:	0	0	0	0	0	0	0	180	0	0	127	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	10	10	10	10	10	11	381	11	11	302	25
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	11	11	11	11	11	12	401	12	12	318	26
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	11	11	11	11	11	11	12	401	12	12	318	26
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	795	797	407	795	790	331	344	xxxx	xxxxx	413	xxxx	xxxxx
Potent Cap.:	308	322	649	308	325	715	1226	xxxx	xxxxx	1157	xxxx	xxxxx
Move Cap.:	291	315	649	291	318	715	1226	xxxx	xxxxx	1157	xxxx	xxxxx
Volume/Cap:	0.04	0.03	0.02	0.04	0.03	0.01	0.01	xxxx	xxxx	0.01	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.0	xxxx	xxxxx	8.1	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	368	xxxxx	xxxx	376	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	0.3	xxxxx	xxxxx	0.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	15.7	xxxxx	xxxxx	15.4	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	C	*	*	C	*	*	*	*	*	*	*			
ApproachDel:	15.7			15.4			xxxxxxx			xxxxxxx					
ApproachLOS:	C			C			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Langner Ave/Wilfred Ave

Average Delay (sec/veh): 30.8 Worst Case Level Of Service: F[110.8]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 1! 0 0 0 0 1 0 1 0 1

Volume Module:

Base Vol: 8 8 8 23 10 17 44 166 11 9 186 32
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: 8 8 8 23 10 17 44 166 11 9 186 32
Added Vol: 108 11 150 0 0 0 0 30 149 186 19 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 116 19 158 23 10 17 44 196 160 195 205 32
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 122 20 166 24 11 18 46 206 168 205 216 34
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 122 20 166 24 11 18 46 206 168 205 216 34

Critical Gap Module:

Critical Gp: 7.1 6.5 6.2 7.1 6.5 6.2 4.1 xxxx xxxxx 4.1 xxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 3.5 4.0 3.3 2.2 xxxx xxxxx 2.2 xxxx xxxxx

Capacity Module:

Cnflict Vol: 1041 1043 291 1103 1094 216 249 xxxx xxxxx 375 xxxx xxxxx
Potent Cap.: 210 231 753 191 216 829 1328 xxxx xxxxx 1195 xxxx xxxxx
Move Cap.: 166 185 753 115 172 829 1328 xxxx xxxxx 1195 xxxx xxxxx
Volume/Cap: 0.74 0.11 0.22 0.21 0.06 0.02 0.03 xxxx xxxx 0.17 xxxx xxxx

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx 0.1 xxxx xxxxx 0.6 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx 7.8 xxxx xxxxx 8.6 xxxx xxxxx
LOS by Move: * * * * * A * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx 289 xxxxx xxxx 180 xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
SharedQueue:xxxxx 12.0 xxxxx xxxxx 1.2 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 111 xxxxx xxxxx 33.1 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS: * F * * D * * * * *
ApproachDel: 110.8 33.1 xxxxxxx xxxxxxx
ApproachLOS: F D * *

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #5 Wilfred Ave/Labath Ave

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

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 1! 0 0 1 0 1 1 0 1 0 1 1 0

Volume Module:

Base Vol: 36 9 252 65 11 4 20 138 39 112 187 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: 36 9 252 65 11 4 20 138 39 112 187 75
Added Vol: 19 22 443 0 0 0 0 150 30 541 186 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 55 31 695 65 11 4 20 288 69 653 373 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 58 33 732 68 12 4 21 303 73 687 393 79
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 58 33 732 68 12 4 21 303 73 687 393 79

Critical Gap Module:

Critical Gp: 7.5 6.5 6.9 7.5 6.5 6.9 4.1 xxxx xxxxx 4.1 xxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 3.5 4.0 3.3 2.2 xxxx xxxxx 2.2 xxxx xxxxx

Capacity Module:

Cnflict Vol: 1958 2228 188 2017 2225 236 472 xxxx xxxxx 376 xxxx xxxxx
Potent Cap.: 39 44 828 35 44 772 1101 xxxx xxxxx 1194 xxxx xxxxx
Move Cap.: 11 18 828 0 18 772 1101 xxxx xxxxx 1194 xxxx xxxxx
Volume/Cap: 5.27 1.80 0.88 xxxx 0.64 0.01 0.02 xxxx xxxx 0.58 xxxx xxxx

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx 0.1 xxxx xxxxx 3.8 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx 8.3 xxxx xxxxx 12.0 xxxx xxxxx
LOS by Move: * * * * * A * * B * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx 103 xxxxx xxxx 0 xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
SharedQueue:xxxxx 93.2 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 3208 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS: * F * * * * * * * * * *
ApproachDel: 3208.1 xxxxxx xxxxxx xxxxxx
ApproachLOS: F F * *

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #6 Dowell Ave/Wilfred Ave

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

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

Volume Module:

Base Vol:	98	67	352	76	15	46	23	250	182	327	229	98
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:	98	67	352	76	15	46	23	250	182	327	229	98
Added Vol:	0	0	0	0	0	0	0	593	0	0	727	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	98	67	352	76	15	46	23	843	182	327	956	98
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	103	71	371	80	16	48	24	887	192	344	1006	103
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	103	71	371	80	16	48	24	887	192	344	1006	103
Critical Gap Module:												
Critical Gp:	7.5	6.5	6.9	7.5	6.5	6.9	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	2231	2829	539	2274	2874	555	1109	xxxx	xxxxx	1079	xxxx	xxxxx
Potent Cap.:	24	18	492	22	17	481	637	xxxx	xxxxx	654	xxxx	xxxxx
Move Cap.:	0	8	492	0	8	481	637	xxxx	xxxxx	654	xxxx	xxxxx
Volume/Cap:	xxxx	8.66	0.75	xxxx	2.07	0.10	0.04	xxxx	xxxx	0.53	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	3.1	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	10.9	xxxx	xxxxx	16.5	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	B	*	*	C	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	0	xxxxx	xxxx	0	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*			
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx					
ApproachLOS:	F			F			*			*					

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 Wilfred Ave/Redwood Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 1.675
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 268.8
Optimal Cycle: 180 Level Of Service: F

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected, Split Phase), Rights (Include), Min. Green, and Lanes.

Volume Module:

Table with 13 columns representing different traffic volumes and adjustment factors like Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module:

Table with 13 columns for saturation flow metrics: Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with 13 columns for capacity analysis metrics: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2k95thQ.

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

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

Intersection #9 Wilfred Ave/101 SB Ramp

Cycle (sec): 145 Critical Vol./Cap.(X): 1.160
 Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 84.0
 Optimal Cycle: 180 Level Of Service: F

Street Name: US-101 SB Ramp Wilfred Avenue
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Permitted			Protected			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	1	0	1	0	0	1	2	0	2

Volume Module:

Base Vol:	0	0	0	424	339	551	0	1072	285	85	626	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:	0	0	0	424	339	551	0	1072	285	85	626	0
Added Vol:	0	0	0	0	0	218	0	204	378	0	497	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	424	339	769	0	1276	663	85	1123	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	446	357	809	0	1343	698	89	1182	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	446	357	809	0	1343	698	89	1182	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	446	357	809	0	1343	698	89	1182	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.83	0.88	0.88	1.00	0.93	0.93	0.93	0.98	1.00
Lanes:	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.32	0.68	2.00	2.00	0.00
Final Sat.:	0	0	0	1583	1668	1668	0	2326	1208	3538	3724	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.28	0.21	0.49	0.00	0.58	0.58	0.03	0.32	0.00
Crit Moves:						****		****		****		
Green/Cycle:	0.00	0.00	0.00	0.42	0.42	0.42	0.00	0.50	0.50	0.02	0.52	0.00
Volume/Cap:	0.00	0.00	0.00	0.67	0.51	1.16	0.00	1.16	1.16	1.16	0.61	0.00
Uniform Del:	0.0	0.0	0.0	34.2	31.2	42.2	0.0	36.4	36.4	70.9	24.5	0.0
IncrcmntDel:	0.0	0.0	0.0	2.8	0.2	83.2	0.0	78.8	78.8	152.1	0.6	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	0.0	0.0	0.0	36.9	31.4	125.4	0.0	115	115.2	223.1	25.1	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	36.9	31.4	125.4	0.0	115	115.2	223.1	25.1	0.0
LOS by Move:	A	A	A	D	C	F	A	F	F	F	C	A
HCM2k95thQ:	0	0	0	29	21	79	0	97	97	9	31	0

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

 Intersection #10 Golf Course Dr/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 1.280
 Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 118.8
 Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	0	0	0	1	1	0	1

Volume Module:

Base Vol:	303	18	571	9	9	9	0	808	688	178	399	17
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:	303	18	571	9	9	9	0	808	688	178	399	17
Added Vol:	485	0	0	0	0	0	0	11	194	0	12	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	788	18	571	9	9	9	0	819	882	178	411	17
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	829	19	601	9	9	9	0	862	928	187	433	18
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	829	19	601	9	9	9	0	862	928	187	433	18
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	829	19	601	9	9	9	0	862	928	187	433	18

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.84	0.84	0.93	0.91	0.91	1.00	0.90	0.90	0.93	0.97	0.97
Lanes:	1.00	0.06	1.94	1.00	0.50	0.50	0.00	1.00	1.00	1.00	1.92	0.08
Final Sat.:	1769	97	3087	1769	861	861	0	1717	1717	1769	3555	147

Capacity Analysis Module:

Vol/Sat:	0.47	0.19	0.19	0.01	0.01	0.01	0.00	0.50	0.54	0.11	0.12	0.12
Crit Moves:	****			****			****			****		
Green/Cycle:	0.37	0.36	0.36	0.01	0.01	0.01	0.00	0.42	0.42	0.08	0.51	0.51
Volume/Cap:	1.28	0.53	0.53	0.53	1.28	1.28	0.00	1.19	1.28	1.28	0.24	0.24
Uniform Del:	31.7	25.1	25.1	49.3	49.6	49.6	0.0	28.9	28.9	45.9	13.9	13.9
IncrcmntDel:	137.7	0.5	0.5	28.1	335	335.2	0.0	91.9	131.8	168.2	0.1	0.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	169.4	25.5	25.5	77.3	385	384.8	0.0	121	160.6	214.1	14.0	14.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	169.4	25.5	25.5	77.3	385	384.8	0.0	121	160.6	214.1	14.0	14.0
LOS by Move:	F	C	C	E	F	F	A	F	F	F	B	B
HCM2k95thQ:	76	15	15	2	5	5	0	71	84	24	8	8

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

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

 Intersection #11 Roberts Lake Dr/Golf Course Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.465
 Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 11.8
 Optimal Cycle: 26 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Protected			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	1	0	0	1	0	2	0	0	1

Volume Module:

Base Vol:	0	0	0	137	0	91	180	1207	0	0	758	57
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	137	0	91	180	1207	0	0	758	57
Added Vol:	0	0	0	0	0	0	0	11	0	0	12	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	137	0	91	180	1218	0	0	770	57
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	144	0	96	189	1282	0	0	811	60
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	144	0	96	189	1282	0	0	811	60
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	144	0	96	189	1282	0	0	811	60

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.93	1.00	0.83	0.93	0.93	1.00	1.00	0.92	0.92
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	2.00	0.00	0.00	1.86	0.14
Final Sat.:	0	0	0	1769	0	1583	1769	3538	0	0	3261	241

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.08	0.00	0.06	0.11	0.36	0.00	0.00	0.25	0.25	
Crit Moves:				****				****					
Green/Cycle:	0.00	0.00	0.00	0.15	0.00	0.15	0.18	0.79	0.00	0.00	0.62	0.62	
Volume/Cap:	0.00	0.00	0.00	0.54	0.00	0.40	0.60	0.46	0.00	0.00	0.40	0.40	
Uniform Del:	0.0	0.0	0.0	39.3	0.0	38.5	37.7	3.5	0.0	0.0	9.6	9.6	
IncrcmntDel:	0.0	0.0	0.0	2.3	0.0	1.1	3.0	0.1	0.0	0.0	0.1	0.1	
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Delay Adj:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	
Delay/Veh:	0.0	0.0	0.0	41.6	0.0	39.6	40.7	3.6	0.0	0.0	9.7	9.7	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	0.0	0.0	0.0	41.6	0.0	39.6	40.7	3.6	0.0	0.0	9.7	9.7	
LOS by Move:	A	A	A	D	A	D	D	A	A	A	A	A	
HCM2k95thQ:	0	0	0	9	0	6	12	13	0	0	14	14	

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

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

Intersection #12 101 NB Ramps/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 1.201
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 103.0
Optimal Cycle: 180 Level Of Service: F

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected, Split Phase), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2k95thQ.

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #13 New Driveway/Stony Point Rd

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

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	1	0	0	1	0	0	0	0	0	1

Volume Module:

Base Vol:	0	902	0	0	632	0	0	0	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
Initial Bse:	0	902	0	0	632	0	0	0	0	0	0	0
Added Vol:	0	59	0	0	52	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	961	0	0	684	0	0	0	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
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	1012	0	0	720	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	1012	0	0	720	0	0	0	0	0	0	0

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3

Capacity Module:

Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	1012
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	293
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	293
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.00

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*			
ApproachDel:	xxxxxxx			xxxxxxx			xxxxxxx			xxxxxxx					
ApproachLOS:	*			*			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #14 New Driveway/Labath Ave

Average Delay (sec/veh): 7.6 Worst Case Level Of Service: B[10.2]

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

Volume Module:

Base Vol:	0	0	0	0	0	0	0	73	0	0	45	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:	0	0	0	0	0	0	0	73	0	0	45	0
Added Vol:	0	0	0	0	0	322	305	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	0	0	322	305	73	0	0	45	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	0	0	339	321	77	0	0	47	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	0	0	339	321	77	0	0	47	0

Critical Gap Module:

Critical Gp:	xxxxx	6.5	6.2	xxxxx	xxxx	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	4.0	3.3	xxxxx	xxxx	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	xxxx	766	77	xxxx	xxxx	47	47	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	335	990	xxxx	xxxx	1027	1573	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	252	990	xxxx	xxxx	1027	1573	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	0.00	0.00	xxxx	xxxx	0.33	0.20	xxxx	xxxx	xxxx	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	1.5	0.8	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	10.2	7.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	B	A	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	0	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	A	*	*	*	*	*
ApproachDel:	xxxxxxx			10.2			xxxxxxx			xxxxxxx		
ApproachLOS:	*			B			*			*		

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #15 Redwood Dr/Business Park Dr

Average Delay (sec/veh): 4.7 Worst Case Level Of Service: C[21.8]

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: 1 0 2 0 0 0 0 1 1 0 1 0 0 0 0 1 0 0 0 0 0

Volume Module:

Base Vol: 13 429 0 0 373 32 197 0 32 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: 13 429 0 0 373 32 197 0 32 0 0 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 13 429 0 0 373 32 197 0 32 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 14 452 0 0 393 34 207 0 34 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 14 452 0 0 393 34 207 0 34 0 0 0

Critical Gap Module:

Critical Gp: 4.1 xxxx xxxxx xxxxx xxxx xxxxx 6.8 xxxx 6.9 xxxxx xxxx xxxxx
FollowUpTim: 2.2 xxxx xxxxx xxxxx xxxx xxxxx 3.5 xxxx 3.3 xxxxx xxxx xxxxx

Capacity Module:

Cnflct Vol: 426 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 663 xxxx 213 xxxx xxxx xxxxx
Potent Cap.: 1144 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 399 xxxx 798 xxxx xxxx xxxxx
Move Cap.: 1144 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 395 xxxx 798 xxxx xxxx xxxxx
Volume/Cap: 0.01 xxxx xxxx xxxxx xxxx xxxxx 0.52 xxxx 0.04 xxxx xxxx xxxxx

Level Of Service Module:

2Way95thQ: 0.0 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 2.9 xxxx 0.1 xxxx xxxx xxxxx
Control Del: 8.2 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 23.7 xxxx 9.7 xxxxx xxxx xxxxx
LOS by Move: A * * * * * C * A * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxx xxxxx
SharedQueue:xxxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxx xxxxx
Shrd ConDel:xxxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxx xxxxx
Shared LOS: * * * * * * * * * * * * * * *
ApproachDel: xxxxxx xxxxxx 21.8 xxxxxx
ApproachLOS: * * C *

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #16 Rohnert Park Expwy/Stony Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.762

Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 27.1

Optimal Cycle: 51 Level Of Service: C

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Permitted Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 1 0 1 1 0 1 0 0 0 0 0 1 0 0 0 1

Volume Module:
Base Vol: 0 530 285 228 411 0 0 0 0 299 0 372
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: 0 530 285 228 411 0 0 0 0 299 0 372
Added Vol: 0 59 0 0 52 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 589 285 228 463 0 0 0 0 299 0 372
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 0 620 300 240 487 0 0 0 0 315 0 392
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 620 300 240 487 0 0 0 0 315 0 392
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 0 620 300 240 487 0 0 0 0 315 0 392

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 1.00 0.98 0.83 0.93 0.98 1.00 1.00 1.00 1.00 0.93 1.00 0.83
Lanes: 0.00 1.00 1.00 1.00 1.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00
Final Sat.: 0 1862 1583 1769 1862 0 0 0 0 1769 0 1583

Capacity Analysis Module:
Vol/Sat: 0.00 0.33 0.19 0.14 0.26 0.00 0.00 0.00 0.00 0.18 0.00 0.25
Crit Moves: ****
Green/Cycle: 0.00 0.44 0.44 0.18 0.62 0.00 0.00 0.00 0.00 0.32 0.00 0.32
Volume/Cap: 0.00 0.76 0.43 0.76 0.43 0.00 0.00 0.00 0.00 0.55 0.00 0.76
Uniform Del: 0.0 23.8 19.5 39.1 10.0 0.0 0.0 0.0 0.0 27.7 0.0 30.3
IncrcmntDel: 0.0 4.3 0.4 10.4 0.3 0.0 0.0 0.0 0.0 1.1 0.0 6.6
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 0.00 1.00 1.00 1.00 1.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00
Delay/Veh: 0.0 28.0 20.0 49.5 10.3 0.0 0.0 0.0 0.0 28.8 0.0 36.9
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 28.0 20.0 49.5 10.3 0.0 0.0 0.0 0.0 28.8 0.0 36.9
LOS by Move: A C B D B A A A A C A D
HCM2k95thQ: 0 30 13 17 15 0 0 0 0 16 0 22

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

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

Intersection #17 Rohnert Park Expwy/Labath Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.786
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 79.8
Optimal Cycle: 74 Level Of Service: E

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic movements and 13 rows of volume-related metrics like Base Vol, Growth Adj, etc.

Saturation Flow Module: Table with 13 columns and 4 rows showing saturation flow rates and adjustments.

Capacity Analysis Module: Table with 13 columns and 13 rows of capacity analysis metrics such as Vol/Sat, Crit Moves, Green/Cycle, etc.

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #18 Rohnert Park Expwy/Redwood Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.764
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 35.9
Optimal Cycle: 70 Level Of Service: D

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module:

Table with 13 columns representing different traffic metrics. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module:

Table with 13 columns representing saturation flow metrics. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with 13 columns representing capacity analysis metrics. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2k95thQ.

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

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

 Intersection #19 Rohnert Park Expwy/101 SB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.800
 Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 24.9
 Optimal Cycle: 77 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Protected		
Rights:	Include			Include			Include			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1	0	0	1	0	0	2	1	0	1

Volume Module:

Base Vol:	6	0	17	692	0	323	0	1158	327	78	988	234
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:	6	0	17	692	0	323	0	1158	327	78	988	234
Added Vol:	0	0	0	0	0	0	0	11	312	0	305	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	6	0	17	692	0	323	0	1169	639	78	1293	234
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00
PHF Volume:	6	0	18	728	0	340	0	1231	673	82	1361	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	6	0	18	728	0	340	0	1231	673	82	1361	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Final Vol.:	6	0	18	728	0	340	0	1231	673	82	1361	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.85	1.00	0.85	0.69	1.00	0.83	1.00	0.93	0.93	0.93	0.98	1.00
Lanes:	0.26	0.00	0.74	2.00	0.00	1.00	0.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	422	0	1197	2640	0	1583	0	3527	1763	1769	3724	1900

Capacity Analysis Module:

Vol/Sat:	0.01	0.00	0.01	0.28	0.00	0.21	0.00	0.35	0.38	0.05	0.37	0.00
Crit Moves:				****				****			****	
Green/Cycle:	0.34	0.00	0.34	0.34	0.00	0.34	0.00	0.48	0.48	0.06	0.54	0.00
Volume/Cap:	0.04	0.00	0.04	0.80	0.00	0.62	0.00	0.73	0.80	0.80	0.68	0.00
Uniform Del:	21.8	0.0	21.8	29.7	0.0	27.3	0.0	21.0	22.1	46.5	17.0	0.0
IncrcmntDel:	0.0	0.0	0.0	5.1	0.0	2.2	0.0	1.1	2.0	34.2	1.0	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	21.8	0.0	21.8	34.8	0.0	29.6	0.0	22.1	24.1	80.8	18.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	21.8	0.0	21.8	34.8	0.0	29.6	0.0	22.1	24.1	80.8	18.0	0.0
LOS by Move:	C	A	C	C	A	C	A	C	C	F	B	A
HCM2k95thQ:	1	0	1	22	0	18	0	28	33	9	28	0

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

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

 Intersection #20 Rohnert Park Expwy/101 NB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.593
 Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 23.7
 Optimal Cycle: 33 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound						
Movement:	L	T	R	L	T	R	L	T	R	L	T	R				
Control:	Protected			Protected			Permitted			Permitted						
Rights:	Include			Include			Ignore			Ignore						
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0				
Lanes:	1	0	0	1	1	1	1	0	4	0	1	0	0	3	0	1

Volume Module:

Base Vol:	321	0	376	14	0	3	19	1345	504	0	976	343
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:	321	0	376	14	0	3	19	1345	504	0	976	343
Added Vol:	293	0	0	0	0	0	0	11	0	0	12	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	614	0	376	14	0	3	19	1356	504	0	988	343
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00	0.95	0.95	0.00
PHF Volume:	646	0	396	15	0	3	20	1427	0	0	1040	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	646	0	396	15	0	3	20	1427	0	0	1040	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Final Vol.:	646	0	396	15	0	3	20	1427	0	0	1040	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	1.00	0.83	0.93	1.00	0.83	0.16	0.98	1.00	1.00	0.98	1.00
Lanes:	1.00	0.00	2.00	1.00	0.00	1.00	1.00	4.00	1.00	0.00	3.00	1.00
Final Sat.:	1769	0	3165	1769	0	1583	305	7448	1900	0	5586	1900

Capacity Analysis Module:

Vol/Sat:	0.37	0.00	0.13	0.01	0.00	0.00	0.07	0.19	0.00	0.00	0.19	0.00
Crit Moves:	****				****			****				
Green/Cycle:	0.62	0.00	0.58	0.04	0.00	0.00	0.32	0.32	0.00	0.00	0.32	0.00
Volume/Cap:	0.59	0.00	0.22	0.22	0.00	xxxx	0.20	0.59	0.00	0.00	0.58	0.00
Uniform Del:	11.6	0.0	10.2	46.6	0.0	0.0	24.5	28.3	0.0	0.0	28.1	0.0
IncrcmntDel:	0.9	0.0	0.1	1.6	0.0	0.0	1.0	0.4	0.0	0.0	0.5	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00
Delay/Veh:	12.5	0.0	10.2	48.2	0.0	0.0	25.5	28.7	0.0	0.0	28.6	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	12.5	0.0	10.2	48.2	0.0	0.0	25.5	28.7	0.0	0.0	28.6	0.0
LOS by Move:	B	A	B	D	A	A	C	C	A	A	C	A
HCM2k95thQ:	22	0	6	1	0	2	1	18	0	0	17	0

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

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

 Intersection #21 Rohnert Park Expwy/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.916
 Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 39.6
 Optimal Cycle: 117 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound										
Movement:	L	T	R	L	T	R	L	T	R	L	T	R								
Control:	Split Phase			Split Phase			Protected			Protected										
Rights:	Include			Include			Include			Include										
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0								
Lanes:	1	1	1	0	1	1	1	1	0	1	2	0	2	0	1	1	0	2	1	0

Volume Module:

Base Vol:	390	348	317	180	313	173	269	920	547	195	756	268
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:	390	348	317	180	313	173	269	920	547	195	756	268
Added Vol:	0	0	0	0	0	0	0	11	0	0	12	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	390	348	317	180	313	173	269	931	547	195	768	268
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	411	366	334	189	329	182	283	980	576	205	808	282
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	411	366	334	189	329	182	283	980	576	205	808	282
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	411	366	334	189	329	182	283	980	576	205	808	282

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.83	0.96	0.96	0.83	0.93	0.98	0.83	0.93	0.94	0.94
Lanes:	1.59	1.41	1.00	1.10	1.90	1.00	2.00	2.00	1.00	1.00	2.22	0.78
Final Sat.:	2875	2566	1583	2003	3483	1583	3538	3724	1583	1769	3979	1389

Capacity Analysis Module:

Vol/Sat:	0.14	0.14	0.21	0.09	0.09	0.12	0.08	0.26	0.36	0.12	0.20	0.20
Crit Moves:			****			****			****	****		
Green/Cycle:	0.23	0.23	0.23	0.13	0.13	0.13	0.15	0.40	0.40	0.13	0.38	0.38
Volume/Cap:	0.62	0.62	0.92	0.75	0.75	0.92	0.54	0.66	0.92	0.92	0.54	0.54
Uniform Del:	34.6	34.6	37.5	42.2	42.2	43.2	39.4	24.6	28.5	43.1	24.4	24.4
IncrcmntDel:	1.0	1.0	27.1	4.7	4.7	40.9	1.1	1.1	18.2	37.8	0.3	0.3
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	35.5	35.5	64.6	46.9	46.9	84.1	40.6	25.8	46.7	80.9	24.7	24.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	35.5	35.5	64.6	46.9	46.9	84.1	40.6	25.8	46.7	80.9	24.7	24.7
LOS by Move:	D	D	E	D	D	F	D	C	D	F	C	C
HCM2k95thQ:	15	15	25	13	13	16	9	23	35	18	17	17

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #22 Gravenstein Hwy (SR 116)/ Stoney Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 1.020
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 63.5
Optimal Cycle: 180 Level Of Service: E

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module:

Table with 13 columns representing different volume and adjustment factors. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module:

Table with 13 columns representing saturation flow and adjustment factors. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with 13 columns representing capacity analysis metrics. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2k95thQ.

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #23 Gravenstein Hwy (SR 116)/ Redwood Rd

Cycle (sec): 80 Critical Vol./Cap.(X): 0.851
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 32.3
Optimal Cycle: 82 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns for different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns for different traffic movements. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns for different traffic movements. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2k95thQ.

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

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

 Intersection #24 Gravenstein Hwy and SB 101 Ramps

Cycle (sec): 80 Critical Vol./Cap.(X): 0.621
 Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 18.0
 Optimal Cycle: 41 Level Of Service: B

Street Name: SB 101 Ramps Gravenstein Hwy
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Permitted			Protected			Permitted			Protected		
Rights:	Include			Include			Ignore			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	2	0	1	0	0	1	1	0	0

Volume Module:

Base Vol:	0	0	0	626	0	268	0	969	340	119	964	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:	0	0	0	626	0	268	0	969	340	119	964	0
Added Vol:	0	0	0	0	0	0	0	0	52	0	59	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	626	0	268	0	969	392	119	1023	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00	0.95	0.95	0.95
PHF Volume:	0	0	0	659	0	282	0	1020	0	125	1077	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	659	0	282	0	1020	0	125	1077	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Final Vol.:	0	0	0	659	0	282	0	1020	0	125	1077	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.90	1.00	0.83	1.00	0.93	1.00	0.93	0.93	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	0.00	2.00	1.00	1.00	2.00	0.00
Final Sat.:	0	0	0	3432	0	1583	0	3538	1900	1769	3538	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.19	0.00	0.18	0.00	0.29	0.00	0.07	0.30	0.00
Crit Moves:				****				****		****		
Green/Cycle:	0.00	0.00	0.00	0.31	0.00	0.31	0.00	0.46	0.00	0.11	0.58	0.00
Volume/Cap:	0.00	0.00	0.00	0.62	0.00	0.58	0.00	0.62	0.00	0.62	0.53	0.00
Uniform Del:	0.0	0.0	0.0	23.6	0.0	23.2	0.0	16.1	0.0	33.8	10.2	0.0
IncrcmntDel:	0.0	0.0	0.0	1.1	0.0	1.7	0.0	0.7	0.0	5.9	0.3	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
Delay/Veh:	0.0	0.0	0.0	24.8	0.0	24.9	0.0	16.9	0.0	39.6	10.5	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	24.8	0.0	24.9	0.0	16.9	0.0	39.6	10.5	0.0
LOS by Move:	A	A	A	C	A	C	A	B	A	D	B	A
HCM2k95thQ:	0	0	0	15	0	13	0	19	0	8	16	0

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

 Intersection #25 Gravenstein Hwy and NB 101 Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.810
 Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 20.9
 Optimal Cycle: 71 Level Of Service: C

Street Name: NB 101 Ramps Gravenstein Hwy
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R
 -----|-----|-----|-----|

Control: Protected Permitted Permitted Permitted
 Rights: Include Include Include Include
 Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
 Lanes: 1 0 0 0 1 0 0 0 0 0 0 2 0 0 0 0 2 0 0
 -----|-----|-----|-----|

Volume Module:
 Base Vol: 383 0 255 0 0 0 0 0 1594 0 0 700 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: 383 0 255 0 0 0 0 0 1594 0 0 700 0
 Added Vol: 59 0 0 0 0 0 0 0 0 0 0 0 0
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
 Initial Fut: 442 0 255 0 0 0 0 0 1594 0 0 700 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
 PHF Volume: 465 0 268 0 0 0 0 0 1678 0 0 737 0
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
 Reduced Vol: 465 0 268 0 0 0 0 0 1678 0 0 737 0
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Final Vol.: 465 0 268 0 0 0 0 0 1678 0 0 737 0
 -----|-----|-----|-----|

Saturation Flow Module:
 Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
 Adjustmet: 0.93 1.00 0.83 1.00 1.00 1.00 1.00 0.93 1.00 1.00 0.93 1.00
 Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 2.00 0.00 0.00 2.00 0.00
 Final Sat.: 1769 0 1583 0 0 0 0 0 3538 0 0 3538 0
 -----|-----|-----|-----|

Capacity Analysis Module:
 Vol/Sat: 0.26 0.00 0.17 0.00 0.00 0.00 0.00 0.47 0.00 0.00 0.21 0.00
 Crit Moves: **** *
 Green/Cycle: 0.32 0.00 0.32 0.00 0.00 0.00 0.00 0.59 0.00 0.00 0.59 0.00
 Volume/Cap: 0.81 0.00 0.52 0.00 0.00 0.00 0.00 0.81 0.00 0.00 0.36 0.00
 Uniform Del: 30.9 0.0 27.5 0.0 0.0 0.0 0.0 16.3 0.0 0.0 10.9 0.0
 IncremntDel: 8.5 0.0 1.0 0.0 0.0 0.0 0.0 2.5 0.0 0.0 0.1 0.0
 InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 Delay Adj: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 1.00 0.00 0.00 1.00 0.00
 Delay/Veh: 39.4 0.0 28.4 0.0 0.0 0.0 0.0 18.9 0.0 0.0 11.0 0.0
 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 AdjDel/Veh: 39.4 0.0 28.4 0.0 0.0 0.0 0.0 18.9 0.0 0.0 11.0 0.0
 LOS by Move: D A C A A A A B A A B A
 HCM2k95thQ: 27 0 14 0 0 0 0 38 0 0 12 0

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #26 Millbrae Ave/Stony Point Rd

Average Delay (sec/veh): 6.8 Worst Case Level Of Service: F[113.3]

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: 1 0 2 0 1 1 0 1 1 0 0 0 1! 0 0 0 1 0 0 1

Volume Module:

Base Vol: 8 728 24 119 593 7 11 4 9 18 24 200
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: 8 728 24 119 593 7 11 4 9 18 24 200
Added Vol: 0 75 0 0 121 0 0 0 0 0 0 0 32
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 8 803 24 119 714 7 11 4 9 18 24 232
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 8 845 25 125 752 7 12 4 9 19 25 244
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 8 845 25 125 752 7 12 4 9 19 25 244

Critical Gap Module:

Critical Gp: 4.1 xxxx xxxxx 4.1 xxxx xxxxx 7.5 6.5 6.9 7.5 6.5 6.9
FollowUpTim: 2.2 xxxx xxxxx 2.2 xxxx xxxxx 3.5 4.0 3.3 3.5 4.0 3.3

Capacity Module:

Cnflict Vol: 759 xxxx xxxxx 871 xxxx xxxxx 1458 1893 379 1491 1872 423
Potent Cap.: 862 xxxx xxxxx 783 xxxx xxxxx 92 71 624 87 73 585
Move Cap.: 862 xxxx xxxxx 783 xxxx xxxxx 32 59 624 71 61 585
Volume/Cap: 0.01 xxxx xxxxx 0.16 xxxx xxxxx 0.36 0.07 0.02 0.27 0.42 0.42

Level Of Service Module:

2Way95thQ: 0.0 xxxx xxxxx 0.6 xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx 2.0
Control Del: 9.2 xxxx xxxxx 10.5 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx 15.5
LOS by Move: A * * B * * * * * C
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx 56 xxxxx 65 xxxx xxxxx
SharedQueue:xxxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx 1.7 xxxxx 3.0 xxxx xxxxx
Shrd ConDel:xxxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx 113 xxxxx 138.6 xxxx xxxxx
Shared LOS: * * * * * * * F * F * *
ApproachDel: xxxxxx xxxxxx 113.3 34.4
ApproachLOS: * * F D

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #27 Millbrae Ave/Primrose Ave

Average Delay (sec/veh): 0.3 Worst Case Level Of Service: B[12.1]

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

Volume Module:

Base Vol:	2	0	2	1	1	0	1	142	4	7	239	2
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:	2	0	2	1	1	0	1	142	4	7	239	2
Added Vol:	0	0	0	0	0	0	0	0	0	0	32	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	2	0	2	1	1	0	1	142	4	7	271	2
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	2	0	2	1	1	0	1	149	4	7	285	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	2	0	2	1	1	0	1	149	4	7	285	2
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	xxxxx	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	xxxxx	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	455	456	152	456	457	xxxxxx	287	xxxx	xxxxxx	154	xxxx	xxxxxx
Potent Cap.:	519	504	900	518	503	xxxxxx	1286	xxxx	xxxxxx	1439	xxxx	xxxxxx
Move Cap.:	515	501	900	515	500	xxxxxx	1286	xxxx	xxxxxx	1439	xxxx	xxxxxx
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	xxxx	0.00	xxxx	xxxx	0.01	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	0.0	xxxx	xxxxxx	0.0	xxxx	xxxxxx			
Control Del:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	7.8	xxxx	xxxxxx	7.5	xxxx	xxxxxx			
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	655	xxxxxx	507	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx			
SharedQueue:	xxxxxx	0.0	xxxxxx	0.0	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx			
Shrd ConDel:	xxxxxx	10.5	xxxxxx	12.1	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx			
Shared LOS:	*	B	*	B	*	*	*	*	*	*	*	*			
ApproachDel:	10.5			12.1			xxxxxxx			xxxxxxx					
ApproachLOS:	B			B			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #28 Millbrae Ave/Whister Ave

Average Delay (sec/veh): 0.5 Worst Case Level Of Service: B[12.3]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 1 0 0 0 0 0 1! 0 0 0 0 1! 0 0 0 0 1! 0 0

Volume Module:

Base Vol: 1 10 0 3 1 1 2 129 2 4 253 8
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 1 10 0 3 1 1 2 129 2 4 253 8
Added Vol: 0 0 0 0 0 0 0 0 0 0 32 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 1 10 0 3 1 1 2 129 2 4 285 8
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 1 11 0 3 1 1 2 136 2 4 300 8
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 1 11 0 3 1 1 2 136 2 4 300 8

Critical Gap Module:

Critical Gp: 7.1 6.5 xxxxx 7.1 6.5 6.2 4.1 xxxxx xxxxx 4.1 xxxxx xxxxx
FollowUpTim: 3.5 4.0 xxxxx 3.5 4.0 3.3 2.2 xxxxx xxxxx 2.2 xxxxx xxxxx

Capacity Module:

Cnflict Vol: 455 458 xxxxx 459 455 304 308 xxxxx xxxxx 138 xxxxx xxxxx
Potent Cap.: 519 502 xxxxx 516 504 740 1264 xxxxx xxxxx 1458 xxxxx xxxxx
Move Cap.: 516 500 xxxxx 506 502 740 1264 xxxxx xxxxx 1458 xxxxx xxxxx
Volume/Cap: 0.00 0.02 xxxxx 0.01 0.00 0.00 0.00 xxxxx xxxxx 0.00 xxxxx xxxxx

Level Of Service Module:

2Way95thQ: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx 0.0 xxxxx xxxxx
Control Del: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 7.9 xxxxx xxxxx 7.5 xxxxx xxxxx
LOS by Move: * * * * * A * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: 501 xxxxx xxxxx xxxxx 539 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue: 0.1 xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd ConDel: 12.3 xxxxx xxxxx xxxxx 11.7 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: B * * * B * * * * *
ApproachDel: 12.3 11.7 xxxxxxx xxxxxxx
ApproachLOS: B B * *

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #29 Millbrae Ave/Langner Ave

Average Delay (sec/veh): 0.6 Worst Case Level Of Service: B[11.3]

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

Volume Module:

Base Vol:	6	0	9	0	0	0	0	153	10	4	321	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:	6	0	9	0	0	0	0	153	10	4	321	0
Added Vol:	11	0	0	0	0	0	0	0	0	0	22	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	17	0	9	0	0	0	0	153	10	4	343	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	18	0	9	0	0	0	0	161	11	4	361	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	18	0	9	0	0	0	0	161	11	4	361	0

Critical Gap Module:

Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	536	536	166	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	172	xxxx	xxxxx
Potent Cap.:	509	454	883	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1418	xxxx	xxxxx
Move Cap.:	508	453	883	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1418	xxxx	xxxxx
Volume/Cap:	0.04	0.00	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	596	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	0.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx			
Shrd ConDel:	xxxxx	11.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx			
Shared LOS:	*	B	*	*	*	*	*	*	*	A	*	*			
ApproachDel:	11.3			xxxxxxx			xxxxxxx			xxxxxxx					
ApproachLOS:	B			*			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #30 Millbrae Ave/Labath Ave

Average Delay (sec/veh): 3.3 Worst Case Level Of Service: B[12.8]

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

Volume Module:

Base Vol:	85	0	29	0	0	0	0	150	16	17	244	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:	85	0	29	0	0	0	0	150	16	17	244	0
Added Vol:	22	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	107	0	29	0	0	0	0	150	16	17	244	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	113	0	31	0	0	0	0	158	17	18	257	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	113	0	31	0	0	0	0	158	17	18	257	0

Critical Gap Module:

Critical Gp:	6.4	6.5	6.2	7.1	6.5	6.2	xxxxx	xxxxx	xxxxx	4.1	xxxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	xxxxx	xxxxx	xxxxx	2.2	xxxxx	xxxxx

Capacity Module:

Cnflict Vol:	459	459	166	474	467	257	xxxxx	xxxxx	xxxxx	175	xxxxx	xxxxx
Potent Cap.:	564	502	883	504	496	787	xxxxx	xxxxx	xxxxx	1414	xxxxx	xxxxx
Move Cap.:	558	495	883	482	490	787	xxxxx	xxxxx	xxxxx	1414	xxxxx	xxxxx
Volume/Cap:	0.20	0.00	0.03	0.00	0.00	0.00	xxxxx	xxxxx	xxxxx	0.01	xxxxx	xxxxx

Level Of Service Module:

2Way95thQ:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx			
Control Del:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	7.6	xxxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxxx	606	xxxxx	xxxxx	0	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
SharedQueue:	xxxxx	0.9	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shrd ConDel:	xxxxx	12.8	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	7.6	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shared LOS:	*	B	*	*	*	*	*	*	*	A	*	*	*	*	*
ApproachDel:	12.8			xxxxxxx			xxxxxxx			xxxxxxx					
ApproachLOS:	B			*			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #31 Millbrae Ave/Dowdell Ave

Average Delay (sec/veh): 0.8 Worst Case Level Of Service: B[11.3]

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

Volume Module:

Base Vol:	32	0	0	0	0	0	0	137	32	0	235	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:	32	0	0	0	0	0	0	137	32	0	235	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	32	0	0	0	0	0	0	137	32	0	235	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	34	0	0	0	0	0	0	144	34	0	247	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	34	0	0	0	0	0	0	144	34	0	247	0

Critical Gap Module:

Critical Gp:	6.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	408	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Potent Cap.:	603	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Move Cap.:	603	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Volume/Cap:	0.06	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx

Level Of Service Module:

2Way95thQ:	0.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	
Control Del:	11.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	
LOS by Move:	B	*	*	*	*	*	*	*	*	*	*	*	
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR
Shared Cap.:	xxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*	
ApproachDel:	11.3			xxxxxxx			xxxxxxx			xxxxxxx			
ApproachLOS:	B			*			*			*			

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

**NEAR-TERM 2008 + ALTERNATIVE B
TRAFFIC CONDITIONS
(TRAFFIX)**

 Impact Analysis Report
 Level Of Service

Intersection	Base		Future		Change in
	Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C	
# 1 Wilfred Ave/Stony Point Rd	F	238.0 0.000	F	OVRFL 0.000	+2611.377 D/
# 2 Wilfred Ave/Primrose Ave	B	11.3 0.000	F	OVRFL 0.000	+ 1.8E+0308
# 3 Wilfred Ave/Whistler Ave	B	11.3 0.000	F	84.4 0.000	+73.076 D/V
# 4 Langner Ave/Wilfred Ave	B	11.3 0.000	F	82.9 0.000	+71.584 D/V
# 5 Wilfred Ave/Labath Ave	E	48.3 0.000	F	OVRFL 0.000	+15026.846 D
# 6 Dowell Ave/Wilfred Ave	F	333.5 0.000	F	OVRFL 0.000	+ 1.8E+0308
# 7 Wilfred Ave/Redwood Dr	D	37.1 0.708	F	154.4 1.335	+117.367 D/V
# 8 Redwood Dr/Commerce Blvd	C	26.6 0.290	C	26.6 0.294	+ 0.001 D/V
# 9 Wilfred Ave/101 SB Ramp	C	30.6 0.630	E	58.4 1.045	+27.790 D/V
# 10 Golf Course Dr/Commerce Blvd	D	44.0 0.925	F	90.0 1.202	+46.003 D/V
# 11 Roberts Lake Dr/Golf Course Dr	B	15.6 0.512	B	15.5 0.516	-0.049 D/V
# 12 101 NB Ramps/Commerce Blvd	C	34.9 0.877	F	86.5 1.148	+51.573 D/V
# 13 New Driveway/Stony Point Rd	A	0.0 0.000	D	27.3 0.000	+27.255 D/V
# 14 New Driveway/Labath Ave		0.0 0.000		0.0 0.000	+ 0.000 D/V
# 15 Redwood Dr/Business Park Dr	D	26.5 0.000	D	26.5 0.000	+ 0.000 D/V
# 16 Rohnert Park Expwy/Stony Point	C	24.0 0.665	E	55.6 1.032	+31.630 D/V
# 17 Rohnert Park Expwy/Labath Ave	C	29.8 0.576	C	34.4 0.596	+ 4.662 D/V
# 18 Rohnert Park Expwy/Redwood Dr	D	35.6 0.711	D	43.6 0.767	+ 8.015 D/V
# 19 Rohnert Park Expwy/101 SB Ramp	C	21.1 0.716	C	21.6 0.790	+ 0.525 D/V
# 20 Rohnert Park Expwy/101 NB Ramp	B	15.8 0.437	C	23.9 0.661	+ 8.165 D/V
# 21 Rohnert Park Expwy/Commerce Bl	C	33.9 0.815	C	33.9 0.815	-0.003 D/V
# 22 Gravenstein Hwy (SR 116)/ Ston	D	37.1 0.766	D	39.5 0.787	+ 2.367 D/V
# 23 Gravenstein Hwy (SR 116)/ Redw	C	28.6 0.734	C	28.6 0.775	+ 0.061 D/V
# 24 Gravenstein Hwy and SB 101 Ram	B	17.6 0.562	B	18.4 0.641	+ 0.848 D/V
# 25 Gravenstein Hwy and NB 101 Ram	B	17.3 0.707	C	21.1 0.784	+ 3.760 D/V

Intersection		Base		Future		Change in	
		Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C		
# 26 Millbrae Ave/Stony Point Rd	E	38.2	0.000	F 57.8	0.000	+19.599	D/V
# 27 Millbrae Ave/Primrose Ave	B	11.4	0.000	B 11.4	0.000	+ 0.000	D/V
# 28 Millbrae Ave/Whistler Ave	B	11.5	0.000	B 11.5	0.000	+ 0.000	D/V
# 29 Millbrae Ave/Langner Ave	A	9.9	0.000	A 9.9	0.000	+ 0.000	D/V
# 30 Millbrae Ave/Labath Ave	B	11.2	0.000	B 11.2	0.000	+ 0.000	D/V
# 31 Millbrae Ave/Dowdell Ave	B	11.3	0.000	B 11.3	0.000	+ 0.000	D/V

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1 Wilfred Ave/Stony Point Rd

Average Delay (sec/veh): 545.6 Worst Case Level Of Service: F[2849.4]

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:	1	0	0	1	0	0	0	0	0	1	0	0

Volume Module:

Base Vol:	12	758	62	75	514	3	0	8	14	106	13	97
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	12	758	62	75	514	3	0	8	14	106	13	97
Added Vol:	0	86	0	121	0	0	0	0	0	174	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	12	844	62	196	514	3	0	8	14	280	13	97
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	13	888	65	206	541	3	0	8	15	295	14	102
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	13	888	65	206	541	3	0	8	15	295	14	102

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflict Vol:	544	xxxx	xxxxx	954	xxxx	xxxxx	xxxx	1934	543	1913	1903	921
Potent Cap.:	1035	xxxx	xxxxx	729	xxxx	xxxxx	xxxx	67	544	52	70	331
Move Cap.:	1035	xxxx	xxxxx	729	xxxx	xxxxx	xxxx	47	544	34	49	331
Volume/Cap:	0.01	xxxx	xxxx	0.28	xxxx	xxxx	xxxx	0.18	0.03	8.64	0.28	0.31

Level Of Service Module:

2Way95thQ:	0.0	xxxx	xxxxx	1.2	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	1.3			
Control Del:	8.5	xxxx	xxxxx	11.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	20.7			
LOS by Move:	A	*	*	B	*	*	*	*	*	*	*	C			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	113	35	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	0.7	37.3	xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	45.0	3786	xxxx	xxxxx			
Shared LOS:	*	*	*	*	*	*	*	*	E	F	*	*			
ApproachDel:	xxxxxx			xxxxxx				45.0				2849.4			
ApproachLOS:	*			*				E				F			

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Wilfred Ave/Primrose Ave

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

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

Volume Module:

Base Vol:	10	10	10	10	10	10	10	131	10	10	201	10
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:	10	10	10	10	10	10	10	131	10	10	201	10
Added Vol:	174	22	794	0	0	0	0	0	121	610	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	184	32	804	10	10	10	10	131	131	620	201	10
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	194	34	846	11	11	11	11	138	138	653	212	11
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	194	34	846	11	11	11	11	138	138	653	212	11
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	1761	1755	207	2190	1819	217	222	xxxx	xxxxx	276	xxxx	xxxxx
Potent Cap.:	67	86	839	33	79	828	1359	xxxx	xxxxx	1299	xxxx	xxxxx
Move Cap.:	13	18	839	0	17	828	1359	xxxx	xxxxx	1299	xxxx	xxxxx
Volume/Cap:	15.46	1.86	1.01	xxxx	0.64	0.01	0.01	xxxx	xxxx	0.50	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	2.9	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.7	xxxx	xxxxx	10.5	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	A	*	*	B	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	59	xxxxx	xxxx	0	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	130	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	7931	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	F	*	*	*	*	*	*	*	*	*	*			
ApproachDel:	7930.5			xxxxxx			xxxxxx			xxxxxx					
ApproachLOS:	F			F			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 Wilfred Ave/Whistler Ave

Average Delay (sec/veh): 2.8 Worst Case Level Of Service: F[84.4]

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

Volume Module:

Base Vol:	10	10	10	10	10	10	10	131	10	10	200	20
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:	10	10	10	10	10	10	10	131	10	10	200	20
Added Vol:	0	0	0	0	0	0	0	794	0	0	610	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	10	10	10	10	10	10	925	10	10	810	20
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	11	11	11	11	11	11	974	11	11	853	21
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	11	11	11	11	11	11	11	974	11	11	853	21

Critical Gap Module:

Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	1895	1895	979	1895	1889	863	874	xxxx	xxxxx	984	xxxx	xxxxx
Potent Cap.:	54	71	306	54	71	357	781	xxxx	xxxxx	710	xxxx	xxxxx
Move Cap.:	45	69	306	45	69	357	781	xxxx	xxxxx	710	xxxx	xxxxx
Volume/Cap:	0.23	0.15	0.03	0.24	0.15	0.03	0.01	xxxx	xxxx	0.01	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.7	xxxx	xxxxx	10.1	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	A	*	*	B	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	75	xxxxx	xxxx	76	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	1.7	xxxxx	xxxxx	1.7	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	84.4	xxxxx	xxxxx	83.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	F	*	*	F	*	*	*	*	*	*	*			
ApproachDel:	84.4			83.1			xxxxxxx			xxxxxxx					
ApproachLOS:	F			F			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Langner Ave/Wilfred Ave

Average Delay (sec/veh): 2.8 Worst Case Level Of Service: F[82.9]

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

Volume Module:

Base Vol:	10	10	10	10	10	10	10	130	10	10	200	10
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:	10	10	10	10	10	10	10	130	10	10	200	10
Added Vol:	0	0	0	0	0	0	0	794	0	0	610	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	10	10	10	10	10	10	924	10	10	810	10
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	11	11	11	11	11	11	973	11	11	853	11
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	11	11	11	11	11	11	11	973	11	11	853	11

Critical Gap Module:

Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	1888	1883	978	1888	1883	858	863	xxxx	xxxxx	983	xxxx	xxxxx
Potent Cap.:	54	72	307	54	72	360	788	xxxx	xxxxx	710	xxxx	xxxxx
Move Cap.:	46	70	307	45	70	360	788	xxxx	xxxxx	710	xxxx	xxxxx
Volume/Cap:	0.23	0.15	0.03	0.23	0.15	0.03	0.01	xxxx	xxxx	0.01	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.6	xxxx	xxxxx	10.1	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	A	*	*	B	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	76	xxxxx	xxxx	77	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	1.6	xxxxx	xxxxx	1.6	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	82.9	xxxxx	xxxxx	81.8	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	F	*	*	F	*	*	*	*	*	*	*			
ApproachDel:	82.9			81.8			xxxxxx			xxxxxx					
ApproachLOS:	F			F			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #5 Wilfred Ave/Labath Ave

Average Delay (sec/veh): 1089.4 Worst Case Level Of Service: F[15075.1]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 1! 0 0 0 0 1! 0 0

Volume Module:

Base Vol: 35 6 266 112 21 14 60 13 77 116 159 99
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 6 266 112 21 14 60 13 77 116 159 99
Added Vol: 0 0 0 0 0 0 0 794 0 0 610 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 35 6 266 112 21 14 60 807 77 116 769 99
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 37 6 280 118 22 15 63 849 81 122 809 104
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 37 6 280 118 22 15 63 849 81 122 809 104

Critical Gap Module:

Critical Gp: 7.1 6.5 6.2 7.1 6.5 6.2 4.1 xxxx xxxxx 4.1 xxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 3.5 4.0 3.3 2.2 xxxx xxxxx 2.2 xxxx xxxxx

Capacity Module:

Cnflct Vol: 2141 2174 890 2265 2163 862 914 xxxx xxxxx 931 xxxx xxxxx
Potent Cap.: 36 47 345 29 48 358 754 xxxx xxxxx 743 xxxx xxxxx
Move Cap.: 15 35 345 4 36 358 754 xxxx xxxxx 743 xxxx xxxxx
Volume/Cap: 2.52 0.18 0.81 30.63 0.61 0.04 0.08 xxxx xxxx 0.16 xxxx xxxx

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx 0.3 xxxx xxxxx 0.6 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx 10.2 xxxx xxxxx 10.8 xxxx xxxxx
LOS by Move: * * * * * B * * B * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx 92 xxxxx xxxx 5 xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
SharedQueue:xxxxx 32.6 xxxxx xxxxx 21.4 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 1228 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS: * F * * F * * * * * * * *
ApproachDel: 1227.8 xxxxxx xxxxxx xxxxxx
ApproachLOS: F F * *

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #6 Dowell Ave/Wilfred Ave

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

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 1! 0 0 0 0 1! 0 0

Volume Module:

Base Vol: 80 45 222 88 13 47 52 191 148 187 247 89
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: 80 45 222 88 13 47 52 191 148 187 247 89
Added Vol: 0 0 0 0 0 0 0 794 0 0 610 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 80 45 222 88 13 47 52 985 148 187 857 89
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 84 47 234 93 14 49 55 1037 156 197 902 94
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 84 47 234 93 14 49 55 1037 156 197 902 94

Critical Gap Module:

Critical Gp: 7.1 6.5 6.2 7.1 6.5 6.2 4.1 xxxx xxxxx 4.1 xxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 3.5 4.0 3.3 2.2 xxxx xxxxx 2.2 xxxx xxxxx

Capacity Module:

Cnflict Vol: 2598 2614 1115 2707 2645 949 996 xxxx xxxxx 1193 xxxx xxxxx
Potent Cap.: 17 25 255 14 24 319 703 xxxx xxxxx 592 xxxx xxxxx
Move Cap.: 0 14 255 0 14 319 703 xxxx xxxxx 592 xxxx xxxxx
Volume/Cap: xxxx 3.33 0.92 xxxx 1.01 0.16 0.08 xxxx xxxx 0.33 xxxx xxxx

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx 0.3 xxxx xxxxx 1.5 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx 10.6 xxxx xxxxx 14.1 xxxx xxxxx
LOS by Move: * * * * * B * * B * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx 0 xxxxx xxxx 0 xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS: * * * * * * * * * * * * * *
ApproachDel: xxxxxx xxxxxx xxxxxx xxxxxx
ApproachLOS: F F * *

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

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

Intersection #7 Wilfred Ave/Redwood Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 1.335
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 154.4
Optimal Cycle: 180 Level Of Service: F

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected, Split Phase), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic flows. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2k95thQ.

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

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

Intersection #8 Redwood Dr/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.294
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 26.6
Optimal Cycle: 31 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic volumes and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 13 columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

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

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

Intersection #9 Wilfred Ave/101 SB Ramp

Cycle (sec): 145 Critical Vol./Cap.(X): 1.045
 Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 58.4
 Optimal Cycle: 180 Level Of Service: E

Street Name: US-101 SB Ramp Wilfred Avenue
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Permitted			Protected			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	1	0	1	0	0	1	2	0	2

Volume Module:

Base Vol:	0	0	0	328	324	459	0	737	219	89	476	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:	0	0	0	328	324	459	0	737	219	89	476	0
Added Vol:	0	0	0	0	0	218	0	204	579	0	380	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	328	324	677	0	941	798	89	856	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	345	341	713	0	991	840	94	901	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	345	341	713	0	991	840	94	901	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	345	341	713	0	991	840	94	901	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.83	0.88	0.88	1.00	0.91	0.91	0.93	0.98	1.00
Lanes:	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.08	0.92	2.00	2.00	0.00
Final Sat.:	0	0	0	1583	1674	1674	0	1876	1591	3538	3724	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.22	0.20	0.43	0.00	0.53	0.53	0.03	0.24	0.00
Crit Moves:						****		****		****		
Green/Cycle:	0.00	0.00	0.00	0.41	0.41	0.41	0.00	0.51	0.51	0.03	0.53	0.00
Volume/Cap:	0.00	0.00	0.00	0.54	0.50	1.04	0.00	1.05	1.05	1.05	0.46	0.00
Uniform Del:	0.0	0.0	0.0	32.6	32.0	43.0	0.0	35.9	35.9	70.7	21.1	0.0
IncrcmntDel:	0.0	0.0	0.0	0.9	0.2	40.8	0.0	34.4	34.4	108.4	0.2	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	0.0	0.0	0.0	33.5	32.2	83.8	0.0	70.2	70.2	179.1	21.2	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	33.5	32.2	83.8	0.0	70.2	70.2	179.1	21.2	0.0
LOS by Move:	A	A	A	C	C	F	A	E	E	F	C	A
HCM2k95thQ:	0	0	0	21	20	63	0	77	77	9	22	0

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

Intersection #10 Golf Course Dr/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 1.202
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 90.0
Optimal Cycle: 180 Level Of Service: F

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Protected), Rights (Include), Min. Green (0-0-0), and Lanes (1-0-0-1-1).

Volume Module: Table with 13 columns for different traffic volumes. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns for saturation flow rates. Rows include Sat/Lane (1900), Adjustment (0.93), Lanes (1.00), and Final Sat. (1769).

Capacity Analysis Module: Table with 13 columns for capacity analysis metrics. Rows include Vol/Sat (0.35), Crit Moves (****), Green/Cycle (0.29), Volume/Cap (1.20), Uniform Del (35.4), Delay Adj (1.00), Delay/Veh (143.8), User DelAdj (1.00), AdjDel/Veh (143.8), LOS by Move (F D D F F F A D F F B B), and HCM2k95thQ (55).

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

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

 Intersection #11 Roberts Lake Dr/Golf Course Dr

Cycle (sec): 80 Critical Vol./Cap.(X): 0.516
 Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 15.5
 Optimal Cycle: 28 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Protected			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	1	0	0	1	0	2	0	0	1

Volume Module:

Base Vol:	0	0	0	92	0	236	195	970	0	0	637	33
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	92	0	236	195	970	0	0	637	33
Added Vol:	0	0	0	0	0	0	0	11	0	0	12	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	92	0	236	195	981	0	0	649	33
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	97	0	248	205	1033	0	0	683	35
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	97	0	248	205	1033	0	0	683	35
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	97	0	248	205	1033	0	0	683	35

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.93	1.00	0.83	0.93	0.93	1.00	1.00	0.92	0.92
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	2.00	0.00	0.00	1.90	0.10
Final Sat.:	0	0	0	1769	0	1583	1769	3538	0	0	3343	170

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.05	0.00	0.16	0.12	0.29	0.00	0.00	0.20	0.20
Crit Moves:						****	****			****		
Green/Cycle:	0.00	0.00	0.00	0.30	0.00	0.30	0.22	0.62	0.00	0.00	0.40	0.40
Volume/Cap:	0.00	0.00	0.00	0.18	0.00	0.52	0.52	0.47	0.00	0.00	0.52	0.52
Uniform Del:	0.0	0.0	0.0	20.5	0.0	23.0	27.2	8.1	0.0	0.0	18.3	18.3
IncrcmntDel:	0.0	0.0	0.0	0.2	0.0	1.0	1.2	0.2	0.0	0.0	0.3	0.3
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Delay/Veh:	0.0	0.0	0.0	20.6	0.0	23.9	28.4	8.3	0.0	0.0	18.7	18.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	20.6	0.0	23.9	28.4	8.3	0.0	0.0	18.7	18.7
LOS by Move:	A	A	A	C	A	C	C	A	A	A	B	B
HCM2k95thQ:	0	0	0	4	0	11	10	14	0	0	14	14

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #12 101 NB Ramps/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 1.148

Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 86.5

Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Control:	Protected			Protected			Split Phase			Split Phase						
Rights:	Include			Include			Include			Include						
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0				
Lanes:	1	0	1	1	0	0	1	1	0	0	1	0	0	1	0	0

Volume Module:

Base Vol:	514	489	2	7	435	512	387	3	40	8	3	5
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:	514	489	2	7	435	512	387	3	40	8	3	5
Added Vol:	0	0	0	0	0	194	368	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	514	489	2	7	435	706	755	3	40	8	3	5
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	541	515	2	7	458	743	795	3	42	8	3	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	541	515	2	7	458	743	795	3	42	8	3	5
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	541	515	2	7	458	743	795	3	42	8	3	5

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.98	0.98	0.93	0.98	0.83	0.93	0.93	0.83	0.92	0.92	0.92
Lanes:	1.00	1.99	0.01	1.00	2.00	1.00	1.99	0.01	1.00	0.50	0.19	0.31
Final Sat.:	1769	3705	15	1769	3724	1583	3535	14	1583	870	326	544

Capacity Analysis Module:

Vol/Sat:	0.31	0.14	0.14	0.00	0.12	0.47	0.22	0.22	0.03	0.01	0.01	0.01
Crit Moves:	****			****			****			****		
Green/Cycle:	0.27	0.66	0.66	0.02	0.41	0.41	0.20	0.20	0.20	0.01	0.01	0.01
Volume/Cap:	1.15	0.21	0.21	0.21	0.30	1.15	1.15	1.15	0.14	1.15	1.15	1.15
Uniform Del:	36.7	6.9	6.9	48.3	19.9	29.5	40.2	40.2	33.2	49.6	49.6	49.6
IncrcmntDel:	88.7	0.0	0.0	3.0	0.1	83.6	82.6	82.6	0.2	287.1	287	287.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	125.3	6.9	6.9	51.3	20.0	113.1	122.8	123	33.4	336.7	337	336.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	125.3	6.9	6.9	51.3	20.0	113.1	122.8	123	33.4	336.7	337	336.7
LOS by Move:	F	A	A	D	C	F	F	F	C	F	F	F
HCM2k95thQ:	47	6	6	1	9	60	37	37	2	4	4	4

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #13 New Driveway/Stony Point Rd

Average Delay (sec/veh): 1.1 Worst Case Level Of Service: D[27.3]

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	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1

Volume Module:

Base Vol:	0	832	0	0	634	0	0	0	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
Initial Bse:	0	832	0	0	634	0	0	0	0	0	0	0
Added Vol:	0	0	480	0	174	0	0	0	0	0	0	86
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	832	480	0	808	0	0	0	0	0	0	86
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	876	505	0	851	0	0	0	0	0	0	91
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	876	505	0	851	0	0	0	0	0	0	91

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3

Capacity Module:

Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	1128
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	251
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	251
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.36

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	1.6			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	27.3			
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	D			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*			
ApproachDel:	xxxxxxx			xxxxxxx			xxxxxxx				27.3				
ApproachLOS:	*			*			*				D				

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #14 New Driveway/Labath Ave

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

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

Volume Module:

Base Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Growth Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Bse:	0	0	0	0	0	0	0	0	0	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	0	0	0	0	0	0	0	0	0
User Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHF Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHF Volume:	0	0	0	0	0	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	0	0	0	0	0	0	0	0	0
Critical Gap Module:												
Critical Gp:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FollowUpTim:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Capacity Module:

Cnflict Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Potent Cap.:	0	0	0	0	0	0	0	0	0	0	0	0
Move Cap.:	1	1	1	1	1	1	1	1	1	1	1	1
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Level Of Service Module:

2Way95thQ:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Del:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LOS by Move:												
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	0	0	0	0	0	0	0	0	0	0	0	0
SharedQueue:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Shrd ConDel:	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Shared LOS:												
ApproachDel:	0.0			0.0			0.0			0.0		
ApproachLOS:												

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #15 Redwood Dr/Business Park Dr

Average Delay (sec/veh): 5.6 Worst Case Level Of Service: D[26.5]

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:	1	0	2	0	0	1	1	0	0	1	0	0

Volume Module:

Base Vol:	33	464	0	0	489	41	172	0	89	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:	33	464	0	0	489	41	172	0	89	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	33	464	0	0	489	41	172	0	89	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	35	488	0	0	515	43	181	0	94	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	35	488	0	0	515	43	181	0	94	0	0	0

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.8	6.5	6.9	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	558	xxxx	xxxxx	xxxxx	xxxx	xxxxx	850	1094	279	xxxx	xxxx	xxxxx
Potent Cap.:	1023	xxxx	xxxxx	xxxxx	xxxx	xxxxx	303	216	724	xxxx	xxxx	xxxxx
Move Cap.:	1023	xxxx	xxxxx	xxxxx	xxxx	xxxxx	296	208	724	xxxx	xxxx	xxxxx
Volume/Cap:	0.03	xxxx	xxxx	xxxxx	xxxx	xxxxx	0.61	0.00	0.13	xxxx	xxxx	xxxxx

Level Of Service Module:

2Way95thQ:	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.8	xxxx	xxxxx	xxxx	xxxx	xxxxx			
Control Del:	8.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	34.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
LOS by Move:	A	*	*	*	*	*	D	*	*	*	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxx	xxxx	724	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	0.4	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	10.7	xxxxx	xxxx	xxxxx			
Shared LOS:	*	*	*	*	*	*	*	*	B	*	*	*			
ApproachDel:	xxxxxxx			xxxxxxx			26.5			xxxxxxx					
ApproachLOS:	*			*			D			*					

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #16 Rohnert Park Expwy/Stony Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 1.032
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 55.6
Optimal Cycle: 180 Level Of Service: E

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Permitted, Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns for different traffic scenarios. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2k95thQ.

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #17 Rohnert Park Expwy/Labath Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.596

Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 34.4

Optimal Cycle: 48 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	0	1	0	0	1	0	2	1	0	3

Volume Module:

Base Vol:	64	19	154	270	43	99	50	600	36	202	575	154
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:	64	19	154	270	43	99	50	600	36	202	575	154
Added Vol:	0	0	0	0	0	0	0	63	0	0	363	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	64	19	154	270	43	99	50	663	36	202	938	154
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	67	20	162	284	45	104	53	698	38	213	987	162
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	67	20	162	284	45	104	53	698	38	213	987	162
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	67	20	162	284	45	104	53	698	38	213	987	162

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.85	0.85	0.93	0.88	0.88	0.93	0.98	0.83	0.93	0.98	0.83
Lanes:	2.00	0.22	1.78	1.00	0.30	0.70	1.00	2.00	1.00	1.00	3.00	1.00
Final Sat.:	3538	355	2874	1769	505	1162	1769	3724	1583	1769	5586	1583

Capacity Analysis Module:

Vol/Sat:	0.02	0.06	0.06	0.16	0.09	0.09	0.03	0.19	0.02	0.12	0.18	0.10
Crit Moves:	****			****			****			****		
Green/Cycle:	0.07	0.12	0.12	0.25	0.29	0.29	0.26	0.28	0.28	0.24	0.26	0.26
Volume/Cap:	0.27	0.47	0.47	0.64	0.31	0.31	0.11	0.67	0.09	0.50	0.68	0.39
Uniform Del:	44.1	41.0	41.0	33.5	27.7	27.7	28.2	31.9	26.6	32.8	33.3	30.5
IncrcmntDel:	0.6	0.9	0.9	3.2	0.4	0.4	0.1	1.7	0.1	0.9	1.3	0.6
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	44.7	41.9	41.9	36.7	28.1	28.1	28.3	33.6	26.6	33.8	34.6	31.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	44.7	41.9	41.9	36.7	28.1	28.1	28.3	33.6	26.6	33.8	34.6	31.1
LOS by Move:	D	D	D	D	C	C	C	C	C	C	C	C
HCM2k95thQ:	3	6	6	16	7	7	3	19	2	12	19	9

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #18 Rohnert Park Expwy/Redwood Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.767

Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 43.6

Optimal Cycle: 70 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Control:	Protected			Protected			Protected			Protected											
Rights:	Include			Include			Include			Include											
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0									
Lanes:	1	0	1	1	1	1	2	0	1	0	1	1	0	3	0	1	2	0	2	0	1

Volume Module:

Base Vol:	137	252	422	364	264	243	233	701	146	371	656	358
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:	137	252	422	364	264	243	233	701	146	371	656	358
Added Vol:	0	0	0	0	0	0	0	63	0	0	363	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	137	252	422	364	264	243	233	764	146	371	1019	358
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	144	265	444	383	278	256	245	804	154	391	1073	377
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	144	265	444	383	278	256	245	804	154	391	1073	377
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	144	265	444	383	278	256	245	804	154	391	1073	377

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.89	0.89	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.83
Lanes:	1.00	1.12	1.88	2.00	1.00	1.00	1.00	3.00	1.00	2.00	2.00	1.00
Final Sat.:	1769	1892	3169	3538	1862	1583	1769	5586	1583	3538	3724	1583

Capacity Analysis Module:

Vol/Sat:	0.08	0.14	0.14	0.11	0.15	0.16	0.14	0.14	0.10	0.11	0.29	0.24
Crit Moves:	****			****			****			****		
Green/Cycle:	0.12	0.20	0.20	0.16	0.24	0.24	0.10	0.29	0.29	0.23	0.42	0.42
Volume/Cap:	0.67	0.69	0.69	0.69	0.62	0.67	1.39	0.49	0.33	0.49	0.69	0.57
Uniform Del:	42.0	36.9	36.9	39.8	33.9	34.4	45.0	29.1	27.6	33.7	23.7	22.2
IncrcmntDel:	8.1	2.0	2.0	3.6	2.7	4.7	204.9	0.2	0.4	0.5	1.3	1.2
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	50.2	38.8	38.8	43.4	36.6	39.1	249.9	29.4	28.1	34.2	25.0	23.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	50.2	38.8	38.8	43.4	36.6	39.1	249.9	29.4	28.1	34.2	25.0	23.3
LOS by Move:	D	D	D	D	D	D	F	C	C	C	C	C
HCM2k95thQ:	11	15	15	13	16	16	31	13	8	11	25	17

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

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

Intersection #19 Rohnert Park Expwy/101 SB Ramps

Cycle (sec): 80 Critical Vol./Cap.(X): 0.790
 Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 21.6
 Optimal Cycle: 69 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1	1	0	0	0	2	1	1	0	2

Volume Module:

Base Vol:	7	0	17	702	1	351	0	1208	278	68	1024	199
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:	7	0	17	702	1	351	0	1208	278	68	1024	199
Added Vol:	0	0	0	0	0	0	0	11	52	0	363	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	7	0	17	702	1	351	0	1219	330	68	1387	199
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00
PHF Volume:	7	0	18	739	1	369	0	1283	347	72	1460	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	7	0	18	739	1	369	0	1283	347	72	1460	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Final Vol.:	7	0	18	739	1	369	0	1283	347	72	1460	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.85	1.00	0.85	0.70	0.70	0.83	1.00	0.95	0.95	0.93	0.98	1.00
Lanes:	0.29	0.00	0.71	1.99	0.01	1.00	0.00	2.36	0.64	1.00	2.00	1.00
Final Sat.:	471	0	1145	2644	4	1583	0	4255	1152	1769	3724	1900

Capacity Analysis Module:

Vol/Sat:	0.02	0.00	0.02	0.28	0.28	0.23	0.00	0.30	0.30	0.04	0.39	0.00
Crit Moves:				****			****			****		
Green/Cycle:	0.35	0.00	0.35	0.35	0.35	0.35	0.00	0.44	0.44	0.06	0.50	0.00
Volume/Cap:	0.04	0.00	0.04	0.79	0.79	0.66	0.00	0.69	0.69	0.69	0.79	0.00
Uniform Del:	17.0	0.0	17.0	23.2	23.2	21.8	0.0	18.1	18.1	36.9	16.7	0.0
IncrcmntDel:	0.0	0.0	0.0	4.6	4.6	2.9	0.0	0.9	0.9	17.8	2.4	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	17.0	0.0	17.0	27.8	27.8	24.7	0.0	19.0	19.0	54.8	19.1	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	17.0	0.0	17.0	27.8	27.8	24.7	0.0	19.0	19.0	54.8	19.1	0.0
LOS by Move:	B	A	B	C	C	C	A	B	B	D	B	A
HCM2k95thQ:	1	0	1	19	19	16	0	21	21	6	29	0

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

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

 Intersection #20 Rohnert Park Expwy/101 NB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.661
 Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 23.9
 Optimal Cycle: 38 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound						
Movement:	L	T	R	L	T	R	L	T	R	L	T	R				
Control:	Protected			Protected			Permitted			Permitted						
Rights:	Include			Include			Ignore			Ignore						
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0				
Lanes:	1	0	0	1	1	1	1	0	4	0	1	0	0	3	0	1

Volume Module:

Base Vol:	303	0	306	14	0	3	17	1631	273	0	985	350
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:	303	0	306	14	0	3	17	1631	273	0	985	350
Added Vol:	351	0	0	0	0	0	0	11	0	0	12	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	654	0	306	14	0	3	17	1642	273	0	997	350
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00	0.95	0.95	0.00
PHF Volume:	688	0	322	15	0	3	18	1728	0	0	1049	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	688	0	322	15	0	3	18	1728	0	0	1049	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Final Vol.:	688	0	322	15	0	3	18	1728	0	0	1049	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	1.00	0.83	0.93	1.00	0.83	0.17	0.98	1.00	1.00	0.98	1.00
Lanes:	1.00	0.00	2.00	1.00	0.00	1.00	1.00	4.00	1.00	0.00	3.00	1.00
Final Sat.:	1769	0	3165	1769	0	1583	328	7448	1900	0	5586	1900

Capacity Analysis Module:

Vol/Sat:	0.39	0.00	0.10	0.01	0.00	0.00	0.05	0.23	0.00	0.00	0.19	0.00
Crit Moves:	****				****			****				
Green/Cycle:	0.59	0.00	0.54	0.04	0.00	0.00	0.35	0.35	0.00	0.00	0.35	0.00
Volume/Cap:	0.66	0.00	0.19	0.19	0.00	xxxx	0.16	0.66	0.00	0.00	0.54	0.00
Uniform Del:	13.8	0.0	11.6	46.0	0.0	0.0	22.3	27.4	0.0	0.0	25.9	0.0
IncrcmntDel:	1.6	0.0	0.1	1.2	0.0	0.0	0.6	0.6	0.0	0.0	0.3	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00
Delay/Veh:	15.4	0.0	11.6	47.2	0.0	0.0	22.9	28.1	0.0	0.0	26.2	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	15.4	0.0	11.6	47.2	0.0	0.0	22.9	28.1	0.0	0.0	26.2	0.0
LOS by Move:	B	A	B	D	A	A	C	C	A	A	C	A
HCM2k95thQ:	26	0	5	1	0	2	1	22	0	0	17	0

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #21 Rohnert Park Expwy/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.815

Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 33.9

Optimal Cycle: 81 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	1	1	0	1	0	1	2	0	1	0	2

Volume Module:

Base Vol:	380	286	224	102	230	183	270	1138	545	141	771	170
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:	380	286	224	102	230	183	270	1138	545	141	771	170
Added Vol:	0	0	0	0	0	0	0	11	0	0	12	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	380	286	224	102	230	183	270	1149	545	141	783	170
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	400	301	236	107	242	193	284	1209	574	148	824	179
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	400	301	236	107	242	193	284	1209	574	148	824	179
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	400	301	236	107	242	193	284	1209	574	148	824	179

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.83	0.97	0.97	0.83	0.93	0.98	0.83	0.93	0.95	0.95
Lanes:	1.71	1.29	1.00	1.00	2.00	1.00	2.00	2.00	1.00	1.00	2.46	0.54
Final Sat.:	3098	2332	1583	1834	3668	1583	3538	3724	1583	1769	4466	970

Capacity Analysis Module:

Vol/Sat:	0.13	0.13	0.15	0.06	0.07	0.12	0.08	0.32	0.36	0.08	0.18	0.18
Crit Moves:			****			****			****	****		
Green/Cycle:	0.18	0.18	0.18	0.15	0.15	0.15	0.17	0.44	0.44	0.10	0.38	0.38
Volume/Cap:	0.71	0.71	0.81	0.39	0.44	0.81	0.48	0.73	0.81	0.81	0.48	0.48
Uniform Del:	38.3	38.3	39.2	38.4	38.7	41.2	37.8	22.8	24.2	43.9	23.4	23.4
IncrcmntDel:	2.3	2.3	16.1	0.3	0.4	19.2	0.6	1.7	7.3	23.8	0.2	0.2
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	40.7	40.7	55.4	38.7	39.1	60.4	38.4	24.5	31.5	67.7	23.6	23.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	40.7	40.7	55.4	38.7	39.1	60.4	38.4	24.5	31.5	67.7	23.6	23.6
LOS by Move:	D	D	E	D	D	E	D	C	C	E	C	C
HCM2k95thQ:	15	15	17	7	8	15	9	28	30	13	15	15

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #22 Gravenstein Hwy (SR 116)/ Stoney Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.787

Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 39.5

Optimal Cycle: 74 Level Of Service: D

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 1 0 1 1 0 1 0 1 0 1 0 2 0 1

Volume Module:
Base Vol: 321 494 108 96 342 219 133 484 202 128 589 103
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 321 494 108 96 342 219 133 484 202 128 589 103
Added Vol: 0 0 0 111 0 0 0 0 0 0 0 117
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 321 494 108 207 342 219 133 484 202 128 589 220
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 338 520 114 218 360 231 140 509 213 135 620 232
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 338 520 114 218 360 231 140 509 213 135 620 232
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 338 520 114 218 360 231 140 509 213 135 620 232

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.93 0.98 0.83 0.93 0.98 0.83 0.93 0.89 0.89 0.93 0.93 0.83
Lanes: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.41 0.59 1.00 2.00 1.00
Final Sat.: 1769 1862 1583 1769 1862 1583 1769 2386 996 1769 3538 1583

Capacity Analysis Module:
Vol/Sat: 0.19 0.28 0.07 0.12 0.19 0.15 0.08 0.21 0.21 0.08 0.18 0.15
Crit Moves: ****
Green/Cycle: 0.25 0.36 0.36 0.16 0.26 0.26 0.11 0.27 0.27 0.10 0.25 0.25
Volume/Cap: 0.75 0.79 0.20 0.79 0.75 0.57 0.69 0.79 0.79 0.79 0.69 0.58
Uniform Del: 34.4 28.9 22.4 40.6 34.2 32.3 42.6 33.7 33.7 44.1 33.8 32.6
IncrcmntDel: 7.0 6.2 0.2 13.8 6.6 1.9 9.7 4.6 4.6 21.0 2.3 2.1
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Delay/Veh: 41.3 35.1 22.6 54.4 40.7 34.1 52.3 38.3 38.3 65.1 36.1 34.7
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 41.3 35.1 22.6 54.4 40.7 34.1 52.3 38.3 38.3 65.1 36.1 34.7
LOS by Move: D D C D D C D D D E D C
HCM2k95thQ: 20 28 5 16 21 13 11 23 23 12 19 13

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #23 Gravenstein Hwy (SR 116)/ Redwood Rd

Cycle (sec): 80 Critical Vol./Cap.(X): 0.775

Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 28.6

Optimal Cycle: 67 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	0	1	0	1	1	0	2

Volume Module:

Base Vol:	48	24	63	485	29	96	102	625	32	53	738	333
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	24	63	485	29	96	102	625	32	53	738	333
Added Vol:	0	0	0	0	0	0	0	111	0	0	117	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	48	24	63	485	29	96	102	736	32	53	855	333
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	51	25	66	511	31	101	107	775	34	56	900	351
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	51	25	66	511	31	101	107	775	34	56	900	351
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	51	25	66	511	31	101	107	775	34	56	900	351

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.87	0.87	0.93	0.87	0.87	0.93	0.93	0.93	0.93	0.93	0.83
Lanes:	1.00	0.28	0.72	1.00	0.23	0.77	1.00	1.92	0.08	1.00	2.00	1.00
Final Sat.:	1769	458	1201	1769	382	1266	1769	3370	147	1769	3538	1583

Capacity Analysis Module:

Vol/Sat:	0.03	0.06	0.06	0.29	0.08	0.08	0.06	0.23	0.23	0.03	0.25	0.22
Crit Moves:	****			****			****			****		
Green/Cycle:	0.12	0.07	0.07	0.37	0.33	0.33	0.08	0.36	0.36	0.05	0.33	0.33
Volume/Cap:	0.24	0.78	0.78	0.78	0.24	0.24	0.78	0.64	0.64	0.64	0.78	0.67
Uniform Del:	32.1	36.5	36.5	22.2	19.7	19.7	36.2	21.4	21.4	37.4	24.2	23.2
IncrcmntDel:	0.6	26.8	26.8	5.8	0.2	0.2	23.5	1.2	1.2	15.3	3.3	3.5
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	32.7	63.3	63.3	27.9	19.9	19.9	59.6	22.6	22.6	52.7	27.6	26.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	32.7	63.3	63.3	27.9	19.9	19.9	59.6	22.6	22.6	52.7	27.6	26.7
LOS by Move:	C	E	E	C	B	B	E	C	C	D	C	C
HCM2k95thQ:	3	8	8	23	5	5	9	18	18	5	22	16

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

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

 Intersection #24 Gravenstein Hwy and SB 101 Ramps

Cycle (sec): 80 Critical Vol./Cap.(X): 0.641
 Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 18.4
 Optimal Cycle: 43 Level Of Service: B

Street Name: SB 101 Ramps Gravenstein Hwy
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Permitted			Protected			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	2	0	1	0	0	1	1	0	0

Volume Module:

Base Vol:	0	0	0	639	0	212	0	819	361	99	900	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:	0	0	0	639	0	212	0	819	361	99	900	0
Added Vol:	0	0	0	0	0	0	0	0	111	0	117	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	639	0	212	0	819	472	99	1017	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	673	0	223	0	862	497	104	1071	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	673	0	223	0	862	497	104	1071	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	673	0	223	0	862	497	104	1071	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.90	1.00	0.83	1.00	0.93	0.83	0.93	0.93	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	0.00	2.00	1.00	1.00	2.00	0.00
Final Sat.:	0	0	0	3432	0	1583	0	3538	1583	1769	3538	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.20	0.00	0.14	0.00	0.24	0.31	0.06	0.30	0.00
Crit Moves:				****					****	****		
Green/Cycle:	0.00	0.00	0.00	0.35	0.00	0.35	0.00	0.43	0.43	0.10	0.54	0.00
Volume/Cap:	0.00	0.00	0.00	0.56	0.00	0.40	0.00	0.57	0.73	0.59	0.56	0.00
Uniform Del:	0.0	0.0	0.0	21.0	0.0	19.7	0.0	17.2	18.9	34.4	12.1	0.0
IncramntDel:	0.0	0.0	0.0	0.6	0.0	0.5	0.0	0.5	4.0	5.1	0.4	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	0.0	0.0	0.0	21.6	0.0	20.2	0.0	17.7	23.0	39.6	12.5	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	21.6	0.0	20.2	0.0	17.7	23.0	39.6	12.5	0.0
LOS by Move:	A	A	A	C	A	C	A	B	C	D	B	A
HCM2k95thQ:	0	0	0	14	0	9	0	17	21	7	18	0

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

 Intersection #25 Gravenstein Hwy and NB 101 Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.784
 Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 21.1
 Optimal Cycle: 65 Level Of Service: C

Street Name: NB 101 Ramps Gravenstein Hwy
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R
 -----|-----|-----|-----|

Control: Protected Permitted Permitted Permitted
 Rights: Include Include Include Include
 Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
 Lanes: 1 0 0 0 1 0 0 0 0 0 0 2 0 0 0 0 2 0 0
 -----|-----|-----|-----|

Volume Module:
 Base Vol: 351 0 236 0 0 0 0 1461 0 0 617 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: 351 0 236 0 0 0 0 1461 0 0 617 0
 Added Vol: 117 0 0 0 0 0 0 0 0 0 0 0
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
 Initial Fut: 468 0 236 0 0 0 0 1461 0 0 617 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
 PHF Volume: 493 0 248 0 0 0 0 1538 0 0 649 0
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 Reduced Vol: 493 0 248 0 0 0 0 1538 0 0 649 0
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Final Vol.: 493 0 248 0 0 0 0 1538 0 0 649 0
 -----|-----|-----|-----|

Saturation Flow Module:
 Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
 Adjustment: 0.93 1.00 0.83 1.00 1.00 1.00 1.00 0.93 1.00 1.00 0.93 1.00
 Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 2.00 0.00 0.00 2.00 0.00
 Final Sat.: 1769 0 1583 0 0 0 0 3538 0 0 3538 0
 -----|-----|-----|-----|

Capacity Analysis Module:
 Vol/Sat: 0.28 0.00 0.16 0.00 0.00 0.00 0.00 0.43 0.00 0.00 0.18 0.00
 Crit Moves: **** *
 Green/Cycle: 0.36 0.00 0.36 0.00 0.00 0.00 0.00 0.55 0.00 0.00 0.55 0.00
 Volume/Cap: 0.78 0.00 0.44 0.00 0.00 0.00 0.00 0.78 0.00 0.00 0.33 0.00
 Uniform Del: 28.8 0.0 24.7 0.0 0.0 0.0 0.0 17.5 0.0 0.0 12.1 0.0
 IncremntDel: 6.4 0.0 0.6 0.0 0.0 0.0 0.0 2.1 0.0 0.0 0.1 0.0
 InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 Delay Adj: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 1.00 0.00 0.00 1.00 0.00
 Delay/Veh: 35.2 0.0 25.2 0.0 0.0 0.0 0.0 19.7 0.0 0.0 12.2 0.0
 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 AdjDel/Veh: 35.2 0.0 25.2 0.0 0.0 0.0 0.0 19.7 0.0 0.0 12.2 0.0
 LOS by Move: D A C A A A A B A A B A
 HCM2k95thQ: 27 0 12 0 0 0 0 35 0 0 11 0

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #26 Millbrae Ave/Stony Point Rd

Average Delay (sec/veh): 3.5 Worst Case Level Of Service: F[57.8]

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:	1	0	2	0	1	1	0	0	1!	0	0	1

Volume Module:

Base Vol:	19	715	20	116	546	4	7	6	11	2	7	194
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:	19	715	20	116	546	4	7	6	11	2	7	194
Added Vol:	0	86	0	0	121	0	0	0	0	0	0	22
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	19	801	20	116	667	4	7	6	11	2	7	216
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	20	843	21	122	702	4	7	6	12	2	7	227
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	20	843	21	122	702	4	7	6	12	2	7	227

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.5	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflict Vol:	706	xxxx	xxxxx	864	xxxx	xxxxx	1414	1853	353	1482	1834	422
Potent Cap.:	901	xxxx	xxxxx	787	xxxx	xxxxx	100	75	649	89	77	586
Move Cap.:	901	xxxx	xxxxx	787	xxxx	xxxxx	48	62	649	70	64	586
Volume/Cap:	0.02	xxxx	xxxx	0.16	xxxx	xxxx	0.15	0.10	0.02	0.03	0.12	0.39

Level Of Service Module:

2Way95thQ:	0.1	xxxx	xxxxx	0.5	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	1.8			
Control Del:	9.1	xxxx	xxxxx	10.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	15.0			
LOS by Move:	A	*	*	B	*	*	*	*	*	*	*	B			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	93	xxxxx	65	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	1.0	xxxxx	0.5	xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	57.8	xxxxx	69.8	xxxx	xxxxx			
Shared LOS:	*	*	*	*	*	*	*	F	*	F	*	*			
ApproachDel:	xxxxxx			xxxxxx				57.8				17.2			
ApproachLOS:	*			*				F				C			

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #27 Millbrae Ave/Primrose Ave

Average Delay (sec/veh): 0.8 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: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 1 0 0 0 0 1! 0 0 0 0 1! 0 0

Volume Module:

Base Vol: 0 0 1 0 1 0 1 139 3 4 199 2
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 1 0 1 0 1 139 3 4 199 2
Added Vol: 22 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 22 0 1 0 1 0 1 139 3 4 199 2
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 23 0 1 0 1 0 1 146 3 4 209 2
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 23 0 1 0 1 0 1 146 3 4 209 2

Critical Gap Module:

Critical Gp: 7.1 6.5 6.2 xxxxx 6.5 xxxxx 4.1 xxxxx xxxxx 4.1 xxxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 xxxxx 4.0 xxxxx 2.2 xxxxx xxxxx 2.2 xxxxx xxxxx

Capacity Module:

Cnflict Vol: 369 370 148 xxxxx 371 xxxxx 212 xxxxx xxxxx 149 xxxxx xxxxx
Potent Cap.: 591 563 904 xxxxx 562 xxxxx 1371 xxxxx xxxxx 1444 xxxxx xxxxx
Move Cap.: 588 561 904 xxxxx 560 xxxxx 1371 xxxxx xxxxx 1444 xxxxx xxxxx
Volume/Cap: 0.04 0.00 0.00 xxxxx 0.00 xxxxx 0.00 xxxxx xxxxx 0.00 xxxxx xxxxx

Level Of Service Module:

2Way95thQ: xxxxx xxxxx xxxxx xxxxx 0.0 xxxxx 0.0 xxxxx xxxxx 0.0 xxxxx xxxxx
Control Del: xxxxx xxxxx xxxxx xxxxx 11.4 xxxxx 7.6 xxxxx xxxxx 7.5 xxxxx xxxxx
LOS by Move: * * * * B * A * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx 597 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue: xxxxx 0.1 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd ConDel: xxxxx 11.3 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: * B * * * * * * * * * *
ApproachDel: 11.3 11.4 xxxxxxx xxxxxxx
ApproachLOS: B B * *

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #28 Millbrae Ave/Whistler Ave

Average Delay (sec/veh): 0.6 Worst Case Level Of Service: B[11.5]

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

Volume Module:

Base Vol:	1	9	0	4	0	1	1	123	2	4	208	8
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	9	0	4	0	1	1	123	2	4	208	8
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1	9	0	4	0	1	1	123	2	4	208	8
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	1	9	0	4	0	1	1	129	2	4	219	8
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	1	9	0	4	0	1	1	129	2	4	219	8

Critical Gap Module:

Critical Gp:	7.1	6.5	xxxxx	7.1	6.5	6.2	4.1	xxxxx	xxxxx	4.1	xxxxx	xxxxx
FollowUpTim:	3.5	4.0	xxxxx	3.5	4.0	3.3	2.2	xxxxx	xxxxx	2.2	xxxxx	xxxxx

Capacity Module:

Cnflct Vol:	365	368	xxxxx	369	365	223	227	xxxxx	xxxxx	132	xxxxx	xxxxx
Potent Cap.:	595	564	xxxxx	591	566	821	1353	xxxxx	xxxxx	1466	xxxxx	xxxxx
Move Cap.:	593	562	xxxxx	582	564	821	1353	xxxxx	xxxxx	1466	xxxxx	xxxxx
Volume/Cap:	0.00	0.02	xxxxx	0.01	0.00	0.00	0.00	xxxxx	xxxxx	0.00	xxxxx	xxxxx

Level Of Service Module:

2Way95thQ:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	0.0	xxxxx	xxxxx
Control Del:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	7.7	xxxxx	xxxxx	7.5	xxxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	565	xxxxx	xxxxx	xxxxx	618	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
SharedQueue:	0.1	xxxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shrd ConDel:	11.5	xxxxx	xxxxx	xxxxx	10.9	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shared LOS:	B	*	*	*	B	*	*	*	*	*	*	*
ApproachDel:	11.5			10.9			xxxxxxx			xxxxxxx		
ApproachLOS:	B			B			*			*		

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #29 Millbrae Ave/Langner Ave

Average Delay (sec/veh): 0.4 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:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	1! 0 0	0	0	0 0 0	0	0	0 1 0	0	1	0 0 0

Volume Module:

Base Vol:	5	0	11	0	0	0	0	149	9	4	270	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:	5	0	11	0	0	0	0	149	9	4	270	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	5	0	11	0	0	0	0	149	9	4	270	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	5	0	12	0	0	0	0	157	9	4	284	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	5	0	12	0	0	0	0	157	9	4	284	0

Critical Gap Module:

Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	454	454	162	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	166	xxxx	xxxxx
Potent Cap.:	567	505	889	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1424	xxxx	xxxxx
Move Cap.:	566	503	889	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1424	xxxx	xxxxx
Volume/Cap:	0.01	0.00	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	754	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	0.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx			
Shrd ConDel:	xxxxx	9.9	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx			
Shared LOS:	*	A	*	*	*	*	*	*	*	A	*	*			
ApproachDel:	9.9			xxxxxx			xxxxxx			xxxxxx					
ApproachLOS:	A			*			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #30 Millbrae Ave/Labath Ave

Average Delay (sec/veh): 1.0 Worst Case Level Of Service: B[11.2]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 1! 0 0 0 0 0 1 0 0 0 0 0

Volume Module:

Base Vol: 25 0 8 0 0 0 0 155 9 11 250 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: 25 0 8 0 0 0 0 155 9 11 250 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 25 0 8 0 0 0 0 155 9 11 250 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 26 0 8 0 0 0 0 163 9 12 263 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 26 0 8 0 0 0 0 163 9 12 263 0

Critical Gap Module:

Critical Gp: 6.4 6.5 6.2 7.1 6.5 6.2 xxxxx xxxxx xxxxx 4.1 xxxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 3.5 4.0 3.3 xxxxx xxxxx xxxxx 2.2 xxxxx xxxxx

Capacity Module:

Cnflict Vol: 454 454 168 458 459 263 xxxxx xxxxx xxxxx 173 xxxxx xxxxx
Potent Cap.: 567 505 881 516 502 780 xxxxx xxxxx xxxxx 1416 xxxxx xxxxx
Move Cap.: 564 501 881 508 498 780 xxxxx xxxxx xxxxx 1416 xxxxx xxxxx
Volume/Cap: 0.05 0.00 0.01 0.00 0.00 0.00 xxxxx xxxxx xxxxx 0.01 xxxxx xxxxx

Level Of Service Module:

2Way95thQ: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx
Control Del: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 7.6 xxxxx xxxxx
LOS by Move: * * * * * * * * * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx 618 xxxxx xxxxx 0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue: xxxxx 0.2 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx
Shrd ConDel: xxxxx 11.2 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 7.6 xxxxx xxxxx
Shared LOS: * B * * * * * * * * * A * *
ApproachDel: 11.2 xxxxxxx xxxxxxx xxxxxxx
ApproachLOS: B * * *

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

Level of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #31 Millbrae Ave/Dowdell Ave

Average Delay (sec/veh): 1.0 Worst Case Level Of Service: B[11.3]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 1 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 1 0 0

Volume Module:

Base Vol: 37 0 0 0 0 0 0 0 135 22 0 235 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: 37 0 0 0 0 0 0 0 135 22 0 235 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 37 0 0 0 0 0 0 0 135 22 0 235 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 39 0 0 0 0 0 0 0 142 23 0 247 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 39 0 0 0 0 0 0 0 142 23 0 247 0

Critical Gap Module:

Critical Gp: 6.4 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim: 3.5 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxxx xxxx xxxxx

Capacity Module:

Cnflict Vol: 401 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Potent Cap.: 609 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Move Cap.: 609 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Volume/Cap: 0.06 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx

Level of Service Module:

2Way95thQ: 0.2 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Control Del: 11.3 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxxx xxxx xxxxx xxxxx
LOS by Move: B * * * * * * * * * * * * * * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxxx xxxx xxxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxxx xxxx xxxxx xxxxx
Shared LOS: * * * * * * * * * * * * * * * *
ApproachDel: 11.3 xxxxxxx xxxxxxx xxxxxxx
ApproachLOS: B * * *

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

**CUMULATIVE 2020 + ALTERNATIVE B
TRAFFIC CONDITIONS
(TRAFFIX)**

 Impact Analysis Report
 Level Of Service

Intersection	Base		Future		Change in
	Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C	
# 1 Wilfred Ave/Stony Point Rd	F	401.6 0.000	F	OVRFL 0.000	+3064.217 D/
# 2 Wilfred Ave/Primrose Ave	B	12.4 0.000	F	OVRFL 0.000	+ 1.8E+0308
# 3 Wilfred Ave/Whistler Ave	B	12.4 0.000	F	111.8 0.000	+99.389 D/V
# 4 Langner Ave/Wilfred Ave	B	12.4 0.000	F	111.7 0.000	+99.298 D/V
# 5 Wilfred Ave/Labath Ave	F	491.5 0.000	F	OVRFL 0.000	+ 1.8E+0308
# 6 Dowell Ave/Wilfred Ave	F	OVRFL 0.000	F	OVRFL 0.000	+ 0.000 D/V
# 7 Wilfred Ave/Redwood Dr	F	87.9 1.116	F	275.0 1.762	+187.124 D/V
# 9 Wilfred Ave/101 SB Ramp	C	33.2 0.823	F	106.7 1.238	+73.478 D/V
# 10 Golf Course Dr/Commerce Blvd	F	96.5 1.161	F	186.3 1.551	+89.777 D/V
# 11 Roberts Lake Dr/Golf Course Dr	B	11.1 0.453	B	10.9 0.457	-0.235 D/V
# 12 101 NB Ramps/Commerce Blvd	E	69.8 1.098	F	150.0 1.369	+80.197 D/V
# 13 New Driveway/Stony Point Rd	A	0.0 0.000	C	24.3 0.000	+24.326 D/V
# 14 New Driveway/Labath Ave		0.0 0.000		0.0 0.000	+ 0.000 D/V
# 15 Redwood Dr/Business Park Dr	C	16.5 0.000	C	16.5 0.000	+ 0.000 D/V
# 16 Rohnert Park Expwy/Stony Point	C	22.1 0.619	D	45.9 0.979	+23.837 D/V
# 17 Rohnert Park Expwy/Labath Ave	C	30.7 0.522	C	34.0 0.543	+ 3.260 D/V
# 18 Rohnert Park Expwy/Redwood Dr	D	36.0 0.697	D	36.9 0.767	+ 0.933 D/V
# 19 Rohnert Park Expwy/101 SB Ramp	C	24.5 0.710	E	56.0 0.716	+31.498 D/V
# 20 Rohnert Park Expwy/101 NB Ramp	B	17.1 0.449	C	24.1 0.672	+ 7.059 D/V
# 21 Rohnert Park Expwy/Commerce Bl	C	34.9 0.802	C	34.9 0.806	+ 0.024 D/V
# 22 Gravenstein Hwy (SR 116)/ Ston	D	39.9 0.829	D	42.4 0.839	+ 2.469 D/V
# 23 Gravenstein Hwy (SR 116)/ Redw	C	34.6 0.882	D	36.5 0.884	+ 1.910 D/V
# 24 Gravenstein Hwy and SB 101 Ram	B	17.0 0.585	C	28.2 0.595	+11.259 D/V
# 25 Gravenstein Hwy and NB 101 Ram	B	18.7 0.767	C	23.0 0.844	+ 4.301 D/V
# 26 Millbrae Ave/Stony Point Rd	F	70.6 0.000	F	144.7 0.000	+74.073 D/V

Intersection	LOS	Base		LOS	Future		Change in
		Del/ Veh	V/ C		Del/ Veh	V/ C	
# 27 Millbrae Ave/Primrose Ave	B	12.4	0.000	B	12.4	0.000	+ 0.000 D/V
# 28 Millbrae Ave/Whister Ave	B	12.4	0.000	B	12.4	0.000	+ 0.000 D/V
# 29 Millbrae Ave/Langner Ave	B	11.2	0.000	B	11.2	0.000	+ 0.000 D/V
# 30 Millbrae Ave/Labath Ave	B	13.5	0.000	B	13.5	0.000	+ 0.000 D/V
# 31 Millbrae Ave/Dowdell Ave	B	11.6	0.000	B	11.6	0.000	+ 0.000 D/V

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1 Wilfred Ave/Stony Point Rd

Average Delay (sec/veh): 787.6 Worst Case Level Of Service: F[3465.8]

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:	1	0	0	1	0	0	0	0	0	1	0	0

Volume Module:

Base Vol:	14	677	74	102	508	3	0	13	16	143	22	134
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:	14	677	74	102	508	3	0	13	16	143	22	134
Added Vol:	0	86	0	121	0	0	0	0	0	174	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	14	763	74	223	508	3	0	13	16	317	22	134
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	15	803	78	235	535	3	0	14	17	334	23	141
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	15	803	78	235	535	3	0	14	17	334	23	141

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflct Vol:	538	xxxx	xxxxx	881	xxxx	xxxxx	xxxx	1916	536	1893	1879	842
Potent Cap.:	1041	xxxx	xxxxx	776	xxxx	xxxxx	xxxx	68	548	54	72	367
Move Cap.:	1041	xxxx	xxxxx	776	xxxx	xxxxx	xxxx	47	548	31	50	367
Volume/Cap:	0.01	xxxx	xxxxx	0.30	xxxx	xxxxx	xxxx	0.29	0.03	10.73	0.47	0.38

Level Of Service Module:

2Way95thQ:	0.0	xxxx	xxxxx	1.3	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	1.8			
Control Del:	8.5	xxxx	xxxxx	11.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	20.8			
LOS by Move:	A	*	*	B	*	*	*	*	*	*	*	C			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	95	32	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	1.2	43.7	xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	60.0	4828	xxxx	xxxxx			
Shared LOS:	*	*	*	*	*	*	*	*	F	F	*	*			
ApproachDel:	xxxxxx			xxxxxx				60.0				3465.8			
ApproachLOS:	*			*				F				F			

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Wilfred Ave/Primrose Ave

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

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 1! 0 0 0 0 1! 0 0

Volume Module:

Base Vol: 10 10 10 10 10 10 10 170 10 9 280 9
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: 10 10 10 10 10 10 10 170 10 9 280 9
Added Vol: 174 22 794 0 0 0 0 0 121 610 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 184 32 804 10 10 10 10 170 131 619 280 9
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 194 34 846 11 11 11 11 179 138 652 295 9
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 194 34 846 11 11 11 11 179 138 652 295 9

Critical Gap Module:

Critical Gp: 7.1 6.5 6.2 7.1 6.5 6.2 4.1 xxxx xxxxx 4.1 xxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 3.5 4.0 3.3 2.2 xxxx xxxxx 2.2 xxxx xxxxx

Capacity Module:

Cnflict Vol: 1882 1876 248 2312 1941 299 304 xxxx xxxxx 317 xxxx xxxxx
Potent Cap.: 55 72 796 27 66 745 1268 xxxx xxxxx 1255 xxxx xxxxx
Move Cap.: 6 13 796 0 12 745 1268 xxxx xxxxx 1255 xxxx xxxxx
Volume/Cap: 34.84 2.52 1.06 xxxx 0.86 0.01 0.01 xxxx xxxx 0.52 xxxx xxxx

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx 0.0 xxxx xxxxx 3.1 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx 7.9 xxxx xxxxx 10.9 xxxx xxxxx
LOS by Move: * * * * * A * * B * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx 28 xxxxx xxxx 0 xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
SharedQueue:xxxxx 134 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS: * F * * * * * * * * * *
ApproachDel: xxxxxx xxxxxx xxxxxx xxxxxx
ApproachLOS: F F * *

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 Wilfred Ave/Whistler Ave

Average Delay (sec/veh): 3.5 Worst Case Level Of Service: F[111.8]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 1! 0 0 0 0 1! 0 0

Volume Module:

Base Vol: 10 10 10 10 10 10 10 170 10 9 280 9
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: 10 10 10 10 10 10 10 170 10 9 280 9
Added Vol: 0 0 0 0 0 0 0 794 0 0 610 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 10 10 10 10 10 10 10 964 10 9 890 9
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 11 11 11 11 11 11 11 1015 11 9 937 9
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 11 11 11 11 11 11 11 1015 11 9 937 9

Critical Gap Module:

Critical Gp: 7.1 6.5 6.2 7.1 6.5 6.2 4.1 xxxx xxxxx 4.1 xxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 3.5 4.0 3.3 2.2 xxxx xxxxx 2.2 xxxx xxxxx

Capacity Module:

Cnflct Vol: 2012 2006 1020 2012 2007 942 946 xxxx xxxxx 1025 xxxx xxxxx
Potent Cap.: 44 60 290 44 60 322 733 xxxx xxxxx 685 xxxx xxxxx
Move Cap.: 36 58 290 36 58 322 733 xxxx xxxxx 685 xxxx xxxxx
Volume/Cap: 0.29 0.18 0.04 0.29 0.18 0.03 0.01 xxxx xxxx 0.01 xxxx xxxx

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx 0.0 xxxx xxxxx 0.0 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx 10.0 xxxx xxxxx 10.3 xxxx xxxxx
LOS by Move: * * * * * A * * B * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx 62 xxxxx xxxx 62 xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
SharedQueue:xxxxx 2.0 xxxxx xxxxx 2.0 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 112 xxxxx xxxxx 111 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS: * F * * F * * * * *
ApproachDel: 111.8 111.0 xxxxxxx xxxxxxx
ApproachLOS: F F * *

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Langner Ave/Wilfred Ave

Average Delay (sec/veh): 3.5 Worst Case Level Of Service: F[111.7]

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

Volume Module:

Base Vol:	10	10	10	10	10	10	10	170	10	9	280	9
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:	10	10	10	10	10	10	10	170	10	9	280	9
Added Vol:	0	0	0	0	0	0	0	794	0	0	610	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	10	10	10	10	10	10	964	10	9	890	9
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	11	11	11	11	11	11	1015	11	9	937	9
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	11	11	11	11	11	11	11	1015	11	9	937	9
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	2012	2006	1020	2007	2002	937	946	xxxx	xxxxx	1025	xxxx	xxxxx
Potent Cap.:	44	60	290	45	60	324	733	xxxx	xxxxx	685	xxxx	xxxxx
Move Cap.:	36	58	290	36	59	324	733	xxxx	xxxxx	685	xxxx	xxxxx
Volume/Cap:	0.29	0.18	0.04	0.29	0.18	0.03	0.01	xxxx	xxxx	0.01	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	10.0	xxxx	xxxxx	10.3	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	A	*	*	B	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	62	xxxxx	xxxx	63	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	2.0	xxxxx	xxxxx	2.0	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	112	xxxxx	xxxxx	110	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	F	*	*	F	*	*	*	*	*	*	*			
ApproachDel:	111.7			109.7			xxxxxx			xxxxxx					
ApproachLOS:	F			F			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #5 Wilfred Ave/Labath Ave

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

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

Volume Module:

Base Vol:	44	14	396	180	31	11	40	109	41	188	245	189
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	14	396	180	31	11	40	109	41	188	245	189
Added Vol:	0	0	0	0	0	0	0	794	0	0	610	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	44	14	396	180	31	11	40	903	41	188	855	189
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	46	15	417	189	33	12	42	951	43	198	900	199
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	46	15	417	189	33	12	42	951	43	198	900	199

Critical Gap Module:

Critical Gp:	7.5	6.5	6.9	7.5	6.5	6.9	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	1918	2551	497	1962	2473	549	1099	xxxx	xxxxx	994	xxxx	xxxxx
Potent Cap.:	42	27	524	39	30	484	643	xxxx	xxxxx	704	xxxx	xxxxx
Move Cap.:	0	18	524	2	20	484	643	xxxx	xxxxx	704	xxxx	xxxxx
Volume/Cap:	xxxx	0.81	0.80	93.42	1.60	0.02	0.07	xxxx	xxxx	0.28	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.2	xxxx	xxxxx	1.2	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	11.0	xxxx	xxxxx	12.1	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	B	*	*	B	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	0	xxxxx	xxxx	2	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	31.7	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	*	*	*	F	*	*	*	*	*	*	*			
ApproachDel:	xxxxxxx			xxxxxxx			xxxxxxx			xxxxxxx					
ApproachLOS:		F			F			*			*				

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #6 Dowell Ave/Wilfred Ave

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

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

Volume Module:

Base Vol:	143	105	559	217	41	119	53	359	273	509	360	273
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:	143	105	559	217	41	119	53	359	273	509	360	273
Added Vol:	0	0	0	0	0	0	0	794	0	0	610	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	143	105	559	217	41	119	53	1153	273	509	970	273
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	151	111	588	228	43	125	56	1214	287	536	1021	287
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	151	111	588	228	43	125	56	1214	287	536	1021	287
Critical Gap Module:												
Critical Gp:	7.5	6.5	6.9	7.5	6.5	6.9	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	3073	3849	751	3010	3849	654	1308	xxxx	xxxxx	1501	xxxx	xxxxx
Potent Cap.:	5	4	358	6	4	414	536	xxxx	xxxxx	452	xxxx	xxxxx
Move Cap.:	0	0	358	0	0	414	536	xxxx	xxxxx	452	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	1.64	xxxx	xxxx	0.30	0.10	xxxx	xxxx	1.18	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.3	xxxx	xxxxx	20.3	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	12.5	xxxx	xxxxx	131.7	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	B	*	*	F	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	0	xxxxx	xxxx	0	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*			
ApproachDel:	xxxxxxx			xxxxxxx			xxxxxxx			xxxxxxx					
ApproachLOS:		F			F			*			*				

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

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

Intersection #7 Wilfred Ave/Redwood Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 1.762
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 275.0
Optimal Cycle: 180 Level Of Service: F

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module:

Table with 13 columns representing different traffic metrics and 13 rows of data including Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module:

Table with 13 columns representing saturation flow metrics and 4 rows of data including Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with 13 columns representing capacity analysis metrics and 13 rows of data including Vol/Sat, Crit Moves, Green/Cycle, etc.

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

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

 Intersection #9 Wilfred Ave/101 SB Ramp

Cycle (sec): 145 Critical Vol./Cap.(X): 1.238
 Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 106.7
 Optimal Cycle: 180 Level Of Service: F

Street Name: US-101 SB Ramp Wilfred Avenue
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Permitted			Protected			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	1	0	1	0	0	1	2	0	2

Volume Module:

Base Vol:	0	0	0	355	288	482	0	1257	283	77	682	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:	0	0	0	355	288	482	0	1257	283	77	682	0
Added Vol:	0	0	0	0	0	218	0	204	579	0	380	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	355	288	700	0	1461	862	77	1062	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	374	303	737	0	1538	907	81	1118	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	374	303	737	0	1538	907	81	1118	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	374	303	737	0	1538	907	81	1118	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.83	0.88	0.88	1.00	0.93	0.93	0.93	0.98	1.00
Lanes:	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.26	0.74	2.00	2.00	0.00
Final Sat.:	0	0	0	1583	1665	1665	0	2211	1304	3538	3724	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.24	0.18	0.44	0.00	0.70	0.70	0.02	0.30	0.00
Crit Moves:						****		****		****		
Green/Cycle:	0.00	0.00	0.00	0.36	0.36	0.36	0.00	0.56	0.56	0.02	0.58	0.00
Volume/Cap:	0.00	0.00	0.00	0.66	0.51	1.24	0.00	1.24	1.24	1.24	0.52	0.00
Uniform Del:	0.0	0.0	0.0	39.2	36.6	46.6	0.0	31.8	31.8	71.2	18.2	0.0
IncrcmntDel:	0.0	0.0	0.0	2.9	0.2	117.2	0.0	112	111.6	188.6	0.2	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	0.0	0.0	0.0	42.1	36.8	163.8	0.0	143	143.4	259.7	18.5	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	42.1	36.8	163.8	0.0	143	143.4	259.7	18.5	0.0
LOS by Move:	A	A	A	D	D	F	A	F	F	F	B	A
HCM2k95thQ:	0	0	0	26	19	79	0	125	125	9	26	0

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #10 Golf Course Dr/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 1.551
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 186.3
Optimal Cycle: 180 Level Of Service: F

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module:

Table with 13 columns representing different traffic metrics and 13 rows of data including Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module:

Table with 13 columns representing saturation flow metrics and 4 rows of data including Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with 13 columns representing capacity analysis metrics and 13 rows of data including Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2k95thQ.

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

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

Intersection #11 Roberts Lake Dr/Golf Course Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.457
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 10.9
Optimal Cycle: 25 Level Of Service: B

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Permitted, Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns for different volume metrics and 13 rows for various adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 13 columns for saturation flow metrics and 4 rows for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns for capacity analysis metrics and 13 rows for Vol/Sat, Crit Moves, Green/Cycle, etc.

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #12 101 NB Ramps/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 1.369

Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 150.0

Optimal Cycle: 180 Level Of Service: F

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 1 1 0 1 0 2 0 1 1 1 0 0 1 0 0 1! 0 0

Volume Module:
Base Vol: 552 413 2 7 616 732 473 3 47 8 3 5
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: 552 413 2 7 616 732 473 3 47 8 3 5
Added Vol: 0 0 0 0 0 194 368 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 552 413 2 7 616 926 841 3 47 8 3 5
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 581 435 2 7 648 975 885 3 49 8 3 5
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 581 435 2 7 648 975 885 3 49 8 3 5
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 581 435 2 7 648 975 885 3 49 8 3 5

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.93 0.98 0.98 0.93 0.98 0.83 0.93 0.93 0.83 0.92 0.92 0.92
Lanes: 1.00 1.99 0.01 1.00 2.00 1.00 1.99 0.01 1.00 0.50 0.19 0.31
Final Sat.: 1769 3702 18 1769 3724 1583 3536 13 1583 870 326 544

Capacity Analysis Module:
Vol/Sat: 0.33 0.12 0.12 0.00 0.17 0.62 0.25 0.25 0.03 0.01 0.01 0.01
Crit Moves: ****
Green/Cycle: 0.24 0.67 0.67 0.02 0.45 0.45 0.18 0.18 0.18 0.01 0.01 0.01
Volume/Cap: 1.37 0.18 0.18 0.18 0.39 1.37 1.37 1.37 0.17 1.37 1.37 1.37
Uniform Del: 38.0 6.3 6.3 47.9 18.3 27.5 40.9 40.9 34.5 49.6 49.6 49.6
IncrcmntDel:180.3 0.0 0.0 2.0 0.1 174.8 175.6 176 0.3 394.3 394 394.3
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Delay/Veh: 218.3 6.3 6.3 49.9 18.5 202.3 216.4 216 34.7 444.0 444 444.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 218.3 6.3 6.3 49.9 18.5 202.3 216.4 216 34.7 444.0 444 444.0
LOS by Move: F A A D B F F C F F F
HCM2k95thQ: 61 5 5 1 13 96 49 49 3 5 5 5

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #13 New Driveway/Stony Point Rd

Average Delay (sec/veh): 1.0 Worst Case Level Of Service: C[24.3]

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	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1

Volume Module:

Base Vol:	0	765	0	0	664	0	0	0	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
Initial Bse:	0	765	0	0	664	0	0	0	0	0	0	0
Added Vol:	0	0	480	0	174	0	0	0	0	0	0	86
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	765	480	0	838	0	0	0	0	0	0	86
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	805	505	0	882	0	0	0	0	0	0	91
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	805	505	0	882	0	0	0	0	0	0	91

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3

Capacity Module:

Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	1058
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	276
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	276
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.33

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	1.4			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	24.3			
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	C			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*			
ApproachDel:	xxxxxxx			xxxxxxx			xxxxxxx					24.3			
ApproachLOS:	*			*			*					C			

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #14 New Driveway/Labath Ave

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

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

Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	0	1	0	0	0	1	0	0	0	1

Volume Module:

Base Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Growth Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Bse:	0	0	0	0	0	0	0	0	0	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	0	0	0	0	0	0	0	0	0
User Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHF Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHF Volume:	0	0	0	0	0	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	0	0	0	0	0	0	0	0	0

Critical Gap Module:

Critical Gp:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FollowUpTim:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Capacity Module:

Cnflict Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Potent Cap.:	0	0	0	0	0	0	0	0	0	0	0	0
Move Cap.:	1	1	1	1	1	1	1	1	1	1	1	1
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Level Of Service Module:

2Way95thQ:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Del:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LOS by Move:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	0	0	0	0	0	0	0	0	0	0	0	0
SharedQueue:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Shrd ConDel:	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Shared LOS:												
ApproachDel:	0.0			0.0			0.0			0.0		
ApproachLOS:												

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #15 Redwood Dr/Business Park Dr

Average Delay (sec/veh): 3.2 Worst Case Level Of Service: C[16.5]

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:	1	0	2	0	0	1	1	0	0	0	0	0

Volume Module:

Base Vol:	12	359	0	0	363	25	144	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:	12	359	0	0	363	25	144	0	31	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	12	359	0	0	363	25	144	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	13	378	0	0	382	26	152	0	33	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	13	378	0	0	382	26	152	0	33	0	0	0

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.8	xxxx	6.9	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	408	xxxx	xxxxx	xxxx	xxxx	xxxxx	609	xxxx	204	xxxx	xxxx	xxxxx
Potent Cap.:	1161	xxxx	xxxxx	xxxx	xxxx	xxxxx	431	xxxx	809	xxxx	xxxx	xxxxx
Move Cap.:	1161	xxxx	xxxxx	xxxx	xxxx	xxxxx	428	xxxx	809	xxxx	xxxx	xxxxx
Volume/Cap:	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	0.35	xxxx	0.04	xxxx	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	1.6	xxxx	0.1	xxxx	xxxx	xxxxx
Control Del:	8.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	18.0	xxxx	9.6	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	*	*	*	C	*	A	*	*	*
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			16.5			xxxxxx		
ApproachLOS:	*			*			C			*		

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #16 Rohnert Park Expwy/Stony Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.979

Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 45.9

Optimal Cycle: 180 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Control:	Permitted			Protected			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1	0	0	1	0	0	0	1	0	0

Volume Module:

Base Vol:	0	547	253	205	460	0	0	0	0	253	0	217
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	547	253	205	460	0	0	0	0	253	0	217
Added Vol:	0	117	0	63	111	0	0	0	0	0	0	363
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	664	253	268	571	0	0	0	0	253	0	580
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	699	266	282	601	0	0	0	0	266	0	611
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	699	266	282	601	0	0	0	0	266	0	611
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	699	266	282	601	0	0	0	0	266	0	611

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.98	0.83	0.93	0.98	1.00	1.00	1.00	1.00	0.93	1.00	0.83
Lanes:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	1862	1583	1769	1862	0	0	0	0	1769	0	1583

Capacity Analysis Module:

Vol/Sat:	0.00	0.38	0.17	0.16	0.32	0.00	0.00	0.00	0.00	0.15	0.00	0.39
Crit Moves:	****			****						****		
Green/Cycle:	0.00	0.38	0.38	0.16	0.55	0.00	0.00	0.00	0.00	0.39	0.00	0.39
Volume/Cap:	0.00	0.98	0.44	0.98	0.59	0.00	0.00	0.00	0.00	0.38	0.00	0.98
Uniform Del:	0.0	30.4	22.9	41.7	15.2	0.0	0.0	0.0	0.0	21.6	0.0	29.9
IncrcmntDel:	0.0	28.5	0.5	47.2	0.9	0.0	0.0	0.0	0.0	0.4	0.0	30.7
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Delay/Veh:	0.0	58.9	23.4	88.9	16.1	0.0	0.0	0.0	0.0	22.0	0.0	60.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	58.9	23.4	88.9	16.1	0.0	0.0	0.0	0.0	22.0	0.0	60.6
LOS by Move:	A	E	C	F	B	A	A	A	A	C	A	E
HCM2k95thQ:	0	45	12	24	23	0	0	0	0	11	0	41

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #17 Rohnert Park Expwy/Labath Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.543

Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 34.0

Optimal Cycle: 44 Level Of Service: C

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 2 0 0 1 1 1 0 0 1 0 1 0 2 0 1 1 0 3 0 1

Volume Module:

Base Vol: 69 26 153 281 40 97 83 585 53 116 492 92
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: 69 26 153 281 40 97 83 585 53 116 492 92
Added Vol: 0 0 0 0 0 0 0 63 0 0 363 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 69 26 153 281 40 97 83 648 53 116 855 92
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 73 27 161 296 42 102 87 682 56 122 900 97
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 73 27 161 296 42 102 87 682 56 122 900 97
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 73 27 161 296 42 102 87 682 56 122 900 97

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.93 0.85 0.85 0.93 0.88 0.88 0.93 0.98 0.83 0.93 0.98 0.83
Lanes: 2.00 0.29 1.71 1.00 0.29 0.71 1.00 2.00 1.00 1.00 3.00 1.00
Final Sat.: 3538 472 2776 1769 486 1179 1769 3724 1583 1769 5586 1583

Capacity Analysis Module:

Vol/Sat: 0.02 0.06 0.06 0.17 0.09 0.09 0.05 0.18 0.04 0.07 0.16 0.06
Crit Moves: ****
Green/Cycle: 0.07 0.12 0.12 0.25 0.29 0.29 0.26 0.28 0.28 0.24 0.26 0.26
Volume/Cap: 0.29 0.48 0.48 0.67 0.30 0.30 0.19 0.65 0.13 0.29 0.62 0.24
Uniform Del: 44.2 41.1 41.1 33.8 27.6 27.6 28.8 31.7 26.9 31.0 32.6 29.2
IncrcmntDel: 0.7 0.9 0.9 3.9 0.3 0.3 0.2 1.5 0.1 0.4 0.8 0.3
InitQueueDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Delay/Veh: 44.8 42.1 42.1 37.7 27.9 27.9 29.0 33.2 27.0 31.4 33.5 29.5
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 44.8 42.1 42.1 37.7 27.9 27.9 29.0 33.2 27.0 31.4 33.5 29.5
LOS by Move: D D D D C C C C C C C
HCM2k95thQ: 3 7 7 17 7 7 4 19 3 6 17 5

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #18 Rohnert Park Expwy/Redwood Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.767
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 36.9
Optimal Cycle: 70 Level Of Service: D

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module:

Table with 13 columns representing different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module:

Table with 13 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with 13 columns. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2k95thQ.

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #19 Rohnert Park Expwy/101 SB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.716
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 56.0
Optimal Cycle: 180 Level Of Service: E

Table with columns: Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Permitted, Protected), Rights (Include, Ignore), Min. Green, Lanes.

Volume Module: Table with columns: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module: Table with columns: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module: Table with columns: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

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

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

 Intersection #20 Rohnert Park Expwy/101 NB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.672
 Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 24.1
 Optimal Cycle: 39 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	0	1	0	4	0	3	0

Volume Module:

Base Vol:	339	0	345	14	0	3	21	1556	298	0	841	383
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:	339	0	345	14	0	3	21	1556	298	0	841	383
Added Vol:	351	0	0	0	0	0	0	11	0	0	12	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	690	0	345	14	0	3	21	1567	298	0	853	383
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00	0.95	0.95	0.00
PHF Volume:	726	0	363	15	0	3	22	1649	0	0	898	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	726	0	363	15	0	3	22	1649	0	0	898	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Final Vol.:	726	0	363	15	0	3	22	1649	0	0	898	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	1.00	0.83	0.93	1.00	0.83	0.21	0.98	1.00	1.00	0.98	1.00
Lanes:	1.00	0.00	2.00	1.00	0.00	1.00	1.00	4.00	1.00	0.00	3.00	1.00
Final Sat.:	1769	0	3165	1769	0	1583	400	7448	1900	0	5586	1900

Capacity Analysis Module:

Vol/Sat:	0.41	0.00	0.11	0.01	0.00	0.00	0.06	0.22	0.00	0.00	0.16	0.00
Crit Moves:	****			****			****					
Green/Cycle:	0.61	0.00	0.57	0.04	0.00	0.00	0.33	0.33	0.00	0.00	0.33	0.00
Volume/Cap:	0.67	0.00	0.20	0.20	0.00	xxxx	0.17	0.67	0.00	0.00	0.49	0.00
Uniform Del:	12.9	0.0	10.5	46.3	0.0	0.0	23.8	28.9	0.0	0.0	26.8	0.0
IncrcmntDel:	1.7	0.0	0.1	1.4	0.0	0.0	0.6	0.7	0.0	0.0	0.2	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00
Delay/Veh:	14.5	0.0	10.5	47.7	0.0	0.0	24.4	29.6	0.0	0.0	27.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	14.5	0.0	10.5	47.7	0.0	0.0	24.4	29.6	0.0	0.0	27.0	0.0
LOS by Move:	B	A	B	D	A	A	C	C	A	A	C	A
HCM2k95thQ:	27	0	5	1	0	2	1	21	0	0	14	0

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #21 Rohnert Park Expwy/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.806
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 34.9
Optimal Cycle: 78 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Split Phase, Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2k95thQ.

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #22 Gravenstein Hwy (SR 116)/ Stoney Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.839

Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 42.4

Optimal Cycle: 87 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Control:	Protected			Protected			Protected			Protected							
Rights:	Include			Include			Include			Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0					
Lanes:	1	0	1	0	1	0	1	1	0	1	1	0	1	0	2	0	1

Volume Module:

Base Vol:	323	483	113	107	358	235	149	583	228	140	661	113
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:	323	483	113	107	358	235	149	583	228	140	661	113
Added Vol:	0	0	0	111	0	0	0	0	0	0	0	117
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	323	483	113	218	358	235	149	583	228	140	661	230
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	340	508	119	229	377	247	157	614	240	147	696	242
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	340	508	119	229	377	247	157	614	240	147	696	242
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	340	508	119	229	377	247	157	614	240	147	696	242

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.89	0.89	0.93	0.93	0.83
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.44	0.56	1.00	2.00	1.00
Final Sat.:	1769	1862	1583	1769	1862	1583	1769	2436	953	1769	3538	1583

Capacity Analysis Module:

Vol/Sat:	0.19	0.27	0.08	0.13	0.20	0.16	0.09	0.25	0.25	0.08	0.20	0.15
Crit Moves:	****			****			****			****		
Green/Cycle:	0.23	0.33	0.33	0.15	0.25	0.25	0.12	0.30	0.30	0.10	0.28	0.28
Volume/Cap:	0.82	0.84	0.23	0.84	0.82	0.63	0.71	0.84	0.84	0.84	0.71	0.56
Uniform Del:	36.3	31.3	24.6	41.1	35.6	33.7	42.1	32.7	32.7	44.2	32.7	31.0
IncrcmntDel:	12.4	10.1	0.2	19.9	11.3	3.4	10.6	6.3	6.3	28.4	2.5	1.6
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	48.7	41.3	24.8	61.0	46.9	37.1	52.7	39.0	39.0	72.6	35.2	32.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	48.7	41.3	24.8	61.0	46.9	37.1	52.7	39.0	39.0	72.6	35.2	32.6
LOS by Move:	D	D	C	E	D	D	D	D	D	E	D	C
HCM2k95thQ:	22	30	5	18	24	15	12	27	27	13	21	13

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #23 Gravenstein Hwy (SR 116)/ Redwood Rd

Cycle (sec): 80 Critical Vol./Cap.(X): 0.884

Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 36.5

Optimal Cycle: 92 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	0	1	0	1	1	0	2

Volume Module:

Base Vol:	48	28	59	592	28	110	122	708	32	53	797	406
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	28	59	592	28	110	122	708	32	53	797	406
Added Vol:	0	0	0	0	0	0	0	111	0	0	117	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	48	28	59	592	28	110	122	819	32	53	914	406
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	51	29	62	623	29	116	128	862	34	56	962	427
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	51	29	62	623	29	116	128	862	34	56	962	427
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	51	29	62	623	29	116	128	862	34	56	962	427

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.88	0.88	0.93	0.86	0.86	0.93	0.93	0.93	0.93	0.93	0.83
Lanes:	1.00	0.32	0.68	1.00	0.20	0.80	1.00	1.92	0.08	1.00	2.00	1.00
Final Sat.:	1769	538	1134	1769	332	1306	1769	3384	132	1769	3538	1583

Capacity Analysis Module:

Vol/Sat:	0.03	0.05	0.05	0.35	0.09	0.09	0.07	0.25	0.25	0.03	0.27	0.27
Crit Moves:	****			****			****			****		
Green/Cycle:	0.11	0.06	0.06	0.40	0.35	0.35	0.08	0.35	0.35	0.04	0.31	0.31
Volume/Cap:	0.25	0.88	0.88	0.88	0.25	0.25	0.88	0.73	0.73	0.73	0.88	0.88
Uniform Del:	32.5	37.2	37.2	22.4	18.6	18.6	36.3	22.9	22.9	37.8	26.3	26.3
IncrcmntDel:	0.7	53.4	53.4	12.8	0.2	0.2	42.5	2.4	2.4	30.7	8.8	16.5
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	33.1	90.6	90.6	35.1	18.9	18.9	78.8	25.3	25.3	68.6	35.2	42.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	33.1	90.6	90.6	35.1	18.9	18.9	78.8	25.3	25.3	68.6	35.2	42.7
LOS by Move:	C	F	F	D	B	B	E	C	C	E	D	D
HCM2k95thQ:	3	9	9	31	5	5	11	21	21	6	27	24

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

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

 Intersection #24 Gravenstein Hwy and SB 101 Ramps

Cycle (sec): 80 Critical Vol./Cap.(X): 0.595
 Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 28.2
 Optimal Cycle: 99 Level Of Service: C

Street Name: SB 101 Ramps Gravenstein Hwy
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Permitted			Protected			Permitted			Protected		
Rights:	Include			Include			Ignore			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	2	0	1	0	0	1	1	0	0

Volume Module:

Base Vol:	0	0	0	640	0	258	0	953	412	66	998	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:	0	0	0	640	0	258	0	953	412	66	998	0
Added Vol:	0	0	0	0	0	0	0	0	111	0	117	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	640	0	258	0	953	523	66	1115	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00	0.95	0.95	0.95
PHF Volume:	0	0	0	674	0	272	0	1003	0	69	1174	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	674	0	272	0	1003	0	69	1174	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Final Vol.:	0	0	0	674	0	272	0	1003	0	69	1174	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.90	1.00	0.83	1.00	0.93	1.00	0.93	0.93	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	0.00	2.00	1.00	1.00	2.00	0.00
Final Sat.:	0	0	0	3432	0	1583	0	3538	1900	1769	3538	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.20	0.00	0.17	0.00	0.28	0.00	0.04	0.33	0.00
Crit Moves:				****							****	
Green/Cycle:	0.00	0.00	0.00	0.21	0.00	0.21	0.00	0.31	0.00	0.36	0.67	0.00
Volume/Cap:	0.00	0.00	0.00	0.91	0.00	0.80	0.00	0.91	0.00	0.11	0.49	0.00
Uniform Del:	0.0	0.0	0.0	30.7	0.0	29.8	0.0	26.6	0.0	16.9	6.4	0.0
IncrcmntDel:	0.0	0.0	0.0	15.9	0.0	12.6	0.0	11.6	0.0	0.1	0.2	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
Delay/Veh:	0.0	0.0	0.0	46.6	0.0	42.3	0.0	38.2	0.0	17.0	6.6	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	46.6	0.0	42.3	0.0	38.2	0.0	17.0	6.6	0.0
LOS by Move:	A	A	A	D	A	D	A	D	A	B	A	A
HCM2k95thQ:	0	0	0	22	0	16	0	29	0	2	15	0

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

 Intersection #25 Gravenstein Hwy and NB 101 Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.844
 Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 23.0
 Optimal Cycle: 80 Level Of Service: C

Street Name: NB 101 Ramps Gravenstein Hwy
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R
 -----|-----|-----|-----|

Control: Protected Permitted Permitted Permitted
 Rights: Include Include Include Include
 Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
 Lanes: 1 0 0 0 1 0 0 0 0 0 0 2 0 0 0 0 2 0 0
 -----|-----|-----|-----|

Volume Module:
 Base Vol: 375 0 273 0 0 0 0 1596 0 0 683 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: 375 0 273 0 0 0 0 1596 0 0 683 0
 Added Vol: 117 0 0 0 0 0 0 0 0 0 0 0
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
 Initial Fut: 492 0 273 0 0 0 0 1596 0 0 683 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
 PHF Volume: 518 0 287 0 0 0 0 1680 0 0 719 0
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 Reduced Vol: 518 0 287 0 0 0 0 1680 0 0 719 0
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Final Vol.: 518 0 287 0 0 0 0 1680 0 0 719 0
 -----|-----|-----|-----|

Saturation Flow Module:
 Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
 Adjustmet: 0.93 1.00 0.83 1.00 1.00 1.00 1.00 0.93 1.00 1.00 0.93 1.00
 Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 2.00 0.00 0.00 2.00 0.00
 Final Sat.: 1769 0 1583 0 0 0 0 3538 0 0 3538 0
 -----|-----|-----|-----|

Capacity Analysis Module:
 Vol/Sat: 0.29 0.00 0.18 0.00 0.00 0.00 0.00 0.47 0.00 0.00 0.20 0.00
 Crit Moves: **** *
 Green/Cycle: 0.35 0.00 0.35 0.00 0.00 0.00 0.00 0.56 0.00 0.00 0.56 0.00
 Volume/Cap: 0.84 0.00 0.52 0.00 0.00 0.00 0.00 0.84 0.00 0.00 0.36 0.00
 Uniform Del: 30.1 0.0 26.0 0.0 0.0 0.0 0.0 18.2 0.0 0.0 12.0 0.0
 IncremntDel: 10.3 0.0 0.9 0.0 0.0 0.0 0.0 3.5 0.0 0.0 0.1 0.0
 InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 Delay Adj: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 1.00 0.00 0.00 1.00 0.00
 Delay/Veh: 40.5 0.0 27.0 0.0 0.0 0.0 0.0 21.7 0.0 0.0 12.1 0.0
 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 AdjDel/Veh: 40.5 0.0 27.0 0.0 0.0 0.0 0.0 21.7 0.0 0.0 12.1 0.0
 LOS by Move: D A C A A A A C A A B A
 HCM2k95thQ: 30 0 14 0 0 0 0 41 0 0 12 0

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #26 Millbrae Ave/Stony Point Rd

Average Delay (sec/veh): 8.7 Worst Case Level Of Service: F[144.7]

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: 1 0 2 0 1 1 0 1 1 0 0 0 1! 0 0 0 1 0 0 1

Volume Module:

Base Vol: 7 728 26 132 585 7 11 5 8 23 25 219
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: 7 728 26 132 585 7 11 5 8 23 25 219
Added Vol: 0 86 0 0 121 0 0 0 0 0 0 22
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 7 814 26 132 706 7 11 5 8 23 25 241
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 7 857 27 139 743 7 12 5 8 24 26 254
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 7 857 27 139 743 7 12 5 8 24 26 254

Critical Gap Module:

Critical Gp: 4.1 xxxx xxxxx 4.1 xxxx xxxxx 7.5 6.5 6.9 7.5 6.5 6.9
FollowUpTim: 2.2 xxxx xxxxx 2.2 xxxx xxxxx 3.5 4.0 3.3 3.5 4.0 3.3

Capacity Module:

Cnflct Vol: 751 xxxx xxxxx 884 xxxx xxxxx 1481 1924 375 1524 1900 428
Potent Cap.: 868 xxxx xxxxx 774 xxxx xxxxx 89 68 628 82 70 580
Move Cap.: 868 xxxx xxxxx 774 xxxx xxxxx 28 55 628 65 57 580
Volume/Cap: 0.01 xxxx xxxxx 0.18 xxxx xxxxx 0.42 0.10 0.01 0.37 0.46 0.44

Level Of Service Module:

2Way95thQ: 0.0 xxxx xxxxx 0.7 xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx 2.2
Control Del: 9.2 xxxx xxxxx 10.7 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx 15.9
LOS by Move: A * * B * * * * * C
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx 48 xxxxx 60 xxxx xxxxx
SharedQueue:xxxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx 2.0 xxxxx 3.8 xxxx xxxxx
Shrd ConDel:xxxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx 145 xxxxx 181.9 xxxx xxxxx
Shared LOS: * * * * * * * F * F * *
ApproachDel: xxxxxx xxxxxx 144.7 43.5
ApproachLOS: * * F E

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #27 Millbrae Ave/Primrose Ave

Average Delay (sec/veh): 0.8 Worst Case Level Of Service: B[12.4]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 1 0 0 0 0 1! 0 0 0 0 1! 0 0

Volume Module:

Base Vol: 1 0 2 0 1 0 1 161 5 7 265 2
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: 1 0 2 0 1 0 1 161 5 7 265 2
Added Vol: 22 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 23 0 2 0 1 0 1 161 5 7 265 2
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 24 0 2 0 1 0 1 169 5 7 279 2
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 24 0 2 0 1 0 1 169 5 7 279 2

Critical Gap Module:

Critical Gp: 7.1 6.5 6.2 xxxxx 6.5 xxxxx 4.1 xxxxx xxxxx 4.1 xxxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 xxxxx 4.0 xxxxx 2.2 xxxxx xxxxx 2.2 xxxxx xxxxx

Capacity Module:

Cnflict Vol: 469 470 172 xxxxx 472 xxxxx 281 xxxxx xxxxx 175 xxxxx xxxxx
Potent Cap.: 508 495 877 xxxxx 493 xxxxx 1293 xxxxx xxxxx 1414 xxxxx xxxxx
Move Cap.: 504 492 877 xxxxx 491 xxxxx 1293 xxxxx xxxxx 1414 xxxxx xxxxx
Volume/Cap: 0.05 0.00 0.00 xxxxx 0.00 xxxxx 0.00 xxxxx xxxxx 0.01 xxxxx xxxxx

Level Of Service Module:

2Way95thQ: xxxxx xxxxx xxxxx xxxxx 0.0 xxxxx 0.0 xxxxx xxxxx 0.0 xxxxx xxxxx
Control Del: xxxxx xxxxx xxxxx xxxxx 12.4 xxxxx 7.8 xxxxx xxxxx 7.6 xxxxx xxxxx
LOS by Move: * * * * B * A * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx 522 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue: xxxxx 0.2 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd ConDel: xxxxx 12.3 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: * B * * * * * * * * * *
ApproachDel: 12.3 12.4 xxxxxxx xxxxxxx
ApproachLOS: B B * *

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #28 Millbrae Ave/Whister Ave

Average Delay (sec/veh): 0.5 Worst Case Level Of Service: B[12.4]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 1 0 0 0 0 0 1! 0 0 0 0 1! 0 0 0 0 1! 0 0

Volume Module:

Base Vol: 1 9 0 4 0 1 1 146 2 4 279 8
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 1 9 0 4 0 1 1 146 2 4 279 8
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 1 9 0 4 0 1 1 146 2 4 279 8
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 1 9 0 4 0 1 1 154 2 4 294 8
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 1 9 0 4 0 1 1 154 2 4 294 8

Critical Gap Module:

Critical Gp: 7.1 6.5 xxxxx 7.1 6.5 6.2 4.1 xxxxx xxxxx 4.1 xxxxx xxxxx
FollowUpTim: 3.5 4.0 xxxxx 3.5 4.0 3.3 2.2 xxxxx xxxxx 2.2 xxxxx xxxxx

Capacity Module:

Cnflct Vol: 464 467 xxxxx 468 464 298 302 xxxxx xxxxx 156 xxxxx xxxxx
Potent Cap.: 512 496 xxxxx 509 498 746 1270 xxxxx xxxxx 1437 xxxxx xxxxx
Move Cap.: 510 494 xxxxx 500 496 746 1270 xxxxx xxxxx 1437 xxxxx xxxxx
Volume/Cap: 0.00 0.02 xxxxx 0.01 0.00 0.00 0.00 xxxxx xxxxx 0.00 xxxxx xxxxx

Level Of Service Module:

2Way95thQ: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx 0.0 xxxxx xxxxx
Control Del: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 7.8 xxxxx xxxxx 7.5 xxxxx xxxxx
LOS by Move: * * * * * A * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: 496 xxxxx xxxxx xxxxx 535 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue: 0.1 xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd ConDel: 12.4 xxxxx xxxxx xxxxx 11.8 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: B * * * B * * * * *
ApproachDel: 12.4 11.8 xxxxxxx xxxxxxx
ApproachLOS: B B * *

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #29 Millbrae Ave/Langner Ave

Average Delay (sec/veh): 1.1 Worst Case Level Of Service: B[11.2]

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

Volume Module:

Base Vol:	27	0	25	0	0	0	0	154	27	7	331	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:	27	0	25	0	0	0	0	154	27	7	331	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	27	0	25	0	0	0	0	154	27	7	331	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	28	0	26	0	0	0	0	162	28	7	348	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	28	0	26	0	0	0	0	162	28	7	348	0

Critical Gap Module:

Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	539	539	176	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	191	xxxx	xxxxx
Potent Cap.:	507	452	872	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1395	xxxx	xxxxx
Move Cap.:	505	449	872	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1395	xxxx	xxxxx
Volume/Cap:	0.06	0.00	0.03	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.01	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	633	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	0.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx			
Shrd ConDel:	xxxxx	11.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx			
Shared LOS:	*	B	*	*	*	*	*	*	*	A	*	*			
ApproachDel:	11.2		xxxxxxx			xxxxxxx			xxxxxxx						
ApproachLOS:	B		*			*			*						

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #30 Millbrae Ave/Labath Ave

Average Delay (sec/veh): 3.7 Worst Case Level Of Service: B[13.5]

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

Volume Module:

Base Vol:	114	0	26	0	0	0	0	160	23	36	225	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:	114	0	26	0	0	0	0	160	23	36	225	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	114	0	26	0	0	0	0	160	23	36	225	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	120	0	27	0	0	0	0	168	24	38	237	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	120	0	27	0	0	0	0	168	24	38	237	0

Critical Gap Module:

Critical Gp:	6.4	6.5	6.2	7.1	6.5	6.2	xxxxx	xxxxx	xxxxx	4.1	xxxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	xxxxx	xxxxx	xxxxx	2.2	xxxxx	xxxxx

Capacity Module:

Cnflict Vol:	493	493	181	507	505	237	xxxxx	xxxxx	xxxxx	193	xxxxx	xxxxx
Potent Cap.:	539	480	867	479	472	807	xxxxx	xxxxx	xxxxx	1393	xxxxx	xxxxx
Move Cap.:	527	467	867	454	459	807	xxxxx	xxxxx	xxxxx	1393	xxxxx	xxxxx
Volume/Cap:	0.23	0.00	0.03	0.00	0.00	0.00	xxxxx	xxxxx	xxxxx	0.03	xxxxx	xxxxx

Level Of Service Module:

2Way95thQ:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.1	xxxxx	xxxxx			
Control Del:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	7.7	xxxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxxx	569	xxxxx	xxxxx	0	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
SharedQueue:	xxxxx	1.0	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.1	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shrd ConDel:	xxxxx	13.5	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	7.7	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shared LOS:	*	B	*	*	*	*	*	*	*	A	*	*	*	*	*
ApproachDel:	13.5			xxxxxxx			xxxxxxx			xxxxxxx					
ApproachLOS:	B			*			*			*					*

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #31 Millbrae Ave/Dowdell Ave

Average Delay (sec/veh): 1.4 Worst Case Level Of Service: B[11.6]

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

Volume Module:

Base Vol:	55	0	0	0	0	0	0	131	51	0	235	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:	55	0	0	0	0	0	0	131	51	0	235	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	55	0	0	0	0	0	0	131	51	0	235	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	58	0	0	0	0	0	0	138	54	0	247	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	58	0	0	0	0	0	0	138	54	0	247	0

Critical Gap Module:

Critical Gp:	6.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	412	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Potent Cap.:	600	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Move Cap.:	600	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Volume/Cap:	0.10	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx

Level Of Service Module:

2Way95thQ:	0.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Control Del:	11.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
LOS by Move:	B	*	*	*	*	*	*	*	*	*	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	11.6			xxxxxx			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	B			*			*			*			*		

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

**NEAR-TERM 2008 + ALTERNATIVE C
TRAFFIC CONDITIONS
(TRAFFIX)**

 Impact Analysis Report
 Level Of Service

Intersection	Base		Future		Change in
	Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C	
# 1 Wilfred Ave/Stony Point Rd	F	238.0 0.000	F	OVRFL 0.000	+3418.852 D/
# 2 Wilfred Ave/Primrose Ave	B	11.3 0.000	C	24.4 0.000	+13.139 D/V
# 3 Wilfred Ave/Whistler Ave	B	11.3 0.000	F	OVRFL 0.000	+ 1.8E+0308
# 4 Langner Ave/Wilfred Ave	B	11.3 0.000	F	132.1 0.000	+120.790 D/V
# 5 Wilfred Ave/Labath Ave	E	48.3 0.000	F	OVRFL 0.000	+16700.108 D
# 6 Dowell Ave/Wilfred Ave	F	333.5 0.000	F	OVRFL 0.000	+ 1.8E+0308
# 7 Wilfred Ave/Redwood Dr	D	37.1 0.708	F	197.5 1.464	+160.447 D/V
# 8 Redwood Dr/Commerce Blvd	C	26.6 0.290	C	26.6 0.294	+ 0.001 D/V
# 9 Wilfred Ave/101 SB Ramp	C	30.6 0.630	D	53.7 1.026	+23.045 D/V
# 10 Golf Course Dr/Commerce Blvd	D	44.0 0.925	F	132.0 1.355	+87.944 D/V
# 11 Roberts Lake Dr/Golf Course Dr	B	15.6 0.512	B	15.5 0.516	-0.049 D/V
# 12 101 NB Ramps/Commerce Blvd	C	34.9 0.877	F	110.2 1.224	+75.256 D/V
# 13 New Driveway/Stony Point Rd	A	0.0 0.000	A	0.0 0.000	+ 0.000 D/V
# 14 New Driveway/Labath Ave		0.0 0.000		0.0 0.000	+ 0.000 D/V
# 15 Redwood Dr/Business Park Dr	D	26.5 0.000	D	26.5 0.000	+ 0.000 D/V
# 16 Rohnert Park Expwy/Stony Point	C	24.0 0.665	D	36.8 0.910	+12.792 D/V
# 17 Rohnert Park Expwy/Labath Ave	C	29.8 0.576	C	34.1 0.615	+ 4.348 D/V
# 18 Rohnert Park Expwy/Redwood Dr	D	35.6 0.711	D	44.0 0.711	+ 8.416 D/V
# 19 Rohnert Park Expwy/101 SB Ramp	C	21.1 0.716	C	21.5 0.747	+ 0.432 D/V
# 20 Rohnert Park Expwy/101 NB Ramp	B	15.8 0.437	B	19.2 0.518	+ 3.414 D/V
# 21 Rohnert Park Expwy/Commerce Bl	C	33.9 0.815	C	33.9 0.815	-0.003 D/V
# 22 Gravenstein Hwy (SR 116)/ Ston	D	37.1 0.766	D	39.3 0.782	+ 2.179 D/V
# 23 Gravenstein Hwy (SR 116)/ Redw	C	28.6 0.734	C	28.6 0.775	+ 0.043 D/V
# 24 Gravenstein Hwy and SB 101 Ram	B	17.6 0.562	B	18.4 0.636	+ 0.778 D/V
# 25 Gravenstein Hwy and NB 101 Ram	B	17.3 0.707	C	21.1 0.784	+ 3.760 D/V

Intersection		Base		Future		Change in
		Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C	
# 26 Millbrae Ave/Stony Point Rd	E	38.2	0.000	F 57.8	0.000	+19.557 D/V
# 27 Millbrae Ave/Primrose Ave	B	11.4	0.000	B 11.6	0.000	+ 0.196 D/V
# 28 Millbrae Ave/Whistler Ave	B	11.5	0.000	B 11.5	0.000	+ 0.050 D/V
# 29 Millbrae Ave/Langner Ave	A	9.9	0.000	A 9.9	0.000	+ 0.000 D/V
# 30 Millbrae Ave/Labath Ave	B	11.2	0.000	B 11.2	0.000	+ 0.000 D/V
# 31 Millbrae Ave/Dowdell Ave	B	11.3	0.000	B 11.3	0.000	+ 0.000 D/V

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1 Wilfred Ave/Stony Point Rd

Average Delay (sec/veh): 810.1 Worst Case Level Of Service: F[3656.8]

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:	1	0	0	1	0	0	0	0	0	1	0	0

Volume Module:

Base Vol:	12	758	62	75	514	3	0	8	14	106	13	97
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	12	758	62	75	514	3	0	8	14	106	13	97
Added Vol:	0	0	255	121	0	0	0	0	0	226	0	75
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	12	758	317	196	514	3	0	8	14	332	13	172
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	13	798	334	206	541	3	0	8	15	349	14	181
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	13	798	334	206	541	3	0	8	15	349	14	181

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflict Vol:	544	xxxx	xxxxx	1132	xxxx	xxxxx	xxxx	2112	543	1957	1947	965
Potent Cap.:	1035	xxxx	xxxxx	625	xxxx	xxxxx	xxxx	52	544	48	65	312
Move Cap.:	1035	xxxx	xxxxx	625	xxxx	xxxxx	xxxx	34	544	29	43	312
Volume/Cap:	0.01	xxxx	xxxx	0.33	xxxx	xxxx	xxxx	0.25	0.03	12.25	0.32	0.58

Level Of Service Module:

2Way95thQ:	0.0	xxxx	xxxxx	1.4	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	3.4
Control Del:	8.5	xxxx	xxxxx	13.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	31.3
LOS by Move:	A	*	*	B	*	*	*	*	*	*	*	D
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	85	29	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	1.0	44.8	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	63.0	5464	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	F	F	*	*
ApproachDel:	xxxxxx			xxxxxx				63.0			3656.8	
ApproachLOS:	*			*				F			F	

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Wilfred Ave/Primrose Ave

Average Delay (sec/veh): 1.7 Worst Case Level Of Service: C[24.4]

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

Volume Module:

Base Vol:	10	10	10	10	10	10	10	131	10	10	201	10
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:	10	10	10	10	10	10	10	131	10	10	201	10
Added Vol:	0	11	0	0	0	0	0	376	0	0	301	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	21	10	10	10	10	10	507	10	10	502	10
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	22	11	11	11	11	11	534	11	11	528	11
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	11	22	11	11	11	11	11	534	11	11	528	11

Critical Gap Module:

Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	1125	1120	539	1131	1120	534	539	xxxx	xxxxx	544	xxxx	xxxxx
Potent Cap.:	184	208	546	182	208	550	1040	xxxx	xxxxx	1035	xxxx	xxxxx
Move Cap.:	171	204	546	161	204	550	1040	xxxx	xxxxx	1035	xxxx	xxxxx
Volume/Cap:	0.06	0.11	0.02	0.07	0.05	0.02	0.01	xxxx	xxxx	0.01	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.5	xxxx	xxxxx	8.5	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	228	xxxxx	xxxx	232	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	0.7	xxxxx	xxxxx	0.5	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	24.4	xxxxx	xxxxx	22.9	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	C	*	*	C	*	*	*	*	*	*	*			
ApproachDel:		24.4			22.9		xxxxxxx		xxxxxxx		xxxxxxx				
ApproachLOS:		C			C		*		*		*				

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 Wilfred Ave/Whistler Ave

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

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

Volume Module:

Base Vol:	10	10	10	10	10	10	10	131	10	10	200	20
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:	10	10	10	10	10	10	10	131	10	10	200	20
Added Vol:	301	22	742	0	0	0	0	0	376	836	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	311	32	752	10	10	10	10	131	386	846	200	20
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	327	34	792	11	11	11	11	138	406	891	211	21
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	327	34	792	11	11	11	11	138	406	891	211	21

Critical Gap Module:

Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	2375	2375	341	2777	2567	221	232	xxxx	xxxxx	544	xxxx	xxxxx
Potent Cap.:	24	35	706	12	26	824	1348	xxxx	xxxxx	1035	xxxx	xxxxx
Move Cap.:	0	0	706	0	0	824	1348	xxxx	xxxxx	1035	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	1.12	xxxx	xxxx	0.01	0.01	xxxx	xxxx	0.86	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	11.4	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.7	xxxx	xxxxx	25.4	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	A	*	*	D	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	0	xxxxx	xxxx	0	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*			
ApproachDel:	xxxxxxx			xxxxxxx			xxxxxxx			xxxxxxx					
ApproachLOS:		F			F			*			*				

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Langner Ave/Wilfred Ave

Average Delay (sec/veh): 4.0 Worst Case Level Of Service: F[132.1]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 1! 0 0 0 0 1! 0 0

Volume Module:

Base Vol: 10 10 10 10 10 10 10 130 10 10 200 10
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: 10 10 10 10 10 10 10 130 10 10 200 10
Added Vol: 0 0 0 0 0 0 0 0 742 0 0 836 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 10 10 10 10 10 10 10 872 10 10 1036 10
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 11 11 11 11 11 11 11 918 11 11 1091 11
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 11 11 11 11 11 11 11 918 11 11 1091 11

Critical Gap Module:

Critical Gp: 7.1 6.5 6.2 7.1 6.5 6.2 4.1 xxxx xxxxx 4.1 xxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 3.5 4.0 3.3 2.2 xxxx xxxxx 2.2 xxxx xxxxx

Capacity Module:

Cnflict Vol: 2072 2066 923 2072 2066 1096 1101 xxxx xxxxx 928 xxxx xxxxx
Potent Cap.: 40 55 330 40 55 262 642 xxxx xxxxx 745 xxxx xxxxx
Move Cap.: 32 53 330 32 53 262 642 xxxx xxxxx 745 xxxx xxxxx
Volume/Cap: 0.33 0.20 0.03 0.33 0.20 0.04 0.02 xxxx xxxx 0.01 xxxx xxxx

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx 0.1 xxxx xxxxx 0.0 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxxx xxxx xxxxx 10.7 xxxx xxxxx 9.9 xxxx xxxxx
LOS by Move: * * * * * B * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx 57 xxxxx xxxx 56 xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
SharedQueue:xxxxx 2.2 xxxxx xxxxx 2.2 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 130 xxxxx xxxxx 132 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS: * F * * F * * * * *
ApproachDel: 130.0 132.1 xxxxxxx xxxxxxx
ApproachLOS: F F * *

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #5 Wilfred Ave/Labath Ave

Average Delay (sec/veh): 1275.9 Worst Case Level Of Service: F[16748.4]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 1! 0 0 0 0 1! 0 0

Volume Module:

Base Vol: 35 6 266 112 21 14 60 13 77 116 159 99
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 6 266 112 21 14 60 13 77 116 159 99
Added Vol: 0 0 0 0 0 0 0 742 0 0 836 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 35 6 266 112 21 14 60 755 77 116 995 99
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 37 6 280 118 22 15 63 795 81 122 1047 104
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 37 6 280 118 22 15 63 795 81 122 1047 104

Critical Gap Module:

Critical Gp: 7.1 6.5 6.2 7.1 6.5 6.2 4.1 xxxx xxxxx 4.1 xxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 3.5 4.0 3.3 2.2 xxxx xxxxx 2.2 xxxx xxxxx

Capacity Module:

Cnflict Vol: 2324 2357 835 2448 2346 1099 1152 xxxx xxxxx 876 xxxx xxxxx
Potent Cap.: 27 36 370 22 37 261 614 xxxx xxxxx 779 xxxx xxxxx
Move Cap.: 7 27 370 3 27 261 614 xxxx xxxxx 779 xxxx xxxxx
Volume/Cap: 5.43 0.24 0.76 33.79 0.81 0.06 0.10 xxxx xxxx 0.16 xxxx xxxx

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx 0.3 xxxx xxxxx 0.6 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx 11.5 xxxx xxxxx 10.5 xxxx xxxxx
LOS by Move: * * * * * B * * B * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx 50 xxxxx xxxx 4 xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
SharedQueue:xxxxx 37.3 xxxxx xxxxx 21.5 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 2597 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS: * F * * F * * * * * * *
ApproachDel: 2597.2 xxxxxx xxxxxx xxxxxx
ApproachLOS: F F * *

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #6 Dowell Ave/Wilfred Ave

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

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

Volume Module:

Base Vol:	80	45	222	88	13	47	52	191	148	187	247	89
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:	80	45	222	88	13	47	52	191	148	187	247	89
Added Vol:	0	0	0	0	0	0	0	742	0	0	836	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	80	45	222	88	13	47	52	933	148	187	1083	89
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	84	47	234	93	14	49	55	982	156	197	1140	94
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	84	47	234	93	14	49	55	982	156	197	1140	94
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	2782	2797	1060	2891	2828	1187	1234	xxxx	xxxxx	1138	xxxx	xxxxx
Potent Cap.:	12	19	275	10	18	232	572	xxxx	xxxxx	621	xxxx	xxxxx
Move Cap.:	0	11	275	0	10	232	572	xxxx	xxxxx	621	xxxx	xxxxx
Volume/Cap:	xxxx	4.35	0.85	xxxx	1.32	0.21	0.10	xxxx	xxxx	0.32	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.3	xxxx	xxxxx	1.4	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	12.0	xxxx	xxxxx	13.5	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	B	*	*	B	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	0	xxxxx	xxxx	0	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*			
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx					
ApproachLOS:	F			F			*			*					

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

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

Intersection #7 Wilfred Ave/Redwood Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 1.464
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 197.5
Optimal Cycle: 180 Level Of Service: F

Table with columns for Approach (North, South, East, West Bound) and Movement (L, T, R). Rows include Control, Rights, Min. Green, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

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

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

Intersection #8 Redwood Dr/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.294
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 26.6
Optimal Cycle: 31 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module:

Table with 13 columns representing different traffic metrics and 13 rows of data including Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module:

Table with 13 columns representing saturation flow metrics and 4 rows of data including Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with 13 columns representing capacity analysis metrics and 13 rows of data including Vol/Sat, Crit Moves, Green/Cycle, etc.

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

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

Intersection #9 Wilfred Ave/101 SB Ramp

Cycle (sec): 145 Critical Vol./Cap.(X): 1.026
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 53.7
Optimal Cycle: 180 Level Of Service: D

Street Name: US-101 SB Ramp Wilfred Avenue
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Permitted Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 0 0 0 1 0 1 1 0 0 0 1 1 0 2 0 2 0 0

Volume Module:
Base Vol: 0 0 0 328 324 459 0 737 219 89 476 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: 0 0 0 328 324 459 0 737 219 89 476 0
Added Vol: 0 0 0 0 0 218 0 204 527 0 606 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 328 324 677 0 941 746 89 1082 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 0 0 0 345 341 713 0 991 785 94 1139 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 0 0 345 341 713 0 991 785 94 1139 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 0 0 0 345 341 713 0 991 785 94 1139 0

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 1.00 1.00 1.00 0.83 0.88 0.88 1.00 0.92 0.92 0.93 0.98 1.00
Lanes: 0.00 0.00 0.00 1.00 1.00 1.00 0.00 1.12 0.88 2.00 2.00 0.00
Final Sat.: 0 0 0 1583 1674 1674 0 1940 1538 3538 3724 0

Capacity Analysis Module:
Vol/Sat: 0.00 0.00 0.00 0.22 0.20 0.43 0.00 0.51 0.51 0.03 0.31 0.00
Crit Moves: ****
Green/Cycle: 0.00 0.00 0.00 0.41 0.41 0.41 0.00 0.50 0.50 0.03 0.52 0.00
Volume/Cap: 0.00 0.00 0.00 0.53 0.49 1.03 0.00 1.03 1.03 1.03 0.58 0.00
Uniform Del: 0.0 0.0 0.0 31.8 31.2 42.4 0.0 36.4 36.4 70.6 23.7 0.0
IncrcmntDel: 0.0 0.0 0.0 0.8 0.2 35.1 0.0 28.7 28.7 101.6 0.5 0.0
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 0.00 0.00 0.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 0.00
Delay/Veh: 0.0 0.0 0.0 32.6 31.4 77.5 0.0 65.1 65.1 172.2 24.2 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 0.0 0.0 32.6 31.4 77.5 0.0 65.1 65.1 172.2 24.2 0.0
LOS by Move: A A A C C E A E E F C A
HCM2k95thQ: 0 0 0 21 20 62 0 74 74 9 30 0

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #10 Golf Course Dr/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 1.355

Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 132.0

Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	0	0	0	1	1	0	1

Volume Module:

Base Vol:	222	108	569	42	41	9	0	558	507	413	344	117
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:	222	108	569	42	41	9	0	558	507	413	344	117
Added Vol:	594	0	0	0	0	0	0	11	194	0	12	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	816	108	569	42	41	9	0	569	701	413	356	117
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	859	114	599	44	43	9	0	599	738	435	375	123
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	859	114	599	44	43	9	0	599	738	435	375	123
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	859	114	599	44	43	9	0	599	738	435	375	123

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.86	0.86	0.93	0.95	0.95	1.00	0.90	0.90	0.93	0.94	0.94
Lanes:	1.00	0.32	1.68	1.00	0.82	0.18	0.00	1.00	1.00	1.00	1.51	0.49
Final Sat.:	1769	519	2736	1769	1486	326	0	1707	1707	1769	2699	887

Capacity Analysis Module:

Vol/Sat:	0.49	0.22	0.22	0.02	0.03	0.03	0.00	0.35	0.43	0.25	0.14	0.14
Crit Moves:	****				****				****	****		
Green/Cycle:	0.36	0.34	0.34	0.04	0.02	0.02	0.00	0.32	0.32	0.18	0.50	0.50
Volume/Cap:	1.36	0.64	0.64	0.64	1.36	1.36	0.00	1.10	1.36	1.36	0.28	0.28
Uniform Del:	32.1	27.8	27.8	47.4	48.9	48.9	0.0	34.1	34.1	40.9	14.5	14.5
IncrcmntDel:	170.0	1.3	1.3	18.8	266	266.1	0.0	57.7	166.5	179.0	0.1	0.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	202.1	29.1	29.1	66.2	315	315.0	0.0	91.8	200.6	219.9	14.6	14.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	202.1	29.1	29.1	66.2	315	315.0	0.0	91.8	200.6	219.9	14.6	14.6
LOS by Move:	F	C	C	E	F	F	A	F	F	F	B	B
HCM2k95thQ:	85	19	19	5	10	10	0	47	74	48	9	9

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

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

Intersection #11 Roberts Lake Dr/Golf Course Dr

Cycle (sec): 80 Critical Vol./Cap.(X): 0.516
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 15.5
Optimal Cycle: 28 Level Of Service: B

Table with columns: Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Permitted, Protected), Rights (Include), Min. Green, Lanes.

Volume Module: Table with columns: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module: Table with columns: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module: Table with columns: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

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

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

 Intersection #12 101 NB Ramps/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 1.224
 Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 110.2
 Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound						
Movement:	L	T	R	L	T	R	L	T	R	L	T	R				
Control:	Protected			Protected			Split Phase			Split Phase						
Rights:	Include			Include			Include			Include						
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0				
Lanes:	1	0	1	1	0	1	1	1	0	0	1	0	0	1	0	0

Volume Module:

Base Vol:	514	489	2	7	435	512	387	3	40	8	3	5
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:	514	489	2	7	435	512	387	3	40	8	3	5
Added Vol:	0	0	0	0	0	194	594	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	514	489	2	7	435	706	981	3	40	8	3	5
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	541	515	2	7	458	743	1033	3	42	8	3	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	541	515	2	7	458	743	1033	3	42	8	3	5
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	541	515	2	7	458	743	1033	3	42	8	3	5

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.98	0.98	0.93	0.98	0.83	0.93	0.93	0.83	0.92	0.92	0.92
Lanes:	1.00	1.99	0.01	1.00	2.00	1.00	1.99	0.01	1.00	0.50	0.19	0.31
Final Sat.:	1769	3705	15	1769	3724	1583	3538	11	1583	870	326	544

Capacity Analysis Module:

Vol/Sat:	0.31	0.14	0.14	0.00	0.12	0.47	0.29	0.29	0.03	0.01	0.01	0.01
Crit Moves:	****					****		****			****	
Green/Cycle:	0.25	0.62	0.62	0.02	0.38	0.38	0.24	0.24	0.24	0.01	0.01	0.01
Volume/Cap:	1.22	0.23	0.23	0.23	0.32	1.22	1.22	1.22	0.11	1.22	1.22	1.22
Uniform Del:	37.5	8.6	8.6	48.4	21.7	30.8	38.1	38.1	29.8	49.6	49.6	49.6
IncrcmntDel:	119.5	0.1	0.1	3.5	0.1	114.9	111.2	111	0.1	323.4	323	323.4
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	157.0	8.6	8.6	51.9	21.8	145.7	149.3	149	29.9	373.0	373	373.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	157.0	8.6	8.6	51.9	21.8	145.7	149.3	149	29.9	373.0	373	373.0
LOS by Move:	F	A	A	D	C	F	F	F	C	F	F	F
HCM2k95thQ:	51	7	7	1	10	65	49	49	2	4	4	4

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #13 New Driveway/Stony Point Rd

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

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 1 0 0 0 0 1 0 0 0 0 0 0 0 0 1

Volume Module:

Base Vol: 0 832 0 0 634 0 0 0 0 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
Initial Bse: 0 832 0 0 634 0 0 0 0 0 0 0 0
Added Vol: 0 255 0 0 226 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 1087 0 0 860 0 0 0 0 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
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 0 1144 0 0 905 0 0 0 0 0 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 0 1144 0 0 905 0 0 0 0 0 0 0 0

Critical Gap Module:

Critical Gp:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 6.2
FollowUpTim:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 3.3

Capacity Module:

Cnflict Vol: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 1144
Potent Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 245
Move Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 245
Volume/Cap: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.00

Level Of Service Module:

2Way95thQ: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Control Del:xxxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
LOS by Move: * * * * * * * * * * * * * * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue:xxxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd ConDel:xxxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: * * * * * * * * * * * * * * * *
ApproachDel: xxxxxxx xxxxxxx xxxxxxx xxxxxxx
ApproachLOS: * * * *

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #14 New Driveway/Labath Ave

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

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	0	0	0	1	0	1	0	0	0	1

Volume Module:

Base Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Growth Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Bse:	0	0	0	0	0	0	0	0	0	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	0	0	0	0	0	0	0	0	0
User Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHF Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHF Volume:	0	0	0	0	0	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	0	0	0	0	0	0	0	0	0

Critical Gap Module:

Critical Gp:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FollowUpTim:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Capacity Module:

Cnflict Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Potent Cap.:	0	0	0	0	0	0	0	0	0	0	0	0
Move Cap.:	1	1	1	1	1	1	1	1	1	1	1	1
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Level Of Service Module:

2Way95thQ:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Del:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LOS by Move:												
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	0	0	0	0	0	0	0	0	0	0	0	0
SharedQueue:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Shrd ConDel:	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Shared LOS:												
ApproachDel:	0.0			0.0			0.0			0.0		
ApproachLOS:												

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #15 Redwood Dr/Business Park Dr

Average Delay (sec/veh): 5.6 Worst Case Level Of Service: D[26.5]

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: 1 0 2 0 0 0 0 1 1 0 1 0 0 0 0 0 0

Volume Module:

Base Vol: 33 464 0 0 489 41 172 0 89 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: 33 464 0 0 489 41 172 0 89 0 0 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 33 464 0 0 489 41 172 0 89 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 35 488 0 0 515 43 181 0 94 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 35 488 0 0 515 43 181 0 94 0 0 0

Critical Gap Module:

Critical Gp: 4.1 xxxxx xxxxx xxxxx xxxxx xxxxx 6.8 6.5 6.9 xxxxx xxxxx xxxxx
FollowUpTim: 2.2 xxxxx xxxxx xxxxx xxxxx xxxxx 3.5 4.0 3.3 xxxxx xxxxx xxxxx

Capacity Module:

Cnflict Vol: 558 xxxxx xxxxx xxxxx xxxxx xxxxx 850 1094 279 xxxxx xxxxx xxxxx
Potent Cap.: 1023 xxxxx xxxxx xxxxx xxxxx xxxxx 303 216 724 xxxxx xxxxx xxxxx
Move Cap.: 1023 xxxxx xxxxx xxxxx xxxxx xxxxx 296 208 724 xxxxx xxxxx xxxxx
Volume/Cap: 0.03 xxxxx xxxxx xxxxx xxxxx xxxxx 0.61 0.00 0.13 xxxxx xxxxx xxxxx

Level Of Service Module:

2Way95thQ: 0.1 xxxxx xxxxx xxxxx xxxxx xxxxx 3.8 xxxxx xxxxx xxxxx xxxxx xxxxx
Control Del: 8.6 xxxxx xxxxx xxxxx xxxxx xxxxx 34.7 xxxxx xxxxx xxxxx xxxxx xxxxx
LOS by Move: A * * * * * D * * * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 724 xxxxx xxxxx xxxxx
SharedQueue: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.4 xxxxx xxxxx xxxxx
Shrd ConDel: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 10.7 xxxxx xxxxx xxxxx
Shared LOS: * * * * * * * * * * B * * *
ApproachDel: xxxxxxx xxxxxxx 26.5 xxxxxxx
ApproachLOS: * * * * * D *

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

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

 Intersection #16 Rohnert Park Expwy/Stony Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.910
 Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 36.8
 Optimal Cycle: 100 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Protected			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1	0	1	0	0	0	0	0	1	0

Volume Module:

Base Vol:	0	546	251	212	421	0	0	0	0	257	0	286
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	546	251	212	421	0	0	0	0	257	0	286
Added Vol:	0	117	0	122	104	0	0	0	0	0	0	138
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	663	251	334	525	0	0	0	0	257	0	424
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	698	264	352	553	0	0	0	0	271	0	446
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	698	264	352	553	0	0	0	0	271	0	446
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	698	264	352	553	0	0	0	0	271	0	446

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.98	0.83	0.93	0.98	1.00	1.00	1.00	1.00	0.93	1.00	0.83
Lanes:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	1862	1583	1769	1862	0	0	0	0	1769	0	1583

Capacity Analysis Module:

Vol/Sat:	0.00	0.37	0.17	0.20	0.30	0.00	0.00	0.00	0.00	0.15	0.00	0.28
Crit Moves:	****			****						****		
Green/Cycle:	0.00	0.41	0.41	0.22	0.63	0.00	0.00	0.00	0.00	0.31	0.00	0.31
Volume/Cap:	0.00	0.91	0.41	0.91	0.47	0.00	0.00	0.00	0.00	0.49	0.00	0.91
Uniform Del:	0.0	27.7	20.8	38.1	9.7	0.0	0.0	0.0	0.0	28.1	0.0	33.2
IncrcmntDel:	0.0	14.9	0.4	25.0	0.3	0.0	0.0	0.0	0.0	0.7	0.0	21.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Delay/Veh:	0.0	42.6	21.2	63.1	10.0	0.0	0.0	0.0	0.0	28.8	0.0	54.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	42.6	21.2	63.1	10.0	0.0	0.0	0.0	0.0	28.8	0.0	54.2
LOS by Move:	A	D	C	E	B	A	A	A	A	C	A	D
HCM2k95thQ:	0	40	11	25	17	0	0	0	0	13	0	30

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #17 Rohnert Park Expwy/Labath Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.615

Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 34.1

Optimal Cycle: 50 Level Of Service: C

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 2 0 0 1 1 1 0 0 1 0 1 0 2 0 1 1 0 3 0 1

Volume Module:

Base Vol: 64 19 154 270 43 99 50 600 36 202 575 154
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: 64 19 154 270 43 99 50 600 36 202 575 154
Added Vol: 0 0 0 0 0 0 0 122 0 0 138 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 64 19 154 270 43 99 50 722 36 202 713 154
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 67 20 162 284 45 104 53 760 38 213 751 162
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 67 20 162 284 45 104 53 760 38 213 751 162
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 67 20 162 284 45 104 53 760 38 213 751 162

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.93 0.85 0.85 0.93 0.88 0.88 0.93 0.98 0.83 0.93 0.98 0.83
Lanes: 2.00 0.22 1.78 1.00 0.30 0.70 1.00 2.00 1.00 1.00 3.00 1.00
Final Sat.: 3538 355 2874 1769 505 1162 1769 3724 1583 1769 5586 1583

Capacity Analysis Module:

Vol/Sat: 0.02 0.06 0.06 0.16 0.09 0.09 0.03 0.20 0.02 0.12 0.13 0.10
Crit Moves: ****
Green/Cycle: 0.07 0.12 0.12 0.25 0.29 0.29 0.26 0.28 0.28 0.24 0.26 0.26
Volume/Cap: 0.27 0.47 0.47 0.64 0.31 0.31 0.11 0.73 0.09 0.50 0.52 0.39
Uniform Del: 44.1 41.0 41.0 33.5 27.7 27.7 28.2 32.6 26.6 32.8 31.6 30.5
IncrcmntDel: 0.6 0.9 0.9 3.2 0.4 0.4 0.1 2.6 0.1 0.9 0.3 0.6
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Delay/Veh: 44.7 41.9 41.9 36.7 28.1 28.1 28.3 35.2 26.6 33.8 32.0 31.1
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 44.7 41.9 41.9 36.7 28.1 28.1 28.3 35.2 26.6 33.8 32.0 31.1
LOS by Move: D D D D C C C D C C C
HCM2k95thQ: 3 6 6 16 7 7 3 22 2 12 13 9

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

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

Intersection #18 Rohnert Park Expwy/Redwood Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.711
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 44.0
Optimal Cycle: 61 Level Of Service: D

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic volumes and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 13 columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, etc.

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #19 Rohnert Park Expwy/101 SB Ramps

Cycle (sec): 80 Critical Vol./Cap.(X): 0.747
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 21.5
Optimal Cycle: 62 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Permitted, Protected), Rights (Include, Ignore), Min. Green, and Lanes.

Volume Module: Table with 13 columns for different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns for different traffic movements. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns for different traffic movements. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueueDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2k95thQ.

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

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

 Intersection #20 Rohnert Park Expwy/101 NB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.518
 Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 19.2
 Optimal Cycle: 28 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	0	1	0	4	0	3	0

Volume Module:

Base Vol:	303	0	306	14	0	3	17	1631	273	0	985	350
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:	303	0	306	14	0	3	17	1631	273	0	985	350
Added Vol:	125	0	0	0	0	0	0	11	0	0	12	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	428	0	306	14	0	3	17	1642	273	0	997	350
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00	0.95	0.95	0.00
PHF Volume:	451	0	322	15	0	3	18	1728	0	0	1049	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	451	0	322	15	0	3	18	1728	0	0	1049	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Final Vol.:	451	0	322	15	0	3	18	1728	0	0	1049	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	1.00	0.83	0.93	1.00	0.83	0.21	0.98	1.00	1.00	0.98	1.00
Lanes:	1.00	0.00	2.00	1.00	0.00	1.00	1.00	4.00	1.00	0.00	3.00	1.00
Final Sat.:	1769	0	3165	1769	0	1583	400	7448	1900	0	5586	1900

Capacity Analysis Module:

Vol/Sat:	0.25	0.00	0.10	0.01	0.00	0.00	0.04	0.23	0.00	0.00	0.19	0.00
Crit Moves:	****			****			****					
Green/Cycle:	0.49	0.00	0.45	0.04	0.00	0.00	0.45	0.45	0.00	0.00	0.45	0.00
Volume/Cap:	0.52	0.00	0.22	0.22	0.00	xxxx	0.10	0.52	0.00	0.00	0.42	0.00
Uniform Del:	17.3	0.0	16.6	46.7	0.0	0.0	15.9	19.8	0.0	0.0	18.7	0.0
IncrcmntDel:	0.6	0.0	0.1	1.7	0.0	0.0	0.2	0.1	0.0	0.0	0.1	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00
Delay/Veh:	17.9	0.0	16.6	48.5	0.0	0.0	16.2	20.0	0.0	0.0	18.9	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	17.9	0.0	16.6	48.5	0.0	0.0	16.2	20.0	0.0	0.0	18.9	0.0
LOS by Move:	B	A	B	D	A	A	B	B	A	A	B	A
HCM2k95thQ:	18	0	6	1	0	2	1	18	0	0	14	0

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

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

 Intersection #21 Rohnert Park Expwy/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.815
 Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 33.9
 Optimal Cycle: 81 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound							
Movement:	L	T	R		L	T	R		L	T	R		L	T	R					
Control:	Split Phase				Split Phase				Protected				Protected							
Rights:	Include				Include				Include				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Lanes:	1	1	1	0	1	1	1	1	0	1	2	0	2	0	1	1	0	2	1	0

Volume Module:

Base Vol:	380	286	224	102	230	183	270	1138	545	141	771	170
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:	380	286	224	102	230	183	270	1138	545	141	771	170
Added Vol:	0	0	0	0	0	0	0	11	0	0	12	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	380	286	224	102	230	183	270	1149	545	141	783	170
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	400	301	236	107	242	193	284	1209	574	148	824	179
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	400	301	236	107	242	193	284	1209	574	148	824	179
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	400	301	236	107	242	193	284	1209	574	148	824	179

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.83	0.97	0.97	0.83	0.93	0.98	0.83	0.93	0.95	0.95
Lanes:	1.71	1.29	1.00	1.00	2.00	1.00	2.00	2.00	1.00	1.00	2.46	0.54
Final Sat.:	3098	2332	1583	1834	3668	1583	3538	3724	1583	1769	4466	970

Capacity Analysis Module:

Vol/Sat:	0.13	0.13	0.15	0.06	0.07	0.12	0.08	0.32	0.36	0.08	0.18	0.18
Crit Moves:			****			****			****	****		
Green/Cycle:	0.18	0.18	0.18	0.15	0.15	0.15	0.17	0.44	0.44	0.10	0.38	0.38
Volume/Cap:	0.71	0.71	0.81	0.39	0.44	0.81	0.48	0.73	0.81	0.81	0.48	0.48
Uniform Del:	38.3	38.3	39.2	38.4	38.7	41.2	37.8	22.8	24.2	43.9	23.4	23.4
IncrcmntDel:	2.3	2.3	16.1	0.3	0.4	19.2	0.6	1.7	7.3	23.8	0.2	0.2
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	40.7	40.7	55.4	38.7	39.1	60.4	38.4	24.5	31.5	67.7	23.6	23.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	40.7	40.7	55.4	38.7	39.1	60.4	38.4	24.5	31.5	67.7	23.6	23.6
LOS by Move:	D	D	E	D	D	E	D	C	C	E	C	C
HCM2k95thQ:	15	15	17	7	8	15	9	28	30	13	15	15

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #22 Gravenstein Hwy (SR 116)/ Stoney Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.782

Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 39.3

Optimal Cycle: 73 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Control:	Protected			Protected			Protected			Protected							
Rights:	Include			Include			Include			Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0					
Lanes:	1	0	1	0	1	0	1	1	0	1	1	0	1	0	2	0	1

Volume Module:

Base Vol:	321	494	108	96	342	219	133	484	202	128	589	103
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	321	494	108	96	342	219	133	484	202	128	589	103
Added Vol:	0	0	0	104	0	0	0	0	0	0	0	117
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	321	494	108	200	342	219	133	484	202	128	589	220
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	338	520	114	211	360	231	140	509	213	135	620	232
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	338	520	114	211	360	231	140	509	213	135	620	232
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	338	520	114	211	360	231	140	509	213	135	620	232

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.89	0.89	0.93	0.93	0.83
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.41	0.59	1.00	2.00	1.00
Final Sat.:	1769	1862	1583	1769	1862	1583	1769	2386	996	1769	3538	1583

Capacity Analysis Module:

Vol/Sat:	0.19	0.28	0.07	0.12	0.19	0.15	0.08	0.21	0.21	0.08	0.18	0.15
Crit Moves:	****			****			****			****		
Green/Cycle:	0.25	0.36	0.36	0.15	0.26	0.26	0.12	0.27	0.27	0.10	0.26	0.26
Volume/Cap:	0.75	0.78	0.20	0.78	0.75	0.57	0.69	0.78	0.78	0.78	0.69	0.57
Uniform Del:	34.5	28.7	22.3	40.8	34.3	32.4	42.5	33.6	33.6	44.1	33.6	32.5
IncrcmntDel:	7.1	6.0	0.2	13.7	6.7	1.9	9.4	4.4	4.4	20.3	2.2	2.0
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	41.6	34.6	22.4	54.5	41.0	34.3	51.9	38.0	38.0	64.4	35.9	34.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	41.6	34.6	22.4	54.5	41.0	34.3	51.9	38.0	38.0	64.4	35.9	34.5
LOS by Move:	D	C	C	D	D	C	D	D	D	E	D	C
HCM2k95thQ:	20	28	5	16	21	13	11	23	23	12	19	13

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #23 Gravenstein Hwy (SR 116)/ Redwood Rd

Cycle (sec): 80 Critical Vol./Cap.(X): 0.775

Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 28.6

Optimal Cycle: 67 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	0	1	0	1	1	0	1

Volume Module:

Base Vol:	48	24	63	485	29	96	102	625	32	53	738	333
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	24	63	485	29	96	102	625	32	53	738	333
Added Vol:	0	0	0	0	0	0	0	104	0	0	117	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	48	24	63	485	29	96	102	729	32	53	855	333
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	51	25	66	511	31	101	107	767	34	56	900	351
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	51	25	66	511	31	101	107	767	34	56	900	351
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	51	25	66	511	31	101	107	767	34	56	900	351

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.87	0.87	0.93	0.87	0.87	0.93	0.93	0.93	0.93	0.93	0.83
Lanes:	1.00	0.28	0.72	1.00	0.23	0.77	1.00	1.92	0.08	1.00	2.00	1.00
Final Sat.:	1769	458	1201	1769	382	1266	1769	3369	148	1769	3538	1583

Capacity Analysis Module:

Vol/Sat:	0.03	0.06	0.06	0.29	0.08	0.08	0.06	0.23	0.23	0.03	0.25	0.22
Crit Moves:	****			****			****			****		
Green/Cycle:	0.12	0.07	0.07	0.37	0.33	0.33	0.08	0.36	0.36	0.05	0.33	0.33
Volume/Cap:	0.24	0.78	0.78	0.78	0.24	0.24	0.78	0.64	0.64	0.64	0.78	0.67
Uniform Del:	32.1	36.5	36.5	22.2	19.7	19.7	36.2	21.4	21.4	37.3	24.2	23.2
IncrcmntDel:	0.6	26.8	26.8	5.8	0.2	0.2	23.5	1.1	1.1	14.7	3.3	3.5
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	32.7	63.3	63.3	27.9	19.9	19.9	59.6	22.5	22.5	52.0	27.6	26.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	32.7	63.3	63.3	27.9	19.9	19.9	59.6	22.5	22.5	52.0	27.6	26.7
LOS by Move:	C	E	E	C	B	B	E	C	C	D	C	C
HCM2k95thQ:	3	8	8	23	5	5	9	18	18	5	22	16

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #24 Gravenstein Hwy and SB 101 Ramps

Cycle (sec): 80 Critical Vol./Cap.(X): 0.636

Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 18.4

Optimal Cycle: 43 Level Of Service: B

Street Name: SB 101 Ramps Gravenstein Hwy

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

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Control: Permitted Protected Permitted Protected

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 0 0 0 0 0 2 0 0 1 0 0 0 2 0 1 1 0 2 0 0

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Volume Module:

Base Vol: 0 0 0 639 0 212 0 819 361 99 900 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: 0 0 0 639 0 212 0 819 361 99 900 0

Added Vol: 0 0 0 0 0 0 0 0 0 104 0 117 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 0 0 0 639 0 212 0 819 465 99 1017 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95

PHF Volume: 0 0 0 673 0 223 0 862 489 104 1071 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 0 0 0 673 0 223 0 862 489 104 1071 0

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Vol.: 0 0 0 673 0 223 0 862 489 104 1071 0

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Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900

Adjustment: 1.00 1.00 1.00 0.90 1.00 0.83 1.00 0.93 0.83 0.93 0.93 1.00

Lanes: 0.00 0.00 0.00 2.00 0.00 1.00 0.00 2.00 1.00 1.00 2.00 0.00

Final Sat.: 0 0 0 3432 0 1583 0 3538 1583 1769 3538 0

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Capacity Analysis Module:

Vol/Sat: 0.00 0.00 0.00 0.20 0.00 0.14 0.00 0.24 0.31 0.06 0.30 0.00

Crit Moves: **** **** ****

Green/Cycle: 0.00 0.00 0.00 0.35 0.00 0.35 0.00 0.43 0.43 0.10 0.54 0.00

Volume/Cap: 0.00 0.00 0.00 0.56 0.00 0.40 0.00 0.57 0.72 0.59 0.56 0.00

Uniform Del: 0.0 0.0 0.0 21.0 0.0 19.7 0.0 17.2 18.8 34.4 12.1 0.0

IncrcmntDel: 0.0 0.0 0.0 0.6 0.0 0.5 0.0 0.5 3.7 5.1 0.4 0.0

InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

Delay Adj: 0.00 0.00 0.00 1.00 0.00 1.00 0.00 1.00 1.00 1.00 1.00 0.00

Delay/Veh: 0.0 0.0 0.0 21.6 0.0 20.2 0.0 17.7 22.5 39.6 12.5 0.0

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 0.0 0.0 0.0 21.6 0.0 20.2 0.0 17.7 22.5 39.6 12.5 0.0

LOS by Move: A A A C A C A B C D B A

HCM2k95thQ: 0 0 0 14 0 9 0 17 21 7 18 0

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

 Intersection #25 Gravenstein Hwy and NB 101 Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.784
 Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 21.1
 Optimal Cycle: 65 Level Of Service: C

Street Name: NB 101 Ramps Gravenstein Hwy
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected			Permitted			Permitted			Permitted						
Rights:	Include			Include			Include			Include						
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0				
Lanes:	1	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0

Volume Module:

Base Vol:	351	0	236	0	0	0	0	1461	0	0	617	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:	351	0	236	0	0	0	0	1461	0	0	617	0
Added Vol:	117	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	468	0	236	0	0	0	0	1461	0	0	617	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	493	0	248	0	0	0	0	1538	0	0	649	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	493	0	248	0	0	0	0	1538	0	0	649	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	493	0	248	0	0	0	0	1538	0	0	649	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	1.00	0.83	1.00	1.00	1.00	1.00	0.93	1.00	1.00	0.93	1.00
Lanes:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
Final Sat.:	1769	0	1583	0	0	0	0	3538	0	0	3538	0

Capacity Analysis Module:

Vol/Sat:	0.28	0.00	0.16	0.00	0.00	0.00	0.00	0.43	0.00	0.00	0.18	0.00
Crit Moves:	****							****				
Green/Cycle:	0.36	0.00	0.36	0.00	0.00	0.00	0.00	0.55	0.00	0.00	0.55	0.00
Volume/Cap:	0.78	0.00	0.44	0.00	0.00	0.00	0.00	0.78	0.00	0.00	0.33	0.00
Uniform Del:	28.8	0.0	24.7	0.0	0.0	0.0	0.0	17.5	0.0	0.0	12.1	0.0
IncrcmntDel:	6.4	0.0	0.6	0.0	0.0	0.0	0.0	2.1	0.0	0.0	0.1	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00
Delay/Veh:	35.2	0.0	25.2	0.0	0.0	0.0	0.0	19.7	0.0	0.0	12.2	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	35.2	0.0	25.2	0.0	0.0	0.0	0.0	19.7	0.0	0.0	12.2	0.0
LOS by Move:	D	A	C	A	A	A	A	B	A	A	B	A
HCM2k95thQ:	27	0	12	0	0	0	0	35	0	0	11	0

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #26 Millbrae Ave/Stony Point Rd

Average Delay (sec/veh): 3.6 Worst Case Level Of Service: F[57.8]

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:	1	0	2	0	1	1	0	0	1	0	0	1

Volume Module:

Base Vol:	19	715	20	116	546	4	7	6	11	2	7	194
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:	19	715	20	116	546	4	7	6	11	2	7	194
Added Vol:	0	75	0	0	121	0	0	0	0	0	0	32
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	19	790	20	116	667	4	7	6	11	2	7	226
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	20	832	21	122	702	4	7	6	12	2	7	238
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	20	832	21	122	702	4	7	6	12	2	7	238

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.5	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflct Vol:	706	xxxx	xxxxx	853	xxxx	xxxxx	1408	1841	353	1470	1822	416
Potent Cap.:	901	xxxx	xxxxx	795	xxxx	xxxxx	101	76	649	90	78	591
Move Cap.:	901	xxxx	xxxxx	795	xxxx	xxxxx	48	63	649	71	65	591
Volume/Cap:	0.02	xxxx	xxxx	0.15	xxxx	xxxx	0.15	0.10	0.02	0.03	0.11	0.40

Level Of Service Module:

2Way95thQ:	0.1	xxxx	xxxxx	0.5	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	1.9
Control Del:	9.1	xxxx	xxxxx	10.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	15.1
LOS by Move:	A	*	*	B	*	*	*	*	*	*	*	C
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	93	xxxxx	66	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	1.0	xxxxx	0.5	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	57.8	xxxxx	68.4	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	F	*	F	*	*
ApproachDel:	xxxxxx			xxxxxx			57.8			17.2		
ApproachLOS:	*			*			F			C		

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #27 Millbrae Ave/Primrose Ave

Average Delay (sec/veh): 0.5 Worst Case Level Of Service: B[11.6]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 1 0 0 0 0 1! 0 0 0 0 1! 0 0

Volume Module:

Base Vol: 0 0 1 0 1 0 1 139 3 4 199 2
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 1 0 1 0 1 139 3 4 199 2
Added Vol: 11 0 0 0 0 0 0 0 0 0 0 22 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 11 0 1 0 1 0 1 139 3 4 221 2
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 12 0 1 0 1 0 1 146 3 4 233 2
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 12 0 1 0 1 0 1 146 3 4 233 2

Critical Gap Module:

Critical Gp: 7.1 6.5 6.2 xxxxx 6.5 xxxxx 4.1 xxxxx xxxxx 4.1 xxxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 xxxxx 4.0 xxxxx 2.2 xxxxx xxxxx 2.2 xxxxx xxxxx

Capacity Module:

Cnflict Vol: 393 393 148 xxxxx 394 xxxxx 235 xxxxx xxxxx 149 xxxxx xxxxx
Potent Cap.: 570 546 904 xxxxx 546 xxxxx 1344 xxxxx xxxxx 1444 xxxxx xxxxx
Move Cap.: 568 544 904 xxxxx 544 xxxxx 1344 xxxxx xxxxx 1444 xxxxx xxxxx
Volume/Cap: 0.02 0.00 0.00 xxxxx 0.00 xxxxx 0.00 xxxxx xxxxx 0.00 xxxxx xxxxx

Level Of Service Module:

2Way95thQ: xxxxx xxxxx xxxxx xxxxx 0.0 xxxxx 0.0 xxxxx xxxxx 0.0 xxxxx xxxxx
Control Del: xxxxx xxxxx xxxxx xxxxx 11.6 xxxxx 7.7 xxxxx xxxxx 7.5 xxxxx xxxxx
LOS by Move: * * * * B * A * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx 586 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue: xxxxx 0.1 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd ConDel: xxxxx 11.3 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: * B * * * * * * * * * *
ApproachDel: 11.3 11.6 xxxxxxx xxxxxxx
ApproachLOS: B B * *

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #28 Millbrae Ave/Whistler Ave

Average Delay (sec/veh): 1.2 Worst Case Level Of Service: B[11.5]

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

Volume Module:

Base Vol:	1	9	0	4	0	1	1	123	2	4	208	8
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	9	0	4	0	1	1	123	2	4	208	8
Added Vol:	22	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	23	9	0	4	0	1	1	123	2	4	208	8
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	24	9	0	4	0	1	1	129	2	4	219	8
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	24	9	0	4	0	1	1	129	2	4	219	8

Critical Gap Module:

Critical Gp:	7.1	6.5	xxxxx	7.1	6.5	6.2	4.1	xxxxx	xxxxx	4.1	xxxxx	xxxxx
FollowUpTim:	3.5	4.0	xxxxx	3.5	4.0	3.3	2.2	xxxxx	xxxxx	2.2	xxxxx	xxxxx

Capacity Module:

Cnflct Vol:	365	368	xxxxx	369	365	223	227	xxxxx	xxxxx	132	xxxxx	xxxxx
Potent Cap.:	595	564	xxxxx	591	566	821	1353	xxxxx	xxxxx	1466	xxxxx	xxxxx
Move Cap.:	593	562	xxxxx	582	564	821	1353	xxxxx	xxxxx	1466	xxxxx	xxxxx
Volume/Cap:	0.04	0.02	xxxxx	0.01	0.00	0.00	0.00	xxxxx	xxxxx	0.00	xxxxx	xxxxx

Level Of Service Module:

2Way95thQ:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	0.0	xxxxx	xxxxx
Control Del:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	7.7	xxxxx	xxxxx	7.5	xxxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	584	xxxxx	xxxxx	xxxxx	618	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
SharedQueue:	0.2	xxxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shrd ConDel:	11.5	xxxxx	xxxxx	xxxxx	10.9	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shared LOS:	B	*	*	*	B	*	*	*	*	*	*	*
ApproachDel:	11.5			10.9			xxxxxxx			xxxxxxx		
ApproachLOS:	B			B			*			*		

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #29 Millbrae Ave/Langner Ave

Average Delay (sec/veh): 0.4 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:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled										
Rights:	Include			Include			Include			Include										
Lanes:	0	0	1!	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0

Volume Module:

Base Vol:	5	0	11	0	0	0	0	149	9	4	270	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:	5	0	11	0	0	0	0	149	9	4	270	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	5	0	11	0	0	0	0	149	9	4	270	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	5	0	12	0	0	0	0	157	9	4	284	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	5	0	12	0	0	0	0	157	9	4	284	0

Critical Gap Module:

Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	454	454	162	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	166	xxxx	xxxxx
Potent Cap.:	567	505	889	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1424	xxxx	xxxxx
Move Cap.:	566	503	889	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1424	xxxx	xxxxx
Volume/Cap:	0.01	0.00	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	754	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	0.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx			
Shrd ConDel:	xxxxx	9.9	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx			
Shared LOS:	*	A	*	*	*	*	*	*	*	A	*	*			
ApproachDel:	9.9			xxxxxx			xxxxxx			xxxxxx					
ApproachLOS:	A			*			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #30 Millbrae Ave/Labath Ave

Average Delay (sec/veh): 1.0 Worst Case Level Of Service: B[11.2]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 1! 0 0 0 0 0 1 0 0 1 0 0 0 0

Volume Module:

Base Vol: 25 0 8 0 0 0 0 155 9 11 250 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: 25 0 8 0 0 0 0 155 9 11 250 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 25 0 8 0 0 0 0 155 9 11 250 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 26 0 8 0 0 0 0 163 9 12 263 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 26 0 8 0 0 0 0 163 9 12 263 0

Critical Gap Module:

Critical Gp: 6.4 6.5 6.2 7.1 6.5 6.2 xxxxx xxxxx xxxxx 4.1 xxxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 3.5 4.0 3.3 xxxxx xxxxx xxxxx 2.2 xxxxx xxxxx

Capacity Module:

Cnflict Vol: 454 454 168 458 459 263 xxxxx xxxxx xxxxx 173 xxxxx xxxxx
Potent Cap.: 567 505 881 516 502 780 xxxxx xxxxx xxxxx 1416 xxxxx xxxxx
Move Cap.: 564 501 881 508 498 780 xxxxx xxxxx xxxxx 1416 xxxxx xxxxx
Volume/Cap: 0.05 0.00 0.01 0.00 0.00 0.00 xxxxx xxxxx xxxxx 0.01 xxxxx xxxxx

Level Of Service Module:

2Way95thQ: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx
Control Del: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 7.6 xxxxx xxxxx
LOS by Move: * * * * * * * * * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx 618 xxxxx xxxxx 0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue: xxxxx 0.2 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx
Shrd ConDel: xxxxx 11.2 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 7.6 xxxxx xxxxx
Shared LOS: * B * * * * * * * * * A * *
ApproachDel: 11.2 xxxxxxx xxxxxxx xxxxxxx
ApproachLOS: B * * *

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #31 Millbrae Ave/Dowdell Ave

Average Delay (sec/veh): 1.0 Worst Case Level Of Service: B[11.3]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 1 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 1 0 0

Volume Module:

Base Vol: 37 0 0 0 0 0 0 0 135 22 0 235 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: 37 0 0 0 0 0 0 0 135 22 0 235 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 37 0 0 0 0 0 0 0 135 22 0 235 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 39 0 0 0 0 0 0 0 142 23 0 247 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 39 0 0 0 0 0 0 0 142 23 0 247 0

Critical Gap Module:

Critical Gp: 6.4 xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
FollowUpTim: 3.5 xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Capacity Module:

Cnflict Vol: 401 xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Potent Cap.: 609 xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Move Cap.: 609 xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Volume/Cap: 0.06 xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Level Of Service Module:

2Way95thQ: 0.2 xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Control Del: 11.3 xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
LOS by Move: B * * * * * * * * * * * * * * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue:xxxxxx xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd ConDel:xxxxxx xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: * * * * * * * * * * * * * * * *
ApproachDel: 11.3 xxxxxxx xxxxxxx xxxxxxx
ApproachLOS: B * * *

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

**CUMULATIVE 2020 + ALTERNATIVE C
TRAFFIC CONDITIONS
(TRAFFIX)**

 Impact Analysis Report
 Level Of Service

Intersection		Base		Future		Change in	
		Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C		
# 1 Wilfred Ave/Stony Point Rd	F	401.6	0.000	F OVRFL	0.000	+4318.691	D/
# 2 Wilfred Ave/Primrose Ave	B	12.4	0.000	D	29.0 0.000	+16.504	D/V
# 3 Wilfred Ave/Whistler Ave	B	12.4	0.000	F OVRFL	0.000	+ 1.8E+0308	
# 4 Langner Ave/Wilfred Ave	B	12.4	0.000	F	185.5 0.000	+173.089	D/V
# 5 Wilfred Ave/Labath Ave	F	491.5	0.000	F OVRFL	0.000	+ 1.8E+0308	
# 6 Dowell Ave/Wilfred Ave	F	OVRFL	0.000	F OVRFL	0.000	+ 0.000	D/V
# 7 Wilfred Ave/Redwood Dr	F	87.9	1.116	F	319.6 1.890	+231.665	D/V
# 9 Wilfred Ave/101 SB Ramp	C	33.2	0.823	F	98.3 1.220	+65.044	D/V
# 10 Golf Course Dr/Commerce Blvd	F	96.5	1.161	F	238.9 1.704	+142.373	D/V
# 11 Roberts Lake Dr/Golf Course Dr	B	11.1	0.453	B	10.9 0.457	-0.235	D/V
# 12 101 NB Ramps/Commerce Blvd	E	69.8	1.098	F	177.5 1.445	+107.657	D/V
# 13 New Driveway/Stony Point Rd	A	0.0	0.000	A	0.0 0.000	+ 0.000	D/V
# 14 New Driveway/Labath Ave		0.0	0.000		0.0 0.000	+ 0.000	D/V
# 15 Redwood Dr/Business Park Dr	C	16.5	0.000	C	16.5 0.000	+ 0.000	D/V
# 16 Rohnert Park Expwy/Stony Point	C	22.1	0.619	C	31.4 0.858	+ 9.368	D/V
# 17 Rohnert Park Expwy/Labath Ave	C	30.7	0.522	C	33.9 0.561	+ 3.165	D/V
# 18 Rohnert Park Expwy/Redwood Dr	D	36.0	0.697	D	36.1 0.694	+ 0.134	D/V
# 19 Rohnert Park Expwy/101 SB Ramp	C	24.5	0.710	C	24.7 0.740	+ 0.229	D/V
# 20 Rohnert Park Expwy/101 NB Ramp	B	17.1	0.449	C	20.0 0.529	+ 2.953	D/V
# 21 Rohnert Park Expwy/Commerce Bl	C	34.9	0.802	C	34.9 0.806	+ 0.024	D/V
# 22 Gravenstein Hwy (SR 116)/ Ston	D	39.9	0.829	D	42.2 0.834	+ 2.259	D/V
# 23 Gravenstein Hwy (SR 116)/ Redw	C	34.6	0.882	D	36.4 0.884	+ 1.882	D/V
# 24 Gravenstein Hwy and SB 101 Ram	B	17.0	0.585	C	28.2 0.595	+11.259	D/V
# 25 Gravenstein Hwy and NB 101 Ram	B	18.7	0.767	C	23.0 0.844	+ 4.301	D/V
# 26 Millbrae Ave/Stony Point Rd	F	70.6	0.000	F	144.6 0.000	+73.961	D/V

Intersection	Base			Future			Change in
	LOS	Del/ Veh	V/ C	LOS	Del/ Veh	V/ C	
# 27 Millbrae Ave/Primrose Ave	B	12.4	0.000	B	12.6	0.000	+ 0.225 D/V
# 28 Millbrae Ave/Whister Ave	B	12.4	0.000	B	12.6	0.000	+ 0.214 D/V
# 29 Millbrae Ave/Langner Ave	B	11.2	0.000	B	11.2	0.000	+ 0.000 D/V
# 30 Millbrae Ave/Labath Ave	B	13.5	0.000	B	13.5	0.000	+ 0.000 D/V
# 31 Millbrae Ave/Dowdell Ave	B	11.6	0.000	B	11.6	0.000	+ 0.000 D/V

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1 Wilfred Ave/Stony Point Rd

Average Delay (sec/veh): 1190.9 Worst Case Level Of Service: F[4720.3]

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:	1	0	0	1	0	0	0	0	0	1	0	0

Volume Module:

Base Vol:	14	677	74	102	508	3	0	13	16	143	22	134
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:	14	677	74	102	508	3	0	13	16	143	22	134
Added Vol:	0	0	255	121	0	0	0	0	0	226	0	75
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	14	677	329	223	508	3	0	13	16	369	22	209
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	15	713	346	235	535	3	0	14	17	388	23	220
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	15	713	346	235	535	3	0	14	17	388	23	220

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflict Vol:	538	xxxx	xxxxx	1059	xxxx	xxxxx	xxxx	2094	536	1936	1923	886
Potent Cap.:	1041	xxxx	xxxxx	665	xxxx	xxxxx	xxxx	53	548	50	68	347
Move Cap.:	1041	xxxx	xxxxx	665	xxxx	xxxxx	xxxx	34	548	24	43	347
Volume/Cap:	0.01	xxxx	xxxx	0.35	xxxx	xxxx	xxxx	0.41	0.03	15.86	0.54	0.63

Level Of Service Module:

2Way95thQ:	0.0	xxxx	xxxxx	1.6	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	4.1
Control Del:	8.5	xxxx	xxxxx	13.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	31.8
LOS by Move:	A	*	*	B	*	*	*	*	*	*	*	D
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	70	25	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	1.7	51.3	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	91.4	7226	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	F	F	*	*
ApproachDel:	xxxxxxx			xxxxxxx				91.4			4720.3	
ApproachLOS:	*			*				F			F	

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Wilfred Ave/Primrose Ave

Average Delay (sec/veh): 1.8 Worst Case Level Of Service: D[29.0]

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

Volume Module:

Base Vol:	10	10	10	10	10	10	10	170	10	9	280	9
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:	10	10	10	10	10	10	10	170	10	9	280	9
Added Vol:	0	11	0	0	0	0	0	376	0	0	301	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	21	10	10	10	10	10	546	10	9	581	9
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	22	11	11	11	11	11	575	11	9	612	9
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	11	22	11	11	11	11	11	575	11	9	612	9

Critical Gap Module:

Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	1247	1241	580	1253	1242	616	621	xxxx	xxxxx	585	xxxx	xxxxx
Potent Cap.:	152	176	518	150	176	494	969	xxxx	xxxxx	999	xxxx	xxxxx
Move Cap.:	139	173	518	131	173	494	969	xxxx	xxxxx	999	xxxx	xxxxx
Volume/Cap:	0.08	0.13	0.02	0.08	0.06	0.02	0.01	xxxx	xxxx	0.01	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.8	xxxx	xxxxx	8.6	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	193	xxxxx	xxxx	194	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	0.8	xxxxx	xxxxx	0.6	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	29.0	xxxxx	xxxxx	27.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	D	*	*	D	*	*	*	*	*	*	*			
ApproachDel:		29.0			27.1		xxxxxxx		xxxxxxx		xxxxxxx				
ApproachLOS:		D			D		*		*		*				

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 Wilfred Ave/Whistler Ave

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

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

Volume Module:

Base Vol:	10	10	10	10	10	10	10	170	10	9	280	9
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:	10	10	10	10	10	10	10	170	10	9	280	9
Added Vol:	301	22	742	0	0	0	0	0	376	836	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	311	32	752	10	10	10	10	170	386	845	280	9
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	327	34	792	11	11	11	11	179	406	889	295	9
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	327	34	792	11	11	11	11	179	406	889	295	9
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	2492	2486	382	2894	2685	299	304	xxxx	xxxxx	585	xxxx	xxxxx
Potent Cap.:	20	30	670	10	22	745	1268	xxxx	xxxxx	999	xxxx	xxxxx
Move Cap.:	0	0	670	0	0	745	1268	xxxx	xxxxx	999	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	1.18	xxxx	xxxx	0.01	0.01	xxxx	xxxx	0.89	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	12.6	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.9	xxxx	xxxxx	29.2	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	A	*	*	D	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	0	xxxxx	xxxx	0	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*			
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx					
ApproachLOS:	F			F			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Langner Ave/Wilfred Ave

Average Delay (sec/veh): 5.3 Worst Case Level Of Service: F[185.5]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 1! 0 0 0 0 1 0 1 0 1

Volume Module:

Base Vol: 10 10 10 10 10 10 10 170 10 9 280 9
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: 10 10 10 10 10 10 10 170 10 9 280 9
Added Vol: 0 0 0 0 0 0 0 0 742 0 0 836 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 10 10 10 10 10 10 10 912 10 9 1116 9
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 11 11 11 11 11 11 11 960 11 9 1175 9
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 11 11 11 11 11 11 11 960 11 9 1175 9

Critical Gap Module:

Critical Gp: 7.1 6.5 6.2 7.1 6.5 6.2 4.1 xxxx xxxxx 4.1 xxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 3.5 4.0 3.3 2.2 xxxx xxxxx 2.2 xxxx xxxxx

Capacity Module:

Cnflict Vol: 2195 2189 965 2191 2185 1175 1184 xxxx xxxxx 971 xxxx xxxxx
Potent Cap.: 33 46 312 33 46 236 597 xxxx xxxxx 718 xxxx xxxxx
Move Cap.: 25 45 312 26 45 236 597 xxxx xxxxx 718 xxxx xxxxx
Volume/Cap: 0.42 0.24 0.03 0.41 0.23 0.04 0.02 xxxx xxxx 0.01 xxxx xxxx

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx 0.1 xxxx xxxxx 0.0 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx 11.1 xxxx xxxxx 10.1 xxxx xxxxx
LOS by Move: * * * * * B * * B * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx 46 xxxxx xxxx 46 xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
SharedQueue:xxxxx 2.7 xxxxx xxxxx 2.7 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 185 xxxxx xxxxx 185 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS: * F * * F * * * * *
ApproachDel: 184.5 185.5 xxxxxxx xxxxxxx
ApproachLOS: F F * *

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #5 Wilfred Ave/Labath Ave

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

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

Volume Module:

Base Vol:	44	14	396	180	31	11	40	109	41	188	245	189
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	14	396	180	31	11	40	109	41	188	245	189
Added Vol:	0	0	0	0	0	0	0	742	0	0	836	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	44	14	396	180	31	11	40	851	41	188	1081	189
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	46	15	417	189	33	12	42	896	43	198	1138	199
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	46	15	417	189	33	12	42	896	43	198	1138	199
Critical Gap Module:												
Critical Gp:	7.5	6.5	6.9	7.5	6.5	6.9	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	1983	2734	469	2173	2656	668	1337	xxxx	xxxxx	939	xxxx	xxxxx
Potent Cap.:	37	21	546	27	23	405	522	xxxx	xxxxx	738	xxxx	xxxxx
Move Cap.:	0	14	546	0	16	405	522	xxxx	xxxxx	738	xxxx	xxxxx
Volume/Cap:	xxxx	1.06	0.76	xxxx	2.09	0.03	0.08	xxxx	xxxx	0.27	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.3	xxxx	xxxxx	1.1	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	12.5	xxxx	xxxxx	11.7	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	B	*	*	B	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	0	xxxxx	xxxx	0	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxxx			xxxxxxx			xxxxxxx			xxxxxxx		
ApproachLOS:		F			F			*			*	

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #6 Dowell Ave/Wilfred Ave

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

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

Volume Module:

Base Vol:	143	105	559	217	41	119	53	359	273	509	360	273
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:	143	105	559	217	41	119	53	359	273	509	360	273
Added Vol:	0	0	0	0	0	0	0	742	0	0	836	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	143	105	559	217	41	119	53	1101	273	509	1196	273
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	151	111	588	228	43	125	56	1159	287	536	1259	287
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	151	111	588	228	43	125	56	1159	287	536	1259	287

Critical Gap Module:

Critical Gp:	7.5	6.5	6.9	7.5	6.5	6.9	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	3137	4032	723	3221	4032	773	1546	xxxx	xxxxx	1446	xxxx	xxxxx
Potent Cap.:	5	3	373	4	3	346	435	xxxx	xxxxx	475	xxxx	xxxxx
Move Cap.:	0	0	373	0	0	346	435	xxxx	xxxxx	475	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	1.58	xxxx	xxxx	0.36	0.13	xxxx	xxxx	1.13	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.4	xxxx	xxxxx	18.5	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	14.5	xxxx	xxxxx	110.0	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	B	*	*	F	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	0	xxxxx	xxxx	0	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*			
ApproachDel:	xxxxxxx			xxxxxxx			xxxxxxx			xxxxxxx					
ApproachLOS:	F			F			*			*					

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

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

Intersection #7 Wilfred Ave/Redwood Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 1.890
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 319.6
Optimal Cycle: 180 Level Of Service: F

Table with columns for Approach (North, South, East, West Bound) and Movement (L, T, R). Rows include Control, Rights, Min. Green, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

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

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

Intersection #9 Wilfred Ave/101 SB Ramp

Cycle (sec): 145 Critical Vol./Cap.(X): 1.220
 Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 98.3
 Optimal Cycle: 180 Level Of Service: F

Street Name: US-101 SB Ramp Wilfred Avenue
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Permitted			Protected			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	1	0	1	0	0	1	2	0	2

Volume Module:

Base Vol:	0	0	0	355	288	482	0	1257	283	77	682	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:	0	0	0	355	288	482	0	1257	283	77	682	0
Added Vol:	0	0	0	0	0	218	0	204	527	0	606	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	355	288	700	0	1461	810	77	1288	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	374	303	737	0	1538	853	81	1356	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	374	303	737	0	1538	853	81	1356	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	374	303	737	0	1538	853	81	1356	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.83	0.88	0.88	1.00	0.93	0.93	0.93	0.98	1.00
Lanes:	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.29	0.71	2.00	2.00	0.00
Final Sat.:	0	0	0	1583	1665	1665	0	2266	1257	3538	3724	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.24	0.18	0.44	0.00	0.68	0.68	0.02	0.36	0.00
Crit Moves:						****		****			****	
Green/Cycle:	0.00	0.00	0.00	0.36	0.36	0.36	0.00	0.56	0.56	0.02	0.58	0.00
Volume/Cap:	0.00	0.00	0.00	0.65	0.50	1.22	0.00	1.22	1.22	1.22	0.63	0.00
Uniform Del:	0.0	0.0	0.0	38.5	36.0	46.2	0.0	32.2	32.2	71.1	20.6	0.0
IncrcmntDel:	0.0	0.0	0.0	2.6	0.2	109.5	0.0	104	103.8	180.6	0.6	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	0.0	0.0	0.0	41.2	36.2	155.7	0.0	136	135.9	251.7	21.2	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	41.2	36.2	155.7	0.0	136	135.9	251.7	21.2	0.0
LOS by Move:	A	A	A	D	D	F	A	F	F	F	C	A
HCM2k95thQ:	0	0	0	25	19	78	0	120	120	9	34	0

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

Intersection #10 Golf Course Dr/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 1.704
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 238.9
Optimal Cycle: 180 Level Of Service: F

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns for different volume metrics (Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.) and 4 rows for North, South, East, and West bounds.

Saturation Flow Module: Table with 13 columns for saturation flow metrics (Sat/Lane, Adjustment, Lanes, Final Sat.) and 4 rows for North, South, East, and West bounds.

Capacity Analysis Module: Table with 13 columns for capacity analysis metrics (Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ) and 4 rows for North, South, East, and West bounds.

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

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

Intersection #11 Roberts Lake Dr/Golf Course Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.457
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 10.9
Optimal Cycle: 25 Level Of Service: B

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Permitted, Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns for different volume metrics (Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.) and 4 rows of data.

Saturation Flow Module: Table with 13 columns for saturation flow metrics (Sat/Lane, Adjustment, Lanes, Final Sat.) and 4 rows of data.

Capacity Analysis Module: Table with 13 columns for capacity analysis metrics (Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ) and 13 rows of data.

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #12 101 NB Ramps/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 1.445
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 177.5
Optimal Cycle: 180 Level Of Service: F

Table with columns for Approach (North, South, East, West Bound) and Movement (L, T, R). Rows include Control, Rights, Min. Green, and Lanes.

Volume Module:

Table showing traffic volume metrics: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module:

Table showing saturation flow metrics: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table showing capacity analysis metrics: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #13 New Driveway/Stony Point Rd

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

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	1	0	0	1	0	0	0	0	0	0

Volume Module:

Base Vol:	0	765	0	0	664	0	0	0	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
Initial Bse:	0	765	0	0	664	0	0	0	0	0	0	0
Added Vol:	0	255	0	0	226	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	1020	0	0	890	0	0	0	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
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	1074	0	0	937	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	1074	0	0	937	0	0	0	0	0	0	0

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3

Capacity Module:

Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	1074
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	270
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	270
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.00

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*			
ApproachDel:	xxxxxxx			xxxxxxx			xxxxxxx			xxxxxxx					
ApproachLOS:	*			*			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #14 New Driveway/Labath Ave

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

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 0 1 0 0 0 1! 0 0 0 0 1! 0 0

Volume Module:

Base Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Growth Adj: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
Initial Bse: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
User Adj: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
PHF Adj: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
PHF Volume: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Critical Gap Module:

Critical Gp: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
FollowUpTim: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

Capacity Module:

Cnflict Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Potent Cap.: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Move Cap.: 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Volume/Cap: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

Level Of Service Module:

2Way95thQ: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Control Del: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
LOS by Move:
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
SharedQueue: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Shrd ConDel: 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
Shared LOS:
ApproachDel: 0.0 0.0 0.0 0.0
ApproachLOS:

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #15 Redwood Dr/Business Park Dr

Average Delay (sec/veh): 3.2 Worst Case Level Of Service: C[16.5]

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:	1	0	2	0	0	1	1	0	0	0	0	0

Volume Module:

Base Vol:	12	359	0	0	363	25	144	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:	12	359	0	0	363	25	144	0	31	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	12	359	0	0	363	25	144	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	13	378	0	0	382	26	152	0	33	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	13	378	0	0	382	26	152	0	33	0	0	0

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.8	xxxx	6.9	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	408	xxxx	xxxxx	xxxxx	xxxx	xxxxx	609	xxxx	204	xxxx	xxxx	xxxxx
Potent Cap.:	1161	xxxx	xxxxx	xxxxx	xxxx	xxxxx	431	xxxx	809	xxxx	xxxx	xxxxx
Move Cap.:	1161	xxxx	xxxxx	xxxxx	xxxx	xxxxx	428	xxxx	809	xxxx	xxxx	xxxxx
Volume/Cap:	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	0.35	xxxx	0.04	xxxx	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	1.6	xxxx	0.1	xxxx	xxxx	xxxxx
Control Del:	8.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	18.0	xxxx	9.6	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	*	*	*	C	*	A	*	*	*
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			16.5			xxxxxx		
ApproachLOS:	*			*			C			*		

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #16 Rohnert Park Expwy/Stony Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.858

Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 31.4

Optimal Cycle: 74 Level Of Service: C

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Permitted Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 1 0 1 1 0 1 0 0 0 0 0 0 0 1

Volume Module:

Base Vol: 0 547 253 205 460 0 0 0 0 253 0 217
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: 0 547 253 205 460 0 0 0 0 253 0 217
Added Vol: 0 117 0 122 104 0 0 0 0 0 0 138
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 664 253 327 564 0 0 0 0 253 0 355
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 0 699 266 344 594 0 0 0 0 266 0 374
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 699 266 344 594 0 0 0 0 266 0 374
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 0 699 266 344 594 0 0 0 0 266 0 374

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 1.00 0.98 0.83 0.93 0.98 1.00 1.00 1.00 1.00 0.93 1.00 0.83
Lanes: 0.00 1.00 1.00 1.00 1.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00
Final Sat.: 0 1862 1583 1769 1862 0 0 0 0 1769 0 1583

Capacity Analysis Module:

Vol/Sat: 0.00 0.38 0.17 0.19 0.32 0.00 0.00 0.00 0.00 0.15 0.00 0.24
Crit Moves: ****
Green/Cycle: 0.00 0.44 0.44 0.23 0.66 0.00 0.00 0.00 0.00 0.28 0.00 0.28
Volume/Cap: 0.00 0.86 0.38 0.86 0.48 0.00 0.00 0.00 0.00 0.55 0.00 0.86
Uniform Del: 0.0 25.3 19.0 37.1 8.3 0.0 0.0 0.0 0.0 30.9 0.0 34.4
IncrcmntDel: 0.0 9.0 0.4 16.6 0.3 0.0 0.0 0.0 0.0 1.3 0.0 15.5
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 0.00 1.00 1.00 1.00 1.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00
Delay/Veh: 0.0 34.3 19.4 53.7 8.5 0.0 0.0 0.0 0.0 32.2 0.0 49.9
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 34.3 19.4 53.7 8.5 0.0 0.0 0.0 0.0 32.2 0.0 49.9
LOS by Move: A C B D A A A A C A D
HCM2k95thQ: 0 37 11 23 17 0 0 0 0 14 0 25

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

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

Intersection #17 Rohnert Park Expwy/Labath Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.561
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 33.9
Optimal Cycle: 45 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic movements and 13 rows of volume-related metrics such as Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 13 columns and 4 rows showing Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns and 13 rows showing Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, etc.

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #18 Rohnert Park Expwy/Redwood Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.694

Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 36.1

Optimal Cycle: 59 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Control:	Protected			Protected			Protected			Protected											
Rights:	Include			Include			Include			Include											
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0									
Lanes:	1	0	1	1	1	1	2	0	1	0	1	1	0	3	0	1	2	0	2	0	1

Volume Module:

Base Vol:	173	326	510	339	301	236	216	700	163	377	603	318
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:	173	326	510	339	301	236	216	700	163	377	603	318
Added Vol:	0	0	0	0	0	0	0	122	0	0	138	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	173	326	510	339	301	236	216	822	163	377	741	318
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	182	343	537	357	317	248	227	865	172	397	780	335
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	182	343	537	357	317	248	227	865	172	397	780	335
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	182	343	537	357	317	248	227	865	172	397	780	335

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.89	0.89	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.83
Lanes:	1.00	1.17	1.83	2.00	1.00	1.00	1.00	3.00	1.00	2.00	2.00	1.00
Final Sat.:	1769	1980	3098	3538	1862	1583	1769	5586	1583	3538	3724	1583

Capacity Analysis Module:

Vol/Sat:	0.10	0.17	0.17	0.10	0.17	0.16	0.13	0.15	0.11	0.11	0.21	0.21
Crit Moves:	****			****			****			****		
Green/Cycle:	0.15	0.25	0.25	0.14	0.25	0.25	0.19	0.28	0.28	0.20	0.30	0.30
Volume/Cap:	0.69	0.70	0.70	0.70	0.69	0.64	0.69	0.55	0.38	0.55	0.69	0.70
Uniform Del:	40.4	34.1	34.1	40.7	34.3	33.8	38.1	30.5	28.9	35.6	30.8	30.9
IncrcmntDel:	7.8	1.7	1.7	4.2	4.6	3.6	6.3	0.4	0.6	0.9	1.9	4.6
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	48.3	35.9	35.9	44.9	38.9	37.4	44.4	30.9	29.4	36.5	32.8	35.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	48.3	35.9	35.9	44.9	38.9	37.4	44.4	30.9	29.4	36.5	32.8	35.6
LOS by Move:	D	D	D	D	D	D	D	C	C	D	C	D
HCM2k95thQ:	13	18	18	13	19	15	15	15	9	12	21	19

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

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #19 Rohnert Park Expwy/101 SB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.740
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 24.7
Optimal Cycle: 65 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Permitted, Protected), Rights (Include, Ignore), Min. Green, and Lanes.

Volume Module: Table with 12 columns for different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 12 columns for different traffic movements. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns for different traffic movements. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2k95thQ.

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #20 Rohnert Park Expwy/101 NB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.529

Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 20.0

Optimal Cycle: 29 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	0	1	0	4	0	3	0

Volume Module:

Base Vol:	339	0	345	14	0	3	21	1556	298	0	841	383
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:	339	0	345	14	0	3	21	1556	298	0	841	383
Added Vol:	125	0	0	0	0	0	0	11	0	0	12	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	464	0	345	14	0	3	21	1567	298	0	853	383
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00	0.95	0.95	0.00
PHF Volume:	488	0	363	15	0	3	22	1649	0	0	898	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	488	0	363	15	0	3	22	1649	0	0	898	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Final Vol.:	488	0	363	15	0	3	22	1649	0	0	898	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	1.00	0.83	0.93	1.00	0.83	0.25	0.98	1.00	1.00	0.98	1.00
Lanes:	1.00	0.00	2.00	1.00	0.00	1.00	1.00	4.00	1.00	0.00	3.00	1.00
Final Sat.:	1769	0	3165	1769	0	1583	471	7448	1900	0	5586	1900

Capacity Analysis Module:

Vol/Sat:	0.28	0.00	0.11	0.01	0.00	0.00	0.05	0.22	0.00	0.00	0.16	0.00
Crit Moves:	****			****			****					
Green/Cycle:	0.52	0.00	0.49	0.04	0.00	0.00	0.42	0.42	0.00	0.00	0.42	0.00
Volume/Cap:	0.53	0.00	0.24	0.24	0.00	xxxx	0.11	0.53	0.00	0.00	0.38	0.00
Uniform Del:	15.8	0.0	14.9	46.9	0.0	0.0	17.7	21.7	0.0	0.0	20.2	0.0
IncrcmntDel:	0.6	0.0	0.1	1.9	0.0	0.0	0.3	0.2	0.0	0.0	0.1	0.0
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00
Delay/Veh:	16.4	0.0	15.0	48.9	0.0	0.0	18.0	21.9	0.0	0.0	20.3	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	16.4	0.0	15.0	48.9	0.0	0.0	18.0	21.9	0.0	0.0	20.3	0.0
LOS by Move:	B	A	B	D	A	A	B	C	A	A	C	A
HCM2k95thQ:	19	0	6	1	0	2	1	18	0	0	12	0

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #21 Rohnert Park Expwy/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.806

Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 34.9

Optimal Cycle: 78 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound										
Movement:	L	T	R	L	T	R	L	T	R	L	T	R								
Control:	Split Phase			Split Phase			Protected			Protected										
Rights:	Include			Include			Include			Include										
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0								
Lanes:	1	1	1	0	1	1	1	1	0	1	2	0	2	0	1	1	0	2	1	0

Volume Module:

Base Vol:	384	293	241	179	354	152	235	1221	462	165	682	202
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:	384	293	241	179	354	152	235	1221	462	165	682	202
Added Vol:	0	0	0	0	0	0	0	11	0	0	12	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	384	293	241	179	354	152	235	1232	462	165	694	202
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	404	308	254	188	373	160	247	1297	486	174	731	213
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	404	308	254	188	373	160	247	1297	486	174	731	213
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	404	308	254	188	373	160	247	1297	486	174	731	213

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.83	0.96	0.96	0.83	0.93	0.98	0.83	0.93	0.95	0.95
Lanes:	1.70	1.30	1.00	1.01	1.99	1.00	2.00	2.00	1.00	1.00	2.32	0.68
Final Sat.:	3080	2350	1583	1844	3647	1583	3538	3724	1583	1769	4180	1217

Capacity Analysis Module:

Vol/Sat:	0.13	0.13	0.16	0.10	0.10	0.10	0.07	0.35	0.31	0.10	0.17	0.17
Crit Moves:			****			****		****		****		
Green/Cycle:	0.20	0.20	0.20	0.13	0.13	0.13	0.16	0.43	0.43	0.12	0.40	0.40
Volume/Cap:	0.66	0.66	0.81	0.81	0.81	0.80	0.44	0.81	0.71	0.81	0.44	0.44
Uniform Del:	36.9	36.9	38.2	42.5	42.5	42.4	38.1	24.7	23.3	42.8	22.1	22.1
IncrcmntDel:	1.5	1.5	14.1	6.8	6.8	19.6	0.6	3.1	3.5	19.5	0.1	0.1
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	38.4	38.4	52.3	49.3	49.3	62.0	38.6	27.8	26.8	62.2	22.3	22.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	38.4	38.4	52.3	49.3	49.3	62.0	38.6	27.8	26.8	62.2	22.3	22.3
LOS by Move:	D	D	D	D	D	E	D	C	C	E	C	C
HCM2k95thQ:	15	15	18	15	15	13	8	33	24	14	14	14

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

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

 Intersection #22 Gravenstein Hwy (SR 116)/ Stoney Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.834
 Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 42.2
 Optimal Cycle: 86 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound							
Movement:	L	T	R	L	T	R	L	T	R	L	T	R					
Control:	Protected			Protected			Protected			Protected							
Rights:	Include			Include			Include			Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0					
Lanes:	1	0	1	0	1	0	1	1	0	1	1	0	1	0	2	0	1

Volume Module:

Base Vol:	323	483	113	107	358	235	149	583	228	140	661	113
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:	323	483	113	107	358	235	149	583	228	140	661	113
Added Vol:	0	0	0	104	0	0	0	0	0	0	0	117
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	323	483	113	211	358	235	149	583	228	140	661	230
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	340	508	119	222	377	247	157	614	240	147	696	242
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	340	508	119	222	377	247	157	614	240	147	696	242
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	340	508	119	222	377	247	157	614	240	147	696	242

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.89	0.89	0.93	0.93	0.83
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.44	0.56	1.00	2.00	1.00
Final Sat.:	1769	1862	1583	1769	1862	1583	1769	2436	953	1769	3538	1583

Capacity Analysis Module:

Vol/Sat:	0.19	0.27	0.08	0.13	0.20	0.16	0.09	0.25	0.25	0.08	0.20	0.15
Crit Moves:	****			****			****			****		
Green/Cycle:	0.23	0.33	0.33	0.15	0.25	0.25	0.12	0.30	0.30	0.10	0.28	0.28
Volume/Cap:	0.83	0.83	0.23	0.83	0.83	0.64	0.71	0.83	0.83	0.83	0.71	0.55
Uniform Del:	36.4	31.1	24.5	41.3	35.7	33.8	42.0	32.6	32.6	44.2	32.5	30.9
IncrcmntDel:	12.8	9.6	0.2	19.7	11.7	3.5	10.2	6.0	6.0	27.5	2.4	1.5
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	49.2	40.7	24.7	61.0	47.4	37.3	52.2	38.6	38.6	71.6	35.0	32.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	49.2	40.7	24.7	61.0	47.4	37.3	52.2	38.6	38.6	71.6	35.0	32.4
LOS by Move:	D	D	C	E	D	D	D	D	D	E	C	C
HCM2k95thQ:	22	29	5	17	24	15	12	27	27	13	21	13

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #23 Gravenstein Hwy (SR 116)/ Redwood Rd

Cycle (sec): 80 Critical Vol./Cap.(X): 0.884
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 36.4
Optimal Cycle: 92 Level Of Service: D

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 12 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2k95thQ.

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

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

 Intersection #24 Gravenstein Hwy and SB 101 Ramps

Cycle (sec): 80 Critical Vol./Cap.(X): 0.595
 Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 28.2
 Optimal Cycle: 99 Level Of Service: C

Street Name: SB 101 Ramps Gravenstein Hwy
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Permitted			Protected			Permitted			Protected		
Rights:	Include			Include			Ignore			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	2	0	1	0	0	1	1	0	0

Volume Module:

Base Vol:	0	0	0	640	0	258	0	953	412	66	998	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:	0	0	0	640	0	258	0	953	412	66	998	0
Added Vol:	0	0	0	0	0	0	0	0	104	0	117	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	640	0	258	0	953	516	66	1115	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00	0.95	0.95	0.95
PHF Volume:	0	0	0	674	0	272	0	1003	0	69	1174	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	674	0	272	0	1003	0	69	1174	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Final Vol.:	0	0	0	674	0	272	0	1003	0	69	1174	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.90	1.00	0.83	1.00	0.93	1.00	0.93	0.93	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	0.00	2.00	1.00	1.00	2.00	0.00
Final Sat.:	0	0	0	3432	0	1583	0	3538	1900	1769	3538	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.20	0.00	0.17	0.00	0.28	0.00	0.04	0.33	0.00
Crit Moves:				****							****	
Green/Cycle:	0.00	0.00	0.00	0.21	0.00	0.21	0.00	0.31	0.00	0.36	0.67	0.00
Volume/Cap:	0.00	0.00	0.00	0.91	0.00	0.80	0.00	0.91	0.00	0.11	0.49	0.00
Uniform Del:	0.0	0.0	0.0	30.7	0.0	29.8	0.0	26.6	0.0	16.9	6.4	0.0
IncrcmntDel:	0.0	0.0	0.0	15.9	0.0	12.6	0.0	11.6	0.0	0.1	0.2	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
Delay/Veh:	0.0	0.0	0.0	46.6	0.0	42.3	0.0	38.2	0.0	17.0	6.6	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	46.6	0.0	42.3	0.0	38.2	0.0	17.0	6.6	0.0
LOS by Move:	A	A	A	D	A	D	A	D	A	B	A	A
HCM2k95thQ:	0	0	0	22	0	16	0	29	0	2	15	0

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

Intersection #25 Gravenstein Hwy and NB 101 Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.844
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 23.0
Optimal Cycle: 80 Level Of Service: C

Street Name: NB 101 Ramps Gravenstein Hwy
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Permitted Permitted Permitted
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 0 0 1 0 0 0 0 0 0 2 0 0 0 0 0 0 0

Volume Module:
Base Vol: 375 0 273 0 0 0 0 0 1596 0 0 683 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: 375 0 273 0 0 0 0 0 1596 0 0 683 0
Added Vol: 117 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 492 0 273 0 0 0 0 0 1596 0 0 683 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 518 0 287 0 0 0 0 0 1680 0 0 719 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 518 0 287 0 0 0 0 0 1680 0 0 719 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 518 0 287 0 0 0 0 0 1680 0 0 719 0

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.93 1.00 0.83 1.00 1.00 1.00 1.00 0.93 1.00 1.00 0.93 1.00
Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 2.00 0.00 0.00 2.00 0.00
Final Sat.: 1769 0 1583 0 0 0 0 0 3538 0 0 3538 0

Capacity Analysis Module:
Vol/Sat: 0.29 0.00 0.18 0.00 0.00 0.00 0.00 0.47 0.00 0.00 0.20 0.00
Crit Moves: ****
Green/Cycle: 0.35 0.00 0.35 0.00 0.00 0.00 0.00 0.56 0.00 0.00 0.56 0.00
Volume/Cap: 0.84 0.00 0.52 0.00 0.00 0.00 0.00 0.84 0.00 0.00 0.36 0.00
Uniform Del: 30.1 0.0 26.0 0.0 0.0 0.0 0.0 18.2 0.0 0.0 12.0 0.0
IncrmntDel: 10.3 0.0 0.9 0.0 0.0 0.0 0.0 3.5 0.0 0.0 0.1 0.0
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 1.00 0.00 0.00 1.00 0.00
Delay/Veh: 40.5 0.0 27.0 0.0 0.0 0.0 0.0 21.7 0.0 0.0 12.1 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 40.5 0.0 27.0 0.0 0.0 0.0 0.0 21.7 0.0 0.0 12.1 0.0
LOS by Move: D A C A A A A C A A B A
HCM2k95thQ: 30 0 14 0 0 0 0 41 0 0 12 0

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #26 Millbrae Ave/Stony Point Rd

Average Delay (sec/veh): 8.7 Worst Case Level Of Service: F[144.6]

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:	1	0	2	0	1	1	0	0	1!	0	0	1

Volume Module:

Base Vol:	7	728	26	132	585	7	11	5	8	23	25	219
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:	7	728	26	132	585	7	11	5	8	23	25	219
Added Vol:	0	75	0	0	121	0	0	0	0	0	0	32
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	7	803	26	132	706	7	11	5	8	23	25	251
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	7	845	27	139	743	7	12	5	8	24	26	264
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	7	845	27	139	743	7	12	5	8	24	26	264

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.5	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflict Vol:	751	xxxx	xxxxx	873	xxxx	xxxxx	1475	1912	375	1512	1888	423
Potent Cap.:	868	xxxx	xxxxx	782	xxxx	xxxxx	90	69	628	84	71	585
Move Cap.:	868	xxxx	xxxxx	782	xxxx	xxxxx	28	56	628	66	58	585
Volume/Cap:	0.01	xxxx	xxxx	0.18	xxxx	xxxx	0.42	0.09	0.01	0.37	0.45	0.45

Level Of Service Module:

2Way95thQ:	0.0	xxxx	xxxxx	0.6	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	2.3			
Control Del:	9.2	xxxx	xxxxx	10.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	16.1			
LOS by Move:	A	*	*	B	*	*	*	*	*	*	*	C			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	48	xxxxx	62	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	2.0	xxxxx	3.7	xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	145	xxxxx	174.9	xxxx	xxxxx			
Shared LOS:	*	*	*	*	*	*	*	F	*	F	*	*			
ApproachDel:	xxxxxx			xxxxxx			144.6			41.6					
ApproachLOS:	*			*			F			E					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #27 Millbrae Ave/Primrose Ave

Average Delay (sec/veh): 0.5 Worst Case Level Of Service: B[12.6]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 1 0 0 0 0 1! 0 0 0 0 1! 0 0

Volume Module:

Base Vol: 1 0 2 0 1 0 1 161 5 7 265 2
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: 1 0 2 0 1 0 1 161 5 7 265 2
Added Vol: 11 0 0 0 0 0 0 0 0 0 22 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 12 0 2 0 1 0 1 161 5 7 287 2
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 13 0 2 0 1 0 1 169 5 7 302 2
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 13 0 2 0 1 0 1 169 5 7 302 2

Critical Gap Module:

Critical Gp: 7.1 6.5 6.2 xxxxx 6.5 xxxxx 4.1 xxxxx xxxxx 4.1 xxxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 xxxxx 4.0 xxxxx 2.2 xxxxx xxxxx 2.2 xxxxx xxxxx

Capacity Module:

Cnflict Vol: 493 493 172 xxxxx 495 xxxxx 304 xxxxx xxxxx 175 xxxxx xxxxx
Potent Cap.: 490 480 877 xxxxx 479 xxxxx 1268 xxxxx xxxxx 1414 xxxxx xxxxx
Move Cap.: 487 477 877 xxxxx 476 xxxxx 1268 xxxxx xxxxx 1414 xxxxx xxxxx
Volume/Cap: 0.03 0.00 0.00 xxxxx 0.00 xxxxx 0.00 xxxxx xxxxx 0.01 xxxxx xxxxx

Level Of Service Module:

2Way95thQ: xxxxx xxxxx xxxxx xxxxx 0.0 xxxxx 0.0 xxxxx xxxxx 0.0 xxxxx xxxxx
Control Del: xxxxx xxxxx xxxxx xxxxx 12.6 xxxxx 7.8 xxxxx xxxxx 7.6 xxxxx xxxxx
LOS by Move: * * * * B * A * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx 520 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue: xxxxx 0.1 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd ConDel: xxxxx 12.1 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: * B * * * * * * * * * *
ApproachDel: 12.1 12.6 xxxxxxx xxxxxxx
ApproachLOS: B B * *

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #28 Millbrae Ave/Whister Ave

Average Delay (sec/veh): 1.1 Worst Case Level Of Service: B[12.6]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 1 0 0 0 0 0 1! 0 0 0 0 1! 0 0 0 0 1! 0 0

Volume Module:

Base Vol: 1 9 0 4 0 1 1 146 2 4 279 8
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 1 9 0 4 0 1 1 146 2 4 279 8
Added Vol: 22 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 23 9 0 4 0 1 1 146 2 4 279 8
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 24 9 0 4 0 1 1 154 2 4 294 8
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 24 9 0 4 0 1 1 154 2 4 294 8

Critical Gap Module:

Critical Gp: 7.1 6.5 xxxxx 7.1 6.5 6.2 4.1 xxxxx xxxxx 4.1 xxxxx xxxxx
FollowUpTim: 3.5 4.0 xxxxx 3.5 4.0 3.3 2.2 xxxxx xxxxx 2.2 xxxxx xxxxx

Capacity Module:

Cnflict Vol: 464 467 xxxxx 468 464 298 302 xxxxx xxxxx 156 xxxxx xxxxx
Potent Cap.: 512 496 xxxxx 509 498 746 1270 xxxxx xxxxx 1437 xxxxx xxxxx
Move Cap.: 510 494 xxxxx 500 496 746 1270 xxxxx xxxxx 1437 xxxxx xxxxx
Volume/Cap: 0.05 0.02 xxxxx 0.01 0.00 0.00 0.00 xxxxx xxxxx 0.00 xxxxx xxxxx

Level Of Service Module:

2Way95thQ: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx 0.0 xxxxx xxxxx
Control Del: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 7.8 xxxxx xxxxx 7.5 xxxxx xxxxx
LOS by Move: * * * * * A * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: 505 xxxxx xxxxx xxxxx 535 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue: 0.2 xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd ConDel: 12.6 xxxxx xxxxx xxxxx 11.8 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: B * * * * B * * * *
ApproachDel: 12.6 11.8 xxxxxxx xxxxxxx
ApproachLOS: B B * *

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #29 Millbrae Ave/Langner Ave

Average Delay (sec/veh): 1.1 Worst Case Level Of Service: B[11.2]

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

Volume Module:

Base Vol:	27	0	25	0	0	0	0	154	27	7	331	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:	27	0	25	0	0	0	0	154	27	7	331	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	27	0	25	0	0	0	0	154	27	7	331	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	28	0	26	0	0	0	0	162	28	7	348	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	28	0	26	0	0	0	0	162	28	7	348	0

Critical Gap Module:

Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	539	539	176	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	191	xxxx	xxxxx
Potent Cap.:	507	452	872	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1395	xxxx	xxxxx
Move Cap.:	505	449	872	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1395	xxxx	xxxxx
Volume/Cap:	0.06	0.00	0.03	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.01	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	633	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	0.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx			
Shrd ConDel:	xxxxx	11.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx			
Shared LOS:	*	B	*	*	*	*	*	*	*	A	*	*			
ApproachDel:	11.2			xxxxxxx			xxxxxxx			xxxxxxx					
ApproachLOS:	B			*			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #30 Millbrae Ave/Labath Ave

Average Delay (sec/veh): 3.7 Worst Case Level Of Service: B[13.5]

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

Volume Module:

Base Vol:	114	0	26	0	0	0	0	160	23	36	225	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:	114	0	26	0	0	0	0	160	23	36	225	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	114	0	26	0	0	0	0	160	23	36	225	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	120	0	27	0	0	0	0	168	24	38	237	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	120	0	27	0	0	0	0	168	24	38	237	0

Critical Gap Module:

Critical Gp:	6.4	6.5	6.2	7.1	6.5	6.2	xxxxx	xxxxx	xxxxx	4.1	xxxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	xxxxx	xxxxx	xxxxx	2.2	xxxxx	xxxxx

Capacity Module:

Cnflict Vol:	493	493	181	507	505	237	xxxxx	xxxxx	xxxxx	193	xxxxx	xxxxx
Potent Cap.:	539	480	867	479	472	807	xxxxx	xxxxx	xxxxx	1393	xxxxx	xxxxx
Move Cap.:	527	467	867	454	459	807	xxxxx	xxxxx	xxxxx	1393	xxxxx	xxxxx
Volume/Cap:	0.23	0.00	0.03	0.00	0.00	0.00	xxxxx	xxxxx	xxxxx	0.03	xxxxx	xxxxx

Level Of Service Module:

2Way95thQ:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.1	xxxxx	xxxxx			
Control Del:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	7.7	xxxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxxx	569	xxxxx	xxxxx	0	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
SharedQueue:	xxxxx	1.0	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.1	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shrd ConDel:	xxxxx	13.5	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	7.7	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shared LOS:	*	B	*	*	*	*	*	*	*	A	*	*	*	*	*
ApproachDel:	13.5			xxxxxxx			xxxxxxx			xxxxxxx					
ApproachLOS:	B			*			*			*					*

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #31 Millbrae Ave/Dowdell Ave

Average Delay (sec/veh): 1.4 Worst Case Level Of Service: B[11.6]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 1 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 1 0 0

Volume Module:

Base Vol: 55 0 0 0 0 0 0 0 131 51 0 235 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: 55 0 0 0 0 0 0 0 131 51 0 235 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 55 0 0 0 0 0 0 0 131 51 0 235 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 58 0 0 0 0 0 0 0 138 54 0 247 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 58 0 0 0 0 0 0 0 138 54 0 247 0

Critical Gap Module:

Critical Gp: 6.4 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim: 3.5 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxxx xxxx xxxxx

Capacity Module:

Cnflict Vol: 412 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Potent Cap.: 600 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Move Cap.: 600 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Volume/Cap: 0.10 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx

Level Of Service Module:

2Way95thQ: 0.3 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Control Del: 11.6 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxxx xxxx xxxxx xxxxx
LOS by Move: B *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
SharedQueue:xxxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxxx xxxx xxxxx xxxxx
Shrd ConDel:xxxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxxx xxxx xxxxx xxxxx
Shared LOS: *
ApproachDel: 11.6 xxxxxxx xxxxxxx xxxxxxx
ApproachLOS: B * * *

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

**NEAR-TERM 2008 + ALTERNATIVE D
TRAFFIC CONDITIONS
(TRAFFIX)**

 Impact Analysis Report
 Level Of Service

Intersection	Base		Future		Change in
	Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C	
# 1 Wilfred Ave/Stony Point Rd	F	238.0 0.000	F	OVRFL 0.000	+1367.066 D/
# 2 Wilfred Ave/Primrose Ave	B	11.3 0.000	F	864.8 0.000	+853.523 D/V
# 3 Wilfred Ave/Whistler Ave	B	11.3 0.000	D	35.0 0.000	+23.630 D/V
# 4 Langner Ave/Wilfred Ave	B	11.3 0.000	D	34.5 0.000	+23.247 D/V
# 5 Wilfred Ave/Labath Ave	E	48.3 0.000	F	OVRFL 0.000	+2536.950 D/
# 6 Dowell Ave/Wilfred Ave	F	333.5 0.000	F	OVRFL 0.000	+ 1.8E+0308
# 7 Wilfred Ave/Redwood Dr	D	37.1 0.708	F	92.7 1.139	+55.605 D/V
# 8 Redwood Dr/Commerce Blvd	C	26.6 0.290	C	26.6 0.292	-0.014 D/V
# 9 Wilfred Ave/101 SB Ramp	C	30.6 0.630	D	39.9 0.916	+ 9.286 D/V
# 10 Golf Course Dr/Commerce Blvd	D	44.0 0.925	E	66.3 1.082	+22.321 D/V
# 11 Roberts Lake Dr/Golf Course Dr	B	15.6 0.512	B	15.5 0.515	-0.033 D/V
# 12 101 NB Ramps/Commerce Blvd	C	34.9 0.877	E	65.1 1.064	+30.143 D/V
# 13 New Driveway/Stony Point Rd	A	0.0 0.000	C	21.6 0.000	+21.614 D/V
# 14 New Driveway/Labath Ave		0.0 0.000		0.0 0.000	+ 0.000 D/V
# 15 Redwood Dr/Business Park Dr	D	26.5 0.000	D	26.5 0.000	+ 0.000 D/V
# 16 Rohnert Park Expwy/Stony Point	C	24.0 0.665	D	38.0 0.918	+13.982 D/V
# 17 Rohnert Park Expwy/Labath Ave	C	29.8 0.576	C	33.9 0.590	+ 4.075 D/V
# 18 Rohnert Park Expwy/Redwood Dr	D	35.6 0.711	D	43.9 0.731	+ 8.319 D/V
# 19 Rohnert Park Expwy/101 SB Ramp	C	21.1 0.716	C	21.5 0.753	+ 0.397 D/V
# 20 Rohnert Park Expwy/101 NB Ramp	B	15.8 0.437	C	21.8 0.592	+ 6.082 D/V
# 21 Rohnert Park Expwy/Commerce Bl	C	33.9 0.815	C	33.9 0.815	-0.003 D/V
# 22 Gravenstein Hwy (SR 116)/ Ston	D	37.1 0.766	D	38.6 0.766	+ 1.470 D/V
# 23 Gravenstein Hwy (SR 116)/ Redw	C	28.6 0.734	C	28.6 0.763	-0.016 D/V
# 24 Gravenstein Hwy and SB 101 Ram	B	17.6 0.562	B	18.1 0.615	+ 0.531 D/V
# 25 Gravenstein Hwy and NB 101 Ram	B	17.3 0.707	B	19.9 0.760	+ 2.560 D/V

Intersection		Base		Future		Change in	
		Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C		
# 26 Millbrae Ave/Stony Point Rd	E	38.2	0.000	F 50.4	0.000	+12.148	D/V
# 27 Millbrae Ave/Primrose Ave	B	11.4	0.000	B 11.4	0.000	+ 0.000	D/V
# 28 Millbrae Ave/Whistler Ave	B	11.5	0.000	B 11.5	0.000	+ 0.000	D/V
# 29 Millbrae Ave/Langner Ave	A	9.9	0.000	A 9.9	0.000	+ 0.000	D/V
# 30 Millbrae Ave/Labath Ave	B	11.2	0.000	B 11.2	0.000	+ 0.000	D/V
# 31 Millbrae Ave/Dowdell Ave	B	11.3	0.000	B 11.3	0.000	+ 0.000	D/V

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1 Wilfred Ave/Stony Point Rd

Average Delay (sec/veh): 281.6 Worst Case Level Of Service: F[1605.1]

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: 1 0 0 1 0 1 0 0 1 0 0 0 0 1 0 0 1 0 0 1

Volume Module:

Base Vol: 12 758 62 75 514 3 0 8 14 106 13 97
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 12 758 62 75 514 3 0 8 14 106 13 97
Added Vol: 0 59 0 84 0 0 0 0 0 120 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 12 817 62 159 514 3 0 8 14 226 13 97
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 13 860 65 167 541 3 0 8 15 238 14 102
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 13 860 65 167 541 3 0 8 15 238 14 102

Critical Gap Module:

Critical Gp: 4.1 xxxx xxxxx 4.1 xxxx xxxxx xxxxx 6.5 6.2 7.1 6.5 6.2
FollowUpTim: 2.2 xxxx xxxxx 2.2 xxxx xxxxx xxxxx 4.0 3.3 3.5 4.0 3.3

Capacity Module:

Cnflict Vol: 544 xxxx xxxxx 925 xxxx xxxxx xxxxx 1828 543 1807 1797 893
Potent Cap.: 1035 xxxx xxxxx 747 xxxx xxxxx xxxxx 78 544 62 81 343
Move Cap.: 1035 xxxx xxxxx 747 xxxx xxxxx xxxxx 59 544 44 62 343
Volume/Cap: 0.01 xxxx xxxxx 0.22 xxxx xxxxx xxxxx 0.14 0.03 5.38 0.22 0.30

Level Of Service Module:

2Way95thQ: 0.0 xxxx xxxxx 0.9 xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 1.2
Control Del: 8.5 xxxx xxxxx 11.2 xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 19.9
LOS by Move: A * * B * * * * * * * * * C
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx 137 45 xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx 0.6 29.1 xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx 36.5 2248 xxxx xxxxx
Shared LOS: * * * * * * * * * * * * * * * * * * *
ApproachDel: xxxxxx xxxxxx 36.5 1605.1
ApproachLOS: * * * * * * * * * * * * * * * * * * *

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Wilfred Ave/Primrose Ave

Average Delay (sec/veh): 389.0 Worst Case Level Of Service: F[864.8]

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

Volume Module:

Base Vol:	10	10	10	10	10	10	10	131	10	10	201	10
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:	10	10	10	10	10	10	10	131	10	10	201	10
Added Vol:	120	15	548	0	0	0	0	0	84	422	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	130	25	558	10	10	10	10	131	94	432	201	10
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	137	26	587	11	11	11	11	138	99	455	212	11
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	137	26	587	11	11	11	11	138	99	455	212	11
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	1345	1340	187	1642	1384	217	222	xxxx	xxxxx	237	xxxx	xxxxx
Potent Cap.:	130	154	860	81	145	828	1359	xxxx	xxxxx	1342	xxxx	xxxxx
Move Cap.:	75	84	860	13	79	828	1359	xxxx	xxxxx	1342	xxxx	xxxxx
Volume/Cap:	1.84	0.32	0.68	0.83	0.13	0.01	0.01	xxxx	xxxx	0.34	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	1.5	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.7	xxxx	xxxxx	9.1	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	265	xxxxx	xxxx	32	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	65.0	xxxxx	xxxxx	3.4	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	865	xxxxx	xxxxx	331	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	F	*	*	F	*	*	*	*	*	*	*			
ApproachDel:	864.8			330.7			xxxxxx			xxxxxx					
ApproachLOS:	F			F			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 Wilfred Ave/Whistler Ave

Average Delay (sec/veh): 1.6 Worst Case Level Of Service: D[35.0]

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

Volume Module:

Base Vol:	10	10	10	10	10	10	10	131	10	10	200	20
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:	10	10	10	10	10	10	10	131	10	10	200	20
Added Vol:	0	0	0	0	0	0	0	548	0	0	422	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	10	10	10	10	10	10	679	10	10	622	20
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	11	11	11	11	11	11	715	11	11	655	21
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	11	11	11	11	11	11	11	715	11	11	655	21

Critical Gap Module:

Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	1438	1438	720	1438	1433	665	676	xxxx	xxxxx	725	xxxx	xxxxx
Potent Cap.:	112	134	431	112	135	463	925	xxxx	xxxxx	887	xxxx	xxxxx
Move Cap.:	101	131	431	101	132	463	925	xxxx	xxxxx	887	xxxx	xxxxx
Volume/Cap:	0.10	0.08	0.02	0.10	0.08	0.02	0.01	xxxx	xxxx	0.01	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.9	xxxx	xxxxx	9.1	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	151	xxxxx	xxxx	153	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	0.8	xxxxx	xxxxx	0.7	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	35.0	xxxxx	xxxxx	34.6	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	D	*	*	D	*	*	*	*	*	*	*			
ApproachDel:		35.0			34.6		xxxxxxx		xxxxxxx						
ApproachLOS:		D			D		*		*		*				

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Langner Ave/Wilfred Ave

Average Delay (sec/veh): 1.6 Worst Case Level Of Service: D[34.5]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 1! 0 0 0 0 1! 0 0 0 0 1! 0 0

Volume Module:

Base Vol: 10 10 10 10 10 10 10 130 10 10 200 10
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: 10 10 10 10 10 10 10 130 10 10 200 10
Added Vol: 0 0 0 0 0 0 0 548 0 0 422 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 10 10 10 10 10 10 10 678 10 10 622 10
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 11 11 11 11 11 11 11 714 11 11 655 11
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 11 11 11 11 11 11 11 714 11 11 655 11

Critical Gap Module:

Critical Gp: 7.1 6.5 6.2 7.1 6.5 6.2 4.1 xxxx xxxxx 4.1 xxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 3.5 4.0 3.3 2.2 xxxx xxxxx 2.2 xxxx xxxxx

Capacity Module:

Cnflict Vol: 1432 1426 719 1432 1426 660 665 xxxx xxxxx 724 xxxx xxxxx
Potent Cap.: 113 137 432 113 137 467 934 xxxx xxxxx 888 xxxx xxxxx
Move Cap.: 102 133 432 102 133 467 934 xxxx xxxxx 888 xxxx xxxxx
Volume/Cap: 0.10 0.08 0.02 0.10 0.08 0.02 0.01 xxxx xxxx 0.01 xxxx xxxx

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx 0.0 xxxx xxxxx 0.0 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx 8.9 xxxx xxxxx 9.1 xxxx xxxxx
LOS by Move: * * * * * A * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx 153 xxxxx xxxx 154 xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
SharedQueue:xxxxx 0.7 xxxxx xxxxx 0.7 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 34.5 xxxxx xxxxx 34.2 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS: * D * * D * * * * *
ApproachDel: 34.5 34.2 xxxxxxx xxxxxxx
ApproachLOS: D D * *

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #5 Wilfred Ave/Labath Ave

Average Delay (sec/veh): 237.0 Worst Case Level Of Service: F[2585.2]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 1! 0 0 0 0 1! 0 0

Volume Module:

Base Vol: 35 6 266 112 21 14 60 13 77 116 159 99
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 6 266 112 21 14 60 13 77 116 159 99
Added Vol: 0 0 0 0 0 0 0 548 0 0 422 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 35 6 266 112 21 14 60 561 77 116 581 99
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 37 6 280 118 22 15 63 591 81 122 612 104
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 37 6 280 118 22 15 63 591 81 122 612 104

Critical Gap Module:

Critical Gp: 7.1 6.5 6.2 7.1 6.5 6.2 4.1 xxxx xxxxx 4.1 xxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 3.5 4.0 3.3 2.2 xxxx xxxxx 2.2 xxxx xxxxx

Capacity Module:

Cnflict Vol: 1684 1717 631 1808 1706 664 716 xxxx xxxxx 672 xxxx xxxxx
Potent Cap.: 76 91 485 62 92 464 894 xxxx xxxxx 929 xxxx xxxxx
Move Cap.: 48 72 485 21 73 464 894 xxxx xxxxx 929 xxxx xxxxx
Volume/Cap: 0.77 0.09 0.58 5.74 0.30 0.03 0.07 xxxx xxxx 0.13 xxxx xxxx

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx 0.2 xxxx xxxxx 0.5 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx 9.3 xxxx xxxxx 9.5 xxxx xxxxx
LOS by Move: * * * * * A * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx 225 xxxxx xxxx 25 xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
SharedQueue:xxxxx 18.7 xxxxx xxxxx 19.2 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 261 xxxxx xxxxx 2585 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS: * F * * F * * * * *
ApproachDel: 260.8 2585.2 xxxxxxx xxxxxxx
ApproachLOS: F F * *

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #6 Dowell Ave/Wilfred Ave

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

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

Volume Module:

Base Vol:	80	45	222	88	13	47	52	191	148	187	247	89
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:	80	45	222	88	13	47	52	191	148	187	247	89
Added Vol:	0	0	0	0	0	0	0	548	0	0	422	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	80	45	222	88	13	47	52	739	148	187	669	89
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	84	47	234	93	14	49	55	778	156	197	704	94
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	84	47	234	93	14	49	55	778	156	197	704	94

Critical Gap Module:

Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	2142	2157	856	2251	2188	751	798	xxxx	xxxxx	934	xxxx	xxxxx
Potent Cap.:	36	48	361	30	46	414	833	xxxx	xxxxx	741	xxxx	xxxxx
Move Cap.:	15	32	361	0	30	414	833	xxxx	xxxxx	741	xxxx	xxxxx
Volume/Cap:	5.50	1.50	0.65	xxxx	0.45	0.12	0.07	xxxx	xxxx	0.27	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.2	xxxx	xxxxx	1.1	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.6	xxxx	xxxxx	11.6	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	A	*	*	B	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	48	xxxxx	xxxx	0	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	42.9	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	3157	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	F	*	*	*	*	*	*	*	*	*	*			
ApproachDel:	3156.9			xxxxxx			xxxxxx			xxxxxx					
ApproachLOS:	F			F			*			*					

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

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

Intersection #7 Wilfred Ave/Redwood Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 1.139
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 92.7
Optimal Cycle: 180 Level Of Service: F

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected, Split Phase), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic flows. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2k95thQ.

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

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

Intersection #8 Redwood Dr/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.292
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 26.6
Optimal Cycle: 31 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module:

Table with 13 columns representing different volume and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module:

Table with 13 columns representing saturation flow factors like Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with 13 columns representing capacity analysis factors like Vol/Sat, Crit Moves, Green/Cycle, etc.

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

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

 Intersection #9 Wilfred Ave/101 SB Ramp

Cycle (sec): 145 Critical Vol./Cap.(X): 0.916
 Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 39.9
 Optimal Cycle: 132 Level Of Service: D

Street Name: US-101 SB Ramp Wilfred Avenue
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Permitted			Protected			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	1	0	1	0	0	1	2	0	2

Volume Module:

Base Vol:	0	0	0	328	324	459	0	737	219	89	476	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:	0	0	0	328	324	459	0	737	219	89	476	0
Added Vol:	0	0	0	0	0	151	0	141	399	0	263	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	328	324	610	0	878	618	89	739	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	345	341	642	0	924	651	94	778	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	345	341	642	0	924	651	94	778	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	345	341	642	0	924	651	94	778	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.83	0.88	0.88	1.00	0.92	0.92	0.93	0.98	1.00
Lanes:	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.17	0.83	2.00	2.00	0.00
Final Sat.:	0	0	0	1583	1680	1680	0	2050	1443	3538	3724	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.22	0.20	0.38	0.00	0.45	0.45	0.03	0.21	0.00
Crit Moves:						****		****		****		
Green/Cycle:	0.00	0.00	0.00	0.42	0.42	0.42	0.00	0.49	0.49	0.03	0.52	0.00
Volume/Cap:	0.00	0.00	0.00	0.52	0.49	0.92	0.00	0.92	0.92	0.92	0.40	0.00
Uniform Del:	0.0	0.0	0.0	31.5	30.9	39.9	0.0	34.1	34.1	70.2	21.0	0.0
IncrcmntDel:	0.0	0.0	0.0	0.8	0.2	12.1	0.0	8.2	8.2	62.7	0.1	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	0.0	0.0	0.0	32.3	31.1	52.0	0.0	42.3	42.3	132.9	21.2	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	32.3	31.1	52.0	0.0	42.3	42.3	132.9	21.2	0.0
LOS by Move:	A	A	A	C	C	D	A	D	D	F	C	A
HCM2k95thQ:	0	0	0	21	20	49	0	57	57	8	19	0

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #10 Golf Course Dr/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 1.082

Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 66.3

Optimal Cycle: 180 Level Of Service: E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	0	0	0	1	1	0	1

Volume Module:

Base Vol:	222	108	569	42	41	9	0	558	507	413	344	117
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:	222	108	569	42	41	9	0	558	507	413	344	117
Added Vol:	254	0	0	0	0	0	0	7	134	0	8	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	476	108	569	42	41	9	0	565	641	413	352	117
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	501	114	599	44	43	9	0	595	675	435	371	123
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	501	114	599	44	43	9	0	595	675	435	371	123
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	501	114	599	44	43	9	0	595	675	435	371	123

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.86	0.86	0.93	0.95	0.95	1.00	0.90	0.90	0.93	0.94	0.94
Lanes:	1.00	0.32	1.68	1.00	0.82	0.18	0.00	1.00	1.00	1.00	1.50	0.50
Final Sat.:	1769	519	2736	1769	1486	326	0	1713	1713	1769	2692	895

Capacity Analysis Module:

Vol/Sat:	0.28	0.22	0.22	0.02	0.03	0.03	0.00	0.35	0.39	0.25	0.14	0.14
Crit Moves:	****				****				****	****		
Green/Cycle:	0.26	0.26	0.26	0.03	0.03	0.03	0.00	0.36	0.36	0.23	0.59	0.59
Volume/Cap:	1.08	0.84	0.84	0.84	1.08	1.08	0.00	0.95	1.08	1.08	0.23	0.23
Uniform Del:	36.9	35.1	35.1	48.3	48.7	48.7	0.0	31.0	31.8	38.6	9.7	9.7
IncrcmntDel:	65.6	7.9	7.9	70.3	154	153.9	0.0	15.0	51.3	68.6	0.1	0.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	102.5	43.0	43.0	118.5	203	202.5	0.0	45.9	83.1	107.2	9.7	9.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	102.5	43.0	43.0	118.5	203	202.5	0.0	45.9	83.1	107.2	9.7	9.7
LOS by Move:	F	D	D	F	F	F	A	D	F	F	A	A
HCM2k95thQ:	41	23	23	6	8	8	0	38	51	37	7	7

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #11 Roberts Lake Dr/Golf Course Dr

Cycle (sec): 80 Critical Vol./Cap.(X): 0.515
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 15.5
Optimal Cycle: 27 Level Of Service: B

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module:

Table with 13 columns representing different volume and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module:

Table with 13 columns for saturation flow parameters like Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with 13 columns for capacity analysis metrics like Vol/Sat, Crit Moves, Green/Cycle, etc.

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

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

Intersection #12 101 NB Ramps/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 1.064
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 65.1
Optimal Cycle: 180 Level Of Service: E

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic volumes and adjustment factors.

Saturation Flow Module: Table with 13 columns representing saturation flow rates and adjustment factors.

Capacity Analysis Module: Table with 13 columns representing capacity analysis metrics like Vol/Sat, Crit Moves, Green/Cycle, etc.

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #13 New Driveway/Stony Point Rd

Average Delay (sec/veh): 0.6 Worst Case Level Of Service: C[21.6]

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	0	0	0	1	0	0	0

Volume Module:

Base Vol:	0	832	0	0	634	0	0	0	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
Initial Bse:	0	832	0	0	634	0	0	0	0	0	0	0
Added Vol:	0	0	332	0	120	0	0	0	0	0	0	59
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	832	332	0	754	0	0	0	0	0	0	59
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	876	349	0	794	0	0	0	0	0	0	62
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	876	349	0	794	0	0	0	0	0	0	62

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3

Capacity Module:

Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	1051
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	278
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	278
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.22

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0.8			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	21.6			
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	C			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*			
ApproachDel:	xxxxxxx			xxxxxxx			xxxxxxx				21.6				
ApproachLOS:	*			*			*				C				

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #14 New Driveway/Labath Ave

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

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

Volume Module:

Base Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Growth Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Bse:	0	0	0	0	0	0	0	0	0	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	0	0	0	0	0	0	0	0	0
User Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHF Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHF Volume:	0	0	0	0	0	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	0	0	0	0	0	0	0	0	0

Critical Gap Module:

Critical Gp:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FollowUpTim:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Capacity Module:

Cnflict Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Potent Cap.:	0	0	0	0	0	0	0	0	0	0	0	0
Move Cap.:	1	1	1	1	1	1	1	1	1	1	1	1
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Level Of Service Module:

2Way95thQ:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Del:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LOS by Move:												
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	0	0	0	0	0	0	0	0	0	0	0	0
SharedQueue:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Shrd ConDel:	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Shared LOS:												
ApproachDel:	0.0			0.0			0.0			0.0		
ApproachLOS:												

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #15 Redwood Dr/Business Park Dr

Average Delay (sec/veh): 5.6 Worst Case Level Of Service: D[26.5]

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: 1 0 2 0 0 0 0 1 1 0 1 0 0 0 0 0 0

Volume Module:

Base Vol: 33 464 0 0 489 41 172 0 89 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: 33 464 0 0 489 41 172 0 89 0 0 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 33 464 0 0 489 41 172 0 89 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 35 488 0 0 515 43 181 0 94 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 35 488 0 0 515 43 181 0 94 0 0 0

Critical Gap Module:

Critical Gp: 4.1 xxxx xxxxx xxxxx xxxx xxxxx 6.8 6.5 6.9 xxxxx xxxx xxxxx
FollowUpTim: 2.2 xxxx xxxxx xxxxx xxxx xxxxx 3.5 4.0 3.3 xxxxx xxxx xxxxx

Capacity Module:

Cnflict Vol: 558 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 850 1094 279 xxxx xxxx xxxxx
Potent Cap.: 1023 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 303 216 724 xxxx xxxx xxxxx
Move Cap.: 1023 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 296 208 724 xxxx xxxx xxxxx
Volume/Cap: 0.03 xxxx xxxx xxxxx xxxx xxxxx 0.61 0.00 0.13 xxxx xxxx xxxxx

Level Of Service Module:

2Way95thQ: 0.1 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 3.8 xxxx xxxxx xxxx xxxx xxxxx
Control Del: 8.6 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 34.7 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move: A * * * * * D * * * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx 724 xxxx xxxx xxxxx
SharedQueue:xxxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx 0.4 xxxxx xxxx xxxxx
Shrd ConDel:xxxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx 10.7 xxxxx xxxx xxxxx
Shared LOS: * * * * * * * * * * B * * *
ApproachDel: xxxxxx xxxxxx 26.5 xxxxxx
ApproachLOS: * * D *

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #16 Rohnert Park Expwy/Stony Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.918

Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 38.0

Optimal Cycle: 105 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Control:	Permitted			Protected			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1	0	0	1	0	0	0	1	0	0

Volume Module:

Base Vol:	0	546	251	212	421	0	0	0	0	257	0	286
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	546	251	212	421	0	0	0	0	257	0	286
Added Vol:	0	81	0	43	77	0	0	0	0	0	0	251
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	627	251	255	498	0	0	0	0	257	0	537
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	660	264	268	524	0	0	0	0	271	0	565
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	660	264	268	524	0	0	0	0	271	0	565
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	660	264	268	524	0	0	0	0	271	0	565

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.98	0.83	0.93	0.98	1.00	1.00	1.00	1.00	0.93	1.00	0.83
Lanes:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	1862	1583	1769	1862	0	0	0	0	1769	0	1583

Capacity Analysis Module:

Vol/Sat:	0.00	0.35	0.17	0.15	0.28	0.00	0.00	0.00	0.00	0.15	0.00	0.36
Crit Moves:	****			****						****		
Green/Cycle:	0.00	0.39	0.39	0.17	0.55	0.00	0.00	0.00	0.00	0.39	0.00	0.39
Volume/Cap:	0.00	0.92	0.43	0.92	0.51	0.00	0.00	0.00	0.00	0.39	0.00	0.92
Uniform Del:	0.0	29.2	22.6	41.1	14.0	0.0	0.0	0.0	0.0	22.0	0.0	29.0
IncrcmntDel:	0.0	16.8	0.5	32.2	0.4	0.0	0.0	0.0	0.0	0.4	0.0	18.9
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Delay/Veh:	0.0	46.0	23.1	73.3	14.5	0.0	0.0	0.0	0.0	22.4	0.0	47.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	46.0	23.1	73.3	14.5	0.0	0.0	0.0	0.0	22.4	0.0	47.9
LOS by Move:	A	D	C	E	B	A	A	A	A	C	A	D
HCM2k95thQ:	0	39	12	21	19	0	0	0	0	12	0	35

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

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

Intersection #17 Rohnert Park Expwy/Labath Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.590
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 33.9
Optimal Cycle: 47 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2k95thQ.

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

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

Intersection #18 Rohnert Park Expwy/Redwood Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.731
 Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 43.9
 Optimal Cycle: 64 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound					
Movement:	L	T	R	L	T	R	L	T	R	L	T	R			
Control:	Protected			Protected			Protected			Protected					
Rights:	Include			Include			Include			Include					
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0			
Lanes:	1	0	1	1	1	1	2	0	1	0	3	0	1	2	0

Volume Module:

Base Vol:	137	252	422	364	264	243	233	701	146	371	656	358
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:	137	252	422	364	264	243	233	701	146	371	656	358
Added Vol:	0	0	0	0	0	0	0	43	0	0	251	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	137	252	422	364	264	243	233	744	146	371	907	358
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	144	265	444	383	278	256	245	783	154	391	955	377
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	144	265	444	383	278	256	245	783	154	391	955	377
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	144	265	444	383	278	256	245	783	154	391	955	377

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.89	0.89	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.83
Lanes:	1.00	1.12	1.88	2.00	1.00	1.00	1.00	3.00	1.00	2.00	2.00	1.00
Final Sat.:	1769	1892	3169	3538	1862	1583	1769	5586	1583	3538	3724	1583

Capacity Analysis Module:

Vol/Sat:	0.08	0.14	0.14	0.11	0.15	0.16	0.14	0.14	0.10	0.11	0.26	0.24
Crit Moves:	****			****			****			****		
Green/Cycle:	0.13	0.22	0.22	0.17	0.26	0.26	0.10	0.28	0.28	0.22	0.40	0.40
Volume/Cap:	0.63	0.65	0.65	0.65	0.58	0.63	1.39	0.51	0.35	0.51	0.65	0.60
Uniform Del:	41.3	35.7	35.7	38.9	32.6	33.1	45.0	30.4	28.9	34.3	24.5	23.9
IncrcmntDel:	5.7	1.4	1.4	2.5	1.9	3.3	204.9	0.3	0.5	0.5	1.0	1.6
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	47.0	37.1	37.1	41.4	34.5	36.4	249.9	30.6	29.4	34.9	25.5	25.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	47.0	37.1	37.1	41.4	34.5	36.4	249.9	30.6	29.4	34.9	25.5	25.6
LOS by Move:	D	D	D	D	C	D	F	C	C	C	C	C
HCM2k95thQ:	10	14	14	13	15	15	31	13	8	11	23	18

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #19 Rohnert Park Expwy/101 SB Ramps

Cycle (sec): 80 Critical Vol./Cap.(X): 0.753
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 21.5
Optimal Cycle: 63 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Permitted/Protected), Rights (Include/Ignore), Min. Green, and Lanes.

Volume Module: Table with 13 columns for different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns for different traffic movements. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns for different traffic movements. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2k95thQ.

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

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

 Intersection #20 Rohnert Park Expwy/101 NB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.592
 Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 21.8
 Optimal Cycle: 32 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	0	1	0	4	0	3	0

Volume Module:

Base Vol:	303	0	306	14	0	3	17	1631	273	0	985	350
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:	303	0	306	14	0	3	17	1631	273	0	985	350
Added Vol:	243	0	0	0	0	0	0	7	0	0	8	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	546	0	306	14	0	3	17	1638	273	0	993	350
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00	0.95	0.95	0.00
PHF Volume:	575	0	322	15	0	3	18	1724	0	0	1045	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	575	0	322	15	0	3	18	1724	0	0	1045	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Final Vol.:	575	0	322	15	0	3	18	1724	0	0	1045	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	1.00	0.83	0.93	1.00	0.83	0.19	0.98	1.00	1.00	0.98	1.00
Lanes:	1.00	0.00	2.00	1.00	0.00	1.00	1.00	4.00	1.00	0.00	3.00	1.00
Final Sat.:	1769	0	3165	1769	0	1583	365	7448	1900	0	5586	1900

Capacity Analysis Module:

Vol/Sat:	0.32	0.00	0.10	0.01	0.00	0.00	0.05	0.23	0.00	0.00	0.19	0.00
Crit Moves:	****			****			****					
Green/Cycle:	0.55	0.00	0.51	0.04	0.00	0.00	0.39	0.39	0.00	0.00	0.39	0.00
Volume/Cap:	0.59	0.00	0.20	0.20	0.00	xxxx	0.13	0.59	0.00	0.00	0.48	0.00
Uniform Del:	15.1	0.0	13.5	46.3	0.0	0.0	19.5	24.1	0.0	0.0	22.8	0.0
IncrcmntDel:	1.0	0.0	0.1	1.3	0.0	0.0	0.4	0.3	0.0	0.0	0.2	0.0
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00
Delay/Veh:	16.1	0.0	13.6	47.7	0.0	0.0	19.9	24.5	0.0	0.0	23.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	16.1	0.0	13.6	47.7	0.0	0.0	19.9	24.5	0.0	0.0	23.0	0.0
LOS by Move:	B	A	B	D	A	A	B	C	A	A	C	A
HCM2k95thQ:	22	0	5	1	0	2	1	20	0	0	15	0

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #21 Rohnert Park Expwy/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.815
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 33.9
Optimal Cycle: 81 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Split Phase, Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2k95thQ.

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

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

 Intersection #22 Gravenstein Hwy (SR 116)/ Stoney Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.766
 Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 38.6
 Optimal Cycle: 70 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	0	1	0	1	0	1	1	0	2

Volume Module:

Base Vol:	321	494	108	96	342	219	133	484	202	128	589	103
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	321	494	108	96	342	219	133	484	202	128	589	103
Added Vol:	0	0	0	77	0	0	0	0	0	0	0	81
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	321	494	108	173	342	219	133	484	202	128	589	184
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	338	520	114	182	360	231	140	509	213	135	620	194
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	338	520	114	182	360	231	140	509	213	135	620	194
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	338	520	114	182	360	231	140	509	213	135	620	194

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.89	0.89	0.93	0.93	0.83
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.41	0.59	1.00	2.00	1.00
Final Sat.:	1769	1862	1583	1769	1862	1583	1769	2386	996	1769	3538	1583

Capacity Analysis Module:

Vol/Sat:	0.19	0.28	0.07	0.10	0.19	0.15	0.08	0.21	0.21	0.08	0.18	0.12
Crit Moves:	****			****			****			****		
Green/Cycle:	0.25	0.37	0.37	0.14	0.25	0.25	0.12	0.28	0.28	0.10	0.26	0.26
Volume/Cap:	0.77	0.76	0.20	0.76	0.77	0.58	0.67	0.77	0.77	0.77	0.67	0.47
Uniform Del:	34.8	27.8	21.6	41.7	34.6	32.7	42.3	33.1	33.1	43.9	33.2	31.2
IncrcmntDel:	7.9	5.0	0.2	13.4	7.4	2.1	8.3	3.8	3.8	18.1	2.0	0.8
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	42.7	32.9	21.8	55.1	42.0	34.8	50.6	36.9	36.9	62.0	35.1	32.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	42.7	32.9	21.8	55.1	42.0	34.8	50.6	36.9	36.9	62.0	35.1	32.0
LOS by Move:	D	C	C	E	D	C	D	D	D	E	D	C
HCM2k95thQ:	21	27	5	14	22	13	11	22	22	11	18	10

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #23 Gravenstein Hwy (SR 116)/ Redwood Rd

Cycle (sec): 80 Critical Vol./Cap.(X): 0.763
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 28.6
Optimal Cycle: 65 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns for different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns for different traffic movements. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns for different traffic movements. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueueDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2k95thQ.

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

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

 Intersection #24 Gravenstein Hwy and SB 101 Ramps

Cycle (sec): 80 Critical Vol./Cap.(X): 0.615
 Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 18.1
 Optimal Cycle: 41 Level Of Service: B

Street Name: SB 101 Ramps Gravenstein Hwy
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Permitted			Protected			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	2	0	1	0	0	1	1	0	0

Volume Module:

Base Vol:	0	0	0	639	0	212	0	819	361	99	900	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:	0	0	0	639	0	212	0	819	361	99	900	0
Added Vol:	0	0	0	0	0	0	0	0	77	0	81	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	639	0	212	0	819	438	99	981	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	673	0	223	0	862	461	104	1033	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	673	0	223	0	862	461	104	1033	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	673	0	223	0	862	461	104	1033	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.90	1.00	0.83	1.00	0.93	0.83	0.93	0.93	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	0.00	2.00	1.00	1.00	2.00	0.00
Final Sat.:	0	0	0	3432	0	1583	0	3538	1583	1769	3538	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.20	0.00	0.14	0.00	0.24	0.29	0.06	0.29	0.00
Crit Moves:				****					****	****		
Green/Cycle:	0.00	0.00	0.00	0.35	0.00	0.35	0.00	0.43	0.43	0.10	0.54	0.00
Volume/Cap:	0.00	0.00	0.00	0.56	0.00	0.40	0.00	0.57	0.68	0.59	0.54	0.00
Uniform Del:	0.0	0.0	0.0	21.0	0.0	19.7	0.0	17.2	18.3	34.4	12.0	0.0
IncrcmntDel:	0.0	0.0	0.0	0.6	0.0	0.5	0.0	0.5	2.7	5.1	0.3	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	0.0	0.0	0.0	21.6	0.0	20.2	0.0	17.7	21.1	39.6	12.3	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	21.6	0.0	20.2	0.0	17.7	21.1	39.6	12.3	0.0
LOS by Move:	A	A	A	C	A	C	A	B	C	D	B	A
HCM2k95thQ:	0	0	0	14	0	9	0	17	19	7	17	0

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

 Intersection #25 Gravenstein Hwy and NB 101 Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.760
 Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 19.9
 Optimal Cycle: 60 Level Of Service: B

Street Name: NB 101 Ramps Gravenstein Hwy
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R
 -----|-----|-----|-----|

Control: Protected Permitted Permitted Permitted
 Rights: Include Include Include Include
 Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
 Lanes: 1 0 0 0 1 0 0 0 0 0 0 2 0 0 0 0 2 0 0
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Volume Module:
 Base Vol: 351 0 236 0 0 0 0 1461 0 0 617 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: 351 0 236 0 0 0 0 1461 0 0 617 0
 Added Vol: 81 0 0 0 0 0 0 0 0 0 0 0
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
 Initial Fut: 432 0 236 0 0 0 0 1461 0 0 617 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
 PHF Volume: 455 0 248 0 0 0 0 1538 0 0 649 0
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 Reduced Vol: 455 0 248 0 0 0 0 1538 0 0 649 0
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Final Vol.: 455 0 248 0 0 0 0 1538 0 0 649 0
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Saturation Flow Module:
 Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
 Adjustment: 0.93 1.00 0.83 1.00 1.00 1.00 1.00 0.93 1.00 1.00 0.93 1.00
 Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 2.00 0.00 0.00 2.00 0.00
 Final Sat.: 1769 0 1583 0 0 0 0 3538 0 0 3538 0
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Capacity Analysis Module:
 Vol/Sat: 0.26 0.00 0.16 0.00 0.00 0.00 0.00 0.43 0.00 0.00 0.18 0.00
 Crit Moves: **** *
 Green/Cycle: 0.34 0.00 0.34 0.00 0.00 0.00 0.00 0.57 0.00 0.00 0.57 0.00
 Volume/Cap: 0.76 0.00 0.46 0.00 0.00 0.00 0.00 0.76 0.00 0.00 0.32 0.00
 Uniform Del: 29.5 0.0 26.0 0.0 0.0 0.0 0.0 16.2 0.0 0.0 11.2 0.0
 IncremntDel: 5.7 0.0 0.6 0.0 0.0 0.0 0.0 1.7 0.0 0.0 0.1 0.0
 InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 Delay Adj: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 1.00 0.00 0.00 1.00 0.00
 Delay/Veh: 35.1 0.0 26.6 0.0 0.0 0.0 0.0 18.0 0.0 0.0 11.3 0.0
 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 AdjDel/Veh: 35.1 0.0 26.6 0.0 0.0 0.0 0.0 18.0 0.0 0.0 11.3 0.0
 LOS by Move: D A C A A A A B A A B A
 HCM2k95thQ: 25 0 12 0 0 0 0 34 0 0 11 0

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #26 Millbrae Ave/Stony Point Rd

Average Delay (sec/veh): 3.4 Worst Case Level Of Service: F[50.4]

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:	1	0	2	0	1	1	0	0	1!	0	0	1

Volume Module:

Base Vol:	19	715	20	116	546	4	7	6	11	2	7	194
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:	19	715	20	116	546	4	7	6	11	2	7	194
Added Vol:	0	59	0	0	84	0	0	0	0	0	0	15
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	19	774	20	116	630	4	7	6	11	2	7	209
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	20	815	21	122	663	4	7	6	12	2	7	220
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	20	815	21	122	663	4	7	6	12	2	7	220

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.5	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflict Vol:	667	xxxx	xxxxx	836	xxxx	xxxxx	1361	1785	334	1434	1766	407
Potent Cap.:	932	xxxx	xxxxx	807	xxxx	xxxxx	109	82	668	96	85	599
Move Cap.:	932	xxxx	xxxxx	807	xxxx	xxxxx	55	68	668	77	70	599
Volume/Cap:	0.02	xxxx	xxxx	0.15	xxxx	xxxx	0.13	0.09	0.02	0.03	0.10	0.37

Level Of Service Module:

2Way95thQ:	0.1	xxxx	xxxxx	0.5	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	1.7			
Control Del:	8.9	xxxx	xxxxx	10.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	14.5			
LOS by Move:	A	*	*	B	*	*	*	*	*	*	*	B			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	104	xxxxx	72	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.9	xxxxx	0.4	xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	50.4	xxxxx	62.8	xxxx	xxxxx			
Shared LOS:	*	*	*	*	*	*	*	F	*	F	*	*			
ApproachDel:	xxxxxx			xxxxxx				50.4				16.5			
ApproachLOS:	*			*				F				C			

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #27 Millbrae Ave/Primrose Ave

Average Delay (sec/veh): 0.6 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:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	1! 0 0	0	0	1 0 0	0	0	1! 0 0	0	0	1! 0 0

Volume Module:

Base Vol:	0	0	1	0	1	0	1	139	3	4	199	2
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	1	0	1	0	1	139	3	4	199	2
Added Vol:	15	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	15	0	1	0	1	0	1	139	3	4	199	2
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	16	0	1	0	1	0	1	146	3	4	209	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	16	0	1	0	1	0	1	146	3	4	209	2

Critical Gap Module:

Critical Gp:	7.1	6.5	6.2	xxxxx	6.5	xxxxx	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	4.0	xxxxx	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	369	370	148	xxxx	371	xxxxx	212	xxxx	xxxxx	149	xxxx	xxxxx
Potent Cap.:	591	563	904	xxxx	562	xxxxx	1371	xxxx	xxxxx	1444	xxxx	xxxxx
Move Cap.:	588	561	904	xxxx	560	xxxxx	1371	xxxx	xxxxx	1444	xxxx	xxxxx
Volume/Cap:	0.03	0.00	0.00	xxxx	0.00	xxxx	0.00	xxxx	xxxx	0.00	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	0.0	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	11.4	xxxxx	7.6	xxxx	xxxxx	7.5	xxxx	xxxxx			
LOS by Move:	*	*	*	*	B	*	A	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	601	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	0.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	11.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	B	*	*	*	*	*	*	*	*	*	*			
ApproachDel:	11.2				11.4		xxxxxxx			xxxxxxx					
ApproachLOS:	B				B		*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #28 Millbrae Ave/Whistler Ave

Average Delay (sec/veh): 0.6 Worst Case Level Of Service: B[11.5]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 1 0 0 0 0 0 1! 0 0 0 0 1! 0 0 0 0 1! 0 0

Volume Module:

Base Vol: 1 9 0 4 0 1 1 123 2 4 208 8
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 1 9 0 4 0 1 1 123 2 4 208 8
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 1 9 0 4 0 1 1 123 2 4 208 8
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 1 9 0 4 0 1 1 129 2 4 219 8
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 1 9 0 4 0 1 1 129 2 4 219 8

Critical Gap Module:

Critical Gp: 7.1 6.5 xxxxx 7.1 6.5 6.2 4.1 xxxxx xxxxx 4.1 xxxxx xxxxx
FollowUpTim: 3.5 4.0 xxxxx 3.5 4.0 3.3 2.2 xxxxx xxxxx 2.2 xxxxx xxxxx

Capacity Module:

Cnflct Vol: 365 368 xxxxx 369 365 223 227 xxxxx xxxxx 132 xxxxx xxxxx
Potent Cap.: 595 564 xxxxx 591 566 821 1353 xxxxx xxxxx 1466 xxxxx xxxxx
Move Cap.: 593 562 xxxxx 582 564 821 1353 xxxxx xxxxx 1466 xxxxx xxxxx
Volume/Cap: 0.00 0.02 xxxxx 0.01 0.00 0.00 0.00 xxxxx xxxxx 0.00 xxxxx xxxxx

Level Of Service Module:

2Way95thQ: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx 0.0 xxxxx xxxxx
Control Del: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 7.7 xxxxx xxxxx 7.5 xxxxx xxxxx
LOS by Move: * * * * * A * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: 565 xxxxx xxxxx xxxxx 618 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue: 0.1 xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd ConDel: 11.5 xxxxx xxxxx xxxxx 10.9 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: B * * * B * * * * *
ApproachDel: 11.5 10.9 xxxxxxx xxxxxxx
ApproachLOS: B B * *

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #29 Millbrae Ave/Langner Ave

Average Delay (sec/veh): 0.4 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: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 0 0 0 0 0 1 0 0 1 0 0 0 0

Volume Module:

Base Vol: 5 0 11 0 0 0 0 149 9 4 270 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: 5 0 11 0 0 0 0 149 9 4 270 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 5 0 11 0 0 0 0 149 9 4 270 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 5 0 12 0 0 0 0 157 9 4 284 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 5 0 12 0 0 0 0 157 9 4 284 0

Critical Gap Module:

Critical Gp: 6.4 6.5 6.2 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 4.1 xxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 2.2 xxxx xxxxx

Capacity Module:

Cnflict Vol: 454 454 162 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 166 xxxx xxxxx
Potent Cap.: 567 505 889 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 1424 xxxx xxxxx
Move Cap.: 566 503 889 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 1424 xxxx xxxxx
Volume/Cap: 0.01 0.00 0.01 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 0.00 xxxx xxxxx

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx 0.0 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxxx xxxx xxxxx xxxxxx xxxx xxxx xxxxx 7.5 xxxx xxxxx
LOS by Move: * * * * * * * * * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx 754 xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
SharedQueue:xxxxx 0.1 xxxxx xxxxx xxxx xxxxx xxxxxx xxxx xxxxx 0.0 xxxx xxxxx
Shrd ConDel:xxxxx 9.9 xxxxx xxxxx xxxx xxxxx xxxxxx xxxx xxxxx 7.5 xxxx xxxxx
Shared LOS: * A * * * * * * * * * A * *
ApproachDel: 9.9 xxxxxxx xxxxxxx xxxxxxx
ApproachLOS: A * *

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #30 Millbrae Ave/Labath Ave

Average Delay (sec/veh): 1.0 Worst Case Level Of Service: B[11.2]

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

Volume Module:

Base Vol:	25	0	8	0	0	0	0	155	9	11	250	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:	25	0	8	0	0	0	0	155	9	11	250	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	25	0	8	0	0	0	0	155	9	11	250	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	26	0	8	0	0	0	0	163	9	12	263	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	26	0	8	0	0	0	0	163	9	12	263	0

Critical Gap Module:

Critical Gp:	6.4	6.5	6.2	7.1	6.5	6.2	xxxxx	xxxxx	xxxxx	4.1	xxxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	xxxxx	xxxxx	xxxxx	2.2	xxxxx	xxxxx

Capacity Module:

Cnflict Vol:	454	454	168	458	459	263	xxxxx	xxxxx	xxxxx	173	xxxxx	xxxxx
Potent Cap.:	567	505	881	516	502	780	xxxxx	xxxxx	xxxxx	1416	xxxxx	xxxxx
Move Cap.:	564	501	881	508	498	780	xxxxx	xxxxx	xxxxx	1416	xxxxx	xxxxx
Volume/Cap:	0.05	0.00	0.01	0.00	0.00	0.00	xxxxx	xxxxx	xxxxx	0.01	xxxxx	xxxxx

Level Of Service Module:

2Way95thQ:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx			
Control Del:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	7.6	xxxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxxx	618	xxxxx	xxxxx	0	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
SharedQueue:	xxxxx	0.2	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shrd ConDel:	xxxxx	11.2	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	7.6	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shared LOS:	*	B	*	*	*	*	*	*	*	A	*	*	*	*	*
ApproachDel:	11.2			xxxxxxx			xxxxxxx			xxxxxxx					
ApproachLOS:	B			*			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #31 Millbrae Ave/Dowdell Ave

Average Delay (sec/veh): 1.0 Worst Case Level Of Service: B[11.3]

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

Volume Module:

Base Vol:	37	0	0	0	0	0	0	135	22	0	235	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:	37	0	0	0	0	0	0	135	22	0	235	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	37	0	0	0	0	0	0	135	22	0	235	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	39	0	0	0	0	0	0	142	23	0	247	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	39	0	0	0	0	0	0	142	23	0	247	0

Critical Gap Module:

Critical Gp:	6.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	401	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	609	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	609	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.06	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	0.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
Control Del:	11.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
LOS by Move:	B	*	*	*	*	*	*	*	*	*	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*			
ApproachDel:	11.3			xxxxxx			xxxxxx			xxxxxx					
ApproachLOS:	B			*			*			*					

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

**CUMULATIVE 2020 + ALTERNATIVE D
TRAFFIC CONDITIONS
(TRAFFIX)**

 Impact Analysis Report
 Level Of Service

Intersection	Base		Future		Change in
	Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C	
# 1 Wilfred Ave/Stony Point Rd	F	401.6 0.000	F	OVRFL 0.000	+1594.173 D/
# 2 Wilfred Ave/Primrose Ave	B	12.4 0.000	F	OVRFL 0.000	+1125.476 D/
# 3 Wilfred Ave/Whistler Ave	B	12.4 0.000	E	42.1 0.000	+29.698 D/V
# 4 Langner Ave/Wilfred Ave	B	12.4 0.000	E	42.1 0.000	+29.731 D/V
# 5 Wilfred Ave/Labath Ave	F	491.5 0.000	F	OVRFL 0.000	+6288.029 D/
# 6 Dowell Ave/Wilfred Ave	F	OVRFL 0.000	F	OVRFL 0.000	+ 0.000 D/V
# 7 Wilfred Ave/Redwood Dr	F	87.9 1.116	F	205.4 1.562	+117.448 D/V
# 9 Wilfred Ave/101 SB Ramp	C	33.2 0.823	E	71.7 1.109	+38.435 D/V
# 10 Golf Course Dr/Commerce Blvd	F	96.5 1.161	F	151.9 1.430	+55.421 D/V
# 11 Roberts Lake Dr/Golf Course Dr	B	11.1 0.453	B	10.9 0.456	-0.232 D/V
# 12 101 NB Ramps/Commerce Blvd	E	69.8 1.098	F	122.9 1.285	+53.098 D/V
# 13 New Driveway/Stony Point Rd	A	0.0 0.000	C	19.8 0.000	+19.751 D/V
# 14 New Driveway/Labath Ave		0.0 0.000		0.0 0.000	+ 0.000 D/V
# 15 Redwood Dr/Business Park Dr	C	16.5 0.000	C	16.5 0.000	+ 0.000 D/V
# 16 Rohnert Park Expwy/Stony Point	C	22.1 0.619	C	32.5 0.866	+10.465 D/V
# 17 Rohnert Park Expwy/Labath Ave	C	30.7 0.522	C	33.5 0.536	+ 2.793 D/V
# 18 Rohnert Park Expwy/Redwood Dr	D	36.0 0.697	D	36.4 0.731	+ 0.447 D/V
# 19 Rohnert Park Expwy/101 SB Ramp	C	24.5 0.710	C	24.8 0.721	+ 0.312 D/V
# 20 Rohnert Park Expwy/101 NB Ramp	B	17.1 0.449	F	OVRFL 0.603	+12440003173
# 21 Rohnert Park Expwy/Commerce Bl	C	34.9 0.802	C	34.9 0.804	+ 0.014 D/V
# 22 Gravenstein Hwy (SR 116)/ Ston	D	39.9 0.829	D	41.4 0.829	+ 1.503 D/V
# 23 Gravenstein Hwy (SR 116)/ Redw	C	34.6 0.882	D	35.7 0.882	+ 1.154 D/V
# 24 Gravenstein Hwy and SB 101 Ram	B	17.0 0.585	B	17.0 0.585	+ 0.057 D/V
# 25 Gravenstein Hwy and NB 101 Ram	B	18.7 0.767	C	21.6 0.820	+ 2.837 D/V
# 26 Millbrae Ave/Stony Point Rd	F	70.6 0.000	F	112.5 0.000	+41.864 D/V

Intersection	Base			Future			Change in
	LOS	Del/ Veh	V/ C	LOS	Del/ Veh	V/ C	
# 27 Millbrae Ave/Primrose Ave	B	12.4	0.000	B	12.4	0.000	+ 0.000 D/V
# 28 Millbrae Ave/Whister Ave	B	12.4	0.000	B	12.4	0.000	+ 0.000 D/V
# 29 Millbrae Ave/Langner Ave	B	11.2	0.000	B	11.2	0.000	+ 0.000 D/V
# 30 Millbrae Ave/Labath Ave	B	13.5	0.000	B	13.5	0.000	+ 0.000 D/V
# 31 Millbrae Ave/Dowdell Ave	B	11.6	0.000	B	11.6	0.000	+ 0.000 D/V

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1 Wilfred Ave/Stony Point Rd

Average Delay (sec/veh): 426.5 Worst Case Level Of Service: F[1995.8]

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:	1	0	0	1	0	0	0	0	0	1	0	0

Volume Module:

Base Vol:	14	677	74	102	508	3	0	13	16	143	22	134
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:	14	677	74	102	508	3	0	13	16	143	22	134
Added Vol:	0	59	0	84	0	0	0	0	0	120	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	14	736	74	186	508	3	0	13	16	263	22	134
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	15	775	78	196	535	3	0	14	17	277	23	141
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	15	775	78	196	535	3	0	14	17	277	23	141

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflict Vol:	538	xxxx	xxxxx	853	xxxx	xxxxx	xxxx	1810	536	1786	1773	814
Potent Cap.:	1041	xxxx	xxxxx	795	xxxx	xxxxx	xxxx	80	548	64	84	381
Move Cap.:	1041	xxxx	xxxxx	795	xxxx	xxxxx	xxxx	59	548	41	62	381
Volume/Cap:	0.01	xxxx	xxxx	0.25	xxxx	xxxx	xxxx	0.23	0.03	6.72	0.37	0.37

Level Of Service Module:

2Way95thQ:	0.0	xxxx	xxxxx	1.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	1.7			
Control Del:	8.5	xxxx	xxxxx	11.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	19.9			
LOS by Move:	A	*	*	B	*	*	*	*	*	*	*	C			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	116	42	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	1.0	35.4	xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	46.6	2925	xxxx	xxxxx			
Shared LOS:	*	*	*	*	*	*	*	*	E	F	*	*			
ApproachDel:	xxxxxx			xxxxxx				46.6		1995.8					
ApproachLOS:	*			*				E		F					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Wilfred Ave/Primrose Ave

Average Delay (sec/veh): 479.7 Worst Case Level Of Service: F[1137.9]

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

Volume Module:

Base Vol:	10	10	10	10	10	10	10	170	10	9	280	9
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:	10	10	10	10	10	10	10	170	10	9	280	9
Added Vol:	120	15	548	0	0	0	0	0	84	422	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	130	25	558	10	10	10	10	170	94	431	280	9
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	137	26	587	11	11	11	11	179	99	454	295	9
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	137	26	587	11	11	11	11	179	99	454	295	9

Critical Gap Module:

Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	1467	1461	228	1763	1506	299	304	xxxx	xxxxx	278	xxxx	xxxxx
Potent Cap.:	107	130	816	66	122	745	1268	xxxx	xxxxx	1297	xxxx	xxxxx
Move Cap.:	59	69	816	8	65	745	1268	xxxx	xxxxx	1297	xxxx	xxxxx
Volume/Cap:	2.33	0.38	0.72	1.24	0.16	0.01	0.01	xxxx	xxxx	0.35	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	1.6	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.9	xxxx	xxxxx	9.3	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	219	xxxxx	xxxx	22	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	70.5	xxxxx	xxxxx	4.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	1138	xxxxx	xxxxx	595	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	F	*	*	F	*	*	*	*	*	*	*			
ApproachDel:	1137.9			595.4			xxxxxx			xxxxxx					
ApproachLOS:	F			F			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 Wilfred Ave/Whistler Ave

Average Delay (sec/veh): 1.8 Worst Case Level Of Service: E[42.1]

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

Volume Module:

Base Vol:	10	10	10	10	10	10	10	170	10	9	280	9
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:	10	10	10	10	10	10	10	170	10	9	280	9
Added Vol:	0	0	0	0	0	0	0	548	0	0	422	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	10	10	10	10	10	10	718	10	9	702	9
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	11	11	11	11	11	11	756	11	9	739	9
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	11	11	11	11	11	11	11	756	11	9	739	9
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	1555	1549	761	1555	1550	744	748	xxxx	xxxxx	766	xxxx	xxxxx
Potent Cap.:	93	115	409	93	115	418	869	xxxx	xxxxx	856	xxxx	xxxxx
Move Cap.:	83	112	409	83	112	418	869	xxxx	xxxxx	856	xxxx	xxxxx
Volume/Cap:	0.13	0.09	0.03	0.13	0.09	0.03	0.01	xxxx	xxxx	0.01	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.2	xxxx	xxxxx	9.3	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	128	xxxxx	xxxx	128	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	0.9	xxxxx	xxxxx	0.9	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	42.1	xxxxx	xxxxx	42.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	E	*	*	E	*	*	*	*	*	*	*			
ApproachDel:	42.1			42.1			xxxxxxx			xxxxxxx					
ApproachLOS:	E			E			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Langner Ave/Wilfred Ave

Average Delay (sec/veh): 1.8 Worst Case Level Of Service: E[42.1]

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

Volume Module:

Base Vol:	10	10	10	10	10	10	10	170	10	9	280	9
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:	10	10	10	10	10	10	10	170	10	9	280	9
Added Vol:	0	0	0	0	0	0	0	548	0	0	422	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	10	10	10	10	10	10	718	10	9	702	9
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	11	11	11	11	11	11	756	11	9	739	9
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	11	11	11	11	11	11	11	756	11	9	739	9
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	1555	1549	761	1551	1545	739	748	xxxx	xxxxx	766	xxxx	xxxxx
Potent Cap.:	93	115	409	94	116	421	869	xxxx	xxxxx	856	xxxx	xxxxx
Move Cap.:	83	112	409	83	113	421	869	xxxx	xxxxx	856	xxxx	xxxxx
Volume/Cap:	0.13	0.09	0.03	0.13	0.09	0.03	0.01	xxxx	xxxx	0.01	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.2	xxxx	xxxxx	9.3	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	128	xxxxx	xxxx	129	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	0.9	xxxxx	xxxxx	0.9	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	42.1	xxxxx	xxxxx	41.7	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	E	*	*	E	*	*	*	*	*	*	*			
ApproachDel:	42.1			41.7			xxxxxxx			xxxxxxx					
ApproachLOS:	E			E			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #5 Wilfred Ave/Labath Ave

Average Delay (sec/veh): 788.0 Worst Case Level Of Service: F[6779.5]

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

Volume Module:

Base Vol:	44	14	396	180	31	11	40	109	41	188	245	189
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	14	396	180	31	11	40	109	41	188	245	189
Added Vol:	0	0	0	0	0	0	0	548	0	0	422	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	44	14	396	180	31	11	40	657	41	188	667	189
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	46	15	417	189	33	12	42	692	43	198	702	199
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	46	15	417	189	33	12	42	692	43	198	702	199

Critical Gap Module:

Critical Gp:	7.5	6.5	6.9	7.5	6.5	6.9	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	1561	2094	367	1635	2016	451	901	xxxx	xxxxx	735	xxxx	xxxxx
Potent Cap.:	77	53	635	68	59	562	763	xxxx	xxxxx	880	xxxx	xxxxx
Move Cap.:	24	39	635	13	43	562	763	xxxx	xxxxx	880	xxxx	xxxxx
Volume/Cap:	1.93	0.38	0.66	14.24	0.75	0.02	0.06	xxxx	xxxx	0.22	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.2	xxxx	xxxxx	0.9	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	10.0	xxxx	xxxxx	10.3	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	A	*	*	B	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	161	xxxxx	xxxx	16	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	43.7	xxxxx	xxxxx	30.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	946	xxxxx	xxxxx	6780	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	F	*	*	F	*	*	*	*	*	*	*			
ApproachDel:	945.9			6779.5			xxxxxxx			xxxxxxx					
ApproachLOS:	F			F			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #6 Dowell Ave/Wilfred Ave

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

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

Volume Module:

Base Vol:	143	105	559	217	41	119	53	359	273	509	360	273
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:	143	105	559	217	41	119	53	359	273	509	360	273
Added Vol:	0	0	0	0	0	0	0	548	0	0	422	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	143	105	559	217	41	119	53	907	273	509	782	273
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	151	111	588	228	43	125	56	955	287	536	823	287
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	151	111	588	228	43	125	56	955	287	536	823	287
Critical Gap Module:												
Critical Gp:	7.5	6.5	6.9	7.5	6.5	6.9	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	2715	3392	621	2683	3392	555	1111	xxxx	xxxxx	1242	xxxx	xxxxx
Potent Cap.:	10	8	435	11	8	480	636	xxxx	xxxxx	568	xxxx	xxxxx
Move Cap.:	0	0	435	0	0	480	636	xxxx	xxxxx	568	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	1.35	xxxx	xxxx	0.26	0.09	xxxx	xxxx	0.94	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.3	xxxx	xxxxx	12.3	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	11.2	xxxx	xxxxx	52.2	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	B	*	*	F	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	0	xxxxx	xxxx	0	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*			
ApproachDel:	xxxxxxx			xxxxxxx			xxxxxxx			xxxxxxx					
ApproachLOS:		F			F			*			*				

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

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

Intersection #7 Wilfred Ave/Redwood Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 1.562
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 205.4
Optimal Cycle: 180 Level Of Service: F

Table with columns for Approach (North, South, East, West Bound) and Movement (L, T, R). Rows include Control, Rights, Min. Green, and Lanes.

Volume Module:

Table with 13 columns for traffic metrics: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module:

Table with 13 columns for saturation flow metrics: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with 13 columns for capacity analysis metrics: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

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

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

 Intersection #9 Wilfred Ave/101 SB Ramp

Cycle (sec): 145 Critical Vol./Cap.(X): 1.109
 Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 71.7
 Optimal Cycle: 180 Level Of Service: E

Street Name: US-101 SB Ramp Wilfred Avenue
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Permitted			Protected			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	1	0	1	0	0	1	2	0	2

Volume Module:

Base Vol:	0	0	0	355	288	482	0	1257	283	77	682	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:	0	0	0	355	288	482	0	1257	283	77	682	0
Added Vol:	0	0	0	0	0	151	0	141	399	0	263	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	355	288	633	0	1398	682	77	945	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	374	303	666	0	1472	718	81	995	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	374	303	666	0	1472	718	81	995	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	374	303	666	0	1472	718	81	995	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.83	0.88	0.88	1.00	0.93	0.93	0.93	0.98	1.00
Lanes:	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.34	0.66	2.00	2.00	0.00
Final Sat.:	0	0	0	1583	1670	1670	0	2380	1161	3538	3724	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.24	0.18	0.40	0.00	0.62	0.62	0.02	0.27	0.00
Crit Moves:						****		****		****		
Green/Cycle:	0.00	0.00	0.00	0.36	0.36	0.36	0.00	0.56	0.56	0.02	0.58	0.00
Volume/Cap:	0.00	0.00	0.00	0.66	0.50	1.11	0.00	1.11	1.11	1.11	0.46	0.00
Uniform Del:	0.0	0.0	0.0	38.9	36.3	46.4	0.0	32.1	32.1	71.0	17.6	0.0
IncrcmntDel:	0.0	0.0	0.0	2.8	0.2	64.8	0.0	57.0	57.0	137.2	0.2	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	0.0	0.0	0.0	41.7	36.5	111.2	0.0	89.1	89.1	208.2	17.8	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	41.7	36.5	111.2	0.0	89.1	89.1	208.2	17.8	0.0
LOS by Move:	A	A	A	D	D	F	A	F	F	F	B	A
HCM2k95thQ:	0	0	0	25	19	64	0	98	98	8	22	0

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

Intersection #10 Golf Course Dr/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 1.430
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 151.9
Optimal Cycle: 180 Level Of Service: F

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different volume metrics and 13 rows for various adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 13 columns for saturation flow metrics and 4 rows for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns for capacity analysis metrics and 13 rows for Vol/Sat, Crit Moves, Green/Cycle, etc.

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

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

Intersection #11 Roberts Lake Dr/Golf Course Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.456
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 10.9
Optimal Cycle: 25 Level Of Service: B

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Permitted, Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns for different volume metrics and 13 rows for various adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 13 columns for saturation flow metrics and 4 rows for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns for capacity analysis metrics and 13 rows for Vol/Sat, Crit Moves, Green/Cycle, etc.

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

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

 Intersection #12 101 NB Ramps/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 1.285
 Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 122.9
 Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	0	2	1	1	0	0	1	0

Volume Module:

Base Vol:	552	413	2	7	616	732	473	3	47	8	3	5
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:	552	413	2	7	616	732	473	3	47	8	3	5
Added Vol:	0	0	0	0	0	134	254	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	552	413	2	7	616	866	727	3	47	8	3	5
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	581	435	2	7	648	912	765	3	49	8	3	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	581	435	2	7	648	912	765	3	49	8	3	5
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	581	435	2	7	648	912	765	3	49	8	3	5

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.98	0.98	0.93	0.98	0.83	0.93	0.93	0.83	0.92	0.92	0.92
Lanes:	1.00	1.99	0.01	1.00	2.00	1.00	1.99	0.01	1.00	0.50	0.19	0.31
Final Sat.:	1769	3702	18	1769	3724	1583	3534	15	1583	870	326	544

Capacity Analysis Module:

Vol/Sat:	0.33	0.12	0.12	0.00	0.17	0.58	0.22	0.22	0.03	0.01	0.01	0.01
Crit Moves:	****					****		****			****	
Green/Cycle:	0.26	0.68	0.68	0.02	0.45	0.45	0.17	0.17	0.17	0.01	0.01	0.01
Volume/Cap:	1.28	0.17	0.17	0.17	0.39	1.28	1.28	1.28	0.19	1.28	1.28	1.28
Uniform Del:	37.2	5.8	5.8	47.8	18.4	27.6	41.6	41.6	35.7	49.6	49.6	49.6
IncrcmntDel:	144.1	0.0	0.0	1.9	0.2	138.7	140.5	141	0.3	353.0	353	353.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	181.4	5.8	5.8	49.7	18.6	166.3	182.1	182	36.0	402.7	403	402.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	181.4	5.8	5.8	49.7	18.6	166.3	182.1	182	36.0	402.7	403	402.7
LOS by Move:	F	A	A	D	B	F	F	F	D	F	F	F
HCM2k95thQ:	57	5	5	1	13	83	41	41	3	4	4	4

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #13 New Driveway/Stony Point Rd

Average Delay (sec/veh): 0.6 Worst Case Level Of Service: C[19.8]

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	0	0	0	1	0	0	0

Volume Module:

Base Vol:	0	765	0	0	664	0	0	0	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
Initial Bse:	0	765	0	0	664	0	0	0	0	0	0	0
Added Vol:	0	0	332	0	120	0	0	0	0	0	0	59
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	765	332	0	784	0	0	0	0	0	0	59
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	805	349	0	825	0	0	0	0	0	0	62
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	805	349	0	825	0	0	0	0	0	0	62

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3

Capacity Module:

Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	980
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	306
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	306
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.20

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0.7			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	19.8			
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	C			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*			
ApproachDel:	xxxxxx			xxxxxx			xxxxxx				19.8				
ApproachLOS:	*			*			*				C				

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #14 New Driveway/Labath Ave

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

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

Volume Module:

Base Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Growth Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Bse:	0	0	0	0	0	0	0	0	0	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	0	0	0	0	0	0	0	0	0
User Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHF Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHF Volume:	0	0	0	0	0	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	0	0	0	0	0	0	0	0	0
Critical Gap Module:												
Critical Gp:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FollowUpTim:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Capacity Module:

Cnflict Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Potent Cap.:	0	0	0	0	0	0	0	0	0	0	0	0
Move Cap.:	1	1	1	1	1	1	1	1	1	1	1	1
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Level Of Service Module:

2Way95thQ:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Del:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LOS by Move:												
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	0	0	0	0	0	0	0	0	0	0	0	0
SharedQueue:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Shrd ConDel:	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Shared LOS:												
ApproachDel:	0.0			0.0			0.0			0.0		
ApproachLOS:												

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #15 Redwood Dr/Business Park Dr

Average Delay (sec/veh): 3.2 Worst Case Level Of Service: C[16.5]

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:	1	0	2	0	0	1	1	0	0	0	0	0

Volume Module:

Base Vol:	12	359	0	0	363	25	144	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:	12	359	0	0	363	25	144	0	31	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	12	359	0	0	363	25	144	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	13	378	0	0	382	26	152	0	33	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	13	378	0	0	382	26	152	0	33	0	0	0

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.8	xxxx	6.9	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	408	xxxx	xxxxx	xxxx	xxxx	xxxxx	609	xxxx	204	xxxx	xxxx	xxxxx
Potent Cap.:	1161	xxxx	xxxxx	xxxx	xxxx	xxxxx	431	xxxx	809	xxxx	xxxx	xxxxx
Move Cap.:	1161	xxxx	xxxxx	xxxx	xxxx	xxxxx	428	xxxx	809	xxxx	xxxx	xxxxx
Volume/Cap:	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	0.35	xxxx	0.04	xxxx	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	1.6	xxxx	0.1	xxxx	xxxx	xxxxx
Control Del:	8.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	18.0	xxxx	9.6	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	*	*	*	C	*	A	*	*	*
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			16.5			xxxxxx		
ApproachLOS:	*			*			C			*		

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #16 Rohnert Park Expwy/Stony Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.866

Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 32.5

Optimal Cycle: 77 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Control:	Permitted			Protected			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1	0	1	0	0	0	0	1	0	0

Volume Module:

Base Vol:	0	547	253	205	460	0	0	0	0	253	0	217
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	547	253	205	460	0	0	0	0	253	0	217
Added Vol:	0	81	0	43	77	0	0	0	0	0	0	251
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	628	253	248	537	0	0	0	0	253	0	468
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	661	266	261	565	0	0	0	0	266	0	493
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	661	266	261	565	0	0	0	0	266	0	493
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	661	266	261	565	0	0	0	0	266	0	493

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.98	0.83	0.93	0.98	1.00	1.00	1.00	1.00	0.93	1.00	0.83
Lanes:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	1862	1583	1769	1862	0	0	0	0	1769	0	1583

Capacity Analysis Module:

Vol/Sat:	0.00	0.36	0.17	0.15	0.30	0.00	0.00	0.00	0.00	0.15	0.00	0.31
Crit Moves:	****			****						****		
Green/Cycle:	0.00	0.41	0.41	0.17	0.58	0.00	0.00	0.00	0.00	0.36	0.00	0.36
Volume/Cap:	0.00	0.87	0.41	0.87	0.52	0.00	0.00	0.00	0.00	0.42	0.00	0.87
Uniform Del:	0.0	27.0	20.9	40.4	12.6	0.0	0.0	0.0	0.0	24.1	0.0	29.8
IncrcmntDel:	0.0	10.2	0.4	22.1	0.5	0.0	0.0	0.0	0.0	0.4	0.0	13.2
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Delay/Veh:	0.0	37.2	21.4	62.5	13.1	0.0	0.0	0.0	0.0	24.6	0.0	42.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	37.2	21.4	62.5	13.1	0.0	0.0	0.0	0.0	24.6	0.0	42.9
LOS by Move:	A	D	C	E	B	A	A	A	A	C	A	D
HCM2k95thQ:	0	36	11	20	19	0	0	0	0	12	0	30

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #17 Rohnert Park Expwy/Labath Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.536

Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 33.5

Optimal Cycle: 43 Level Of Service: C

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 2 0 0 1 1 1 0 0 1 0 1 0 2 0 1 1 0 3 0 1

Volume Module:

Base Vol: 69 26 153 281 40 97 83 585 53 116 492 92
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: 69 26 153 281 40 97 83 585 53 116 492 92
Added Vol: 0 0 0 0 0 0 0 43 0 0 251 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 69 26 153 281 40 97 83 628 53 116 743 92
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 73 27 161 296 42 102 87 661 56 122 782 97
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 73 27 161 296 42 102 87 661 56 122 782 97
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 73 27 161 296 42 102 87 661 56 122 782 97

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.93 0.85 0.85 0.93 0.88 0.88 0.93 0.98 0.83 0.93 0.98 0.83
Lanes: 2.00 0.29 1.71 1.00 0.29 0.71 1.00 2.00 1.00 1.00 3.00 1.00
Final Sat.: 3538 472 2776 1769 486 1179 1769 3724 1583 1769 5586 1583

Capacity Analysis Module:

Vol/Sat: 0.02 0.06 0.06 0.17 0.09 0.09 0.05 0.18 0.04 0.07 0.14 0.06
Crit Moves: ****
Green/Cycle: 0.07 0.12 0.12 0.25 0.29 0.29 0.26 0.28 0.28 0.24 0.26 0.26
Volume/Cap: 0.29 0.48 0.48 0.67 0.30 0.30 0.19 0.63 0.13 0.29 0.54 0.24
Uniform Del: 44.2 41.1 41.1 33.8 27.6 27.6 28.8 31.5 26.9 31.0 31.8 29.2
IncrcmntDel: 0.7 0.9 0.9 3.9 0.3 0.3 0.2 1.3 0.1 0.4 0.4 0.3
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Delay/Veh: 44.8 42.1 42.1 37.7 27.9 27.9 29.0 32.8 27.0 31.4 32.2 29.5
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 44.8 42.1 42.1 37.7 27.9 27.9 29.0 32.8 27.0 31.4 32.2 29.5
LOS by Move: D D D D C C C C C C C
HCM2k95thQ: 3 7 7 17 7 7 4 18 3 6 14 5

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

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

Intersection #18 Rohnert Park Expwy/Redwood Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.731
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 36.4
Optimal Cycle: 64 Level Of Service: D

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic volumes and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 13 columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, etc.

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #19 Rohnert Park Expwy/101 SB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.721
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 24.8
Optimal Cycle: 62 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Permitted, Protected), Rights (Include, Ignore), Min. Green, and Lanes.

Volume Module: Table with 12 columns for different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 12 columns for different traffic movements. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns for different traffic movements. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2k95thQ.

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #20 Rohnert Park Expwy/101 NB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.603
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): OVERFLOW
Optimal Cycle: 33 Level Of Service: F

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected, Permitted), Rights (Include, Ignore), Min. Green, and Lanes.

Volume Module: Table with 13 columns for different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns for different traffic movements. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns for different traffic movements. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2k95thQ.

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #21 Rohnert Park Expwy/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.804

Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 34.9

Optimal Cycle: 78 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound										
Movement:	L	T	R	L	T	R	L	T	R	L	T	R								
Control:	Split Phase			Split Phase			Protected			Protected										
Rights:	Include			Include			Include			Include										
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0								
Lanes:	1	1	1	0	1	1	1	1	0	1	2	0	2	0	1	1	0	2	1	0

Volume Module:

Base Vol:	384	293	241	179	354	152	235	1221	462	165	682	202
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:	384	293	241	179	354	152	235	1221	462	165	682	202
Added Vol:	0	0	0	0	0	0	0	7	0	0	8	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	384	293	241	179	354	152	235	1228	462	165	690	202
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	404	308	254	188	373	160	247	1293	486	174	726	213
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	404	308	254	188	373	160	247	1293	486	174	726	213
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	404	308	254	188	373	160	247	1293	486	174	726	213

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.83	0.96	0.96	0.83	0.93	0.98	0.83	0.93	0.95	0.95
Lanes:	1.70	1.30	1.00	1.01	1.99	1.00	2.00	2.00	1.00	1.00	2.32	0.68
Final Sat.:	3080	2350	1583	1844	3647	1583	3538	3724	1583	1769	4174	1222

Capacity Analysis Module:

Vol/Sat:	0.13	0.13	0.16	0.10	0.10	0.10	0.07	0.35	0.31	0.10	0.17	0.17
Crit Moves:			****			****		****		****		
Green/Cycle:	0.20	0.20	0.20	0.13	0.13	0.13	0.16	0.43	0.43	0.12	0.39	0.39
Volume/Cap:	0.66	0.66	0.80	0.80	0.80	0.80	0.44	0.80	0.71	0.80	0.44	0.44
Uniform Del:	36.9	36.9	38.2	42.4	42.4	42.4	38.0	24.7	23.3	42.7	22.2	22.2
IncrcmntDel:	1.5	1.5	13.9	6.8	6.8	19.4	0.6	3.1	3.5	19.3	0.1	0.1
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	38.4	38.4	52.1	49.2	49.2	61.8	38.6	27.8	26.9	62.0	22.3	22.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	38.4	38.4	52.1	49.2	49.2	61.8	38.6	27.8	26.9	62.0	22.3	22.3
LOS by Move:	D	D	D	D	D	E	D	C	C	E	C	C
HCM2k95thQ:	15	15	18	15	15	13	8	33	24	14	14	14

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #22 Gravenstein Hwy (SR 116)/ Stoney Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.829

Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 41.4

Optimal Cycle: 84 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	0	1	0	1	0	1	1	0	2

Volume Module:

Base Vol:	323	483	113	107	358	235	149	583	228	140	661	113
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:	323	483	113	107	358	235	149	583	228	140	661	113
Added Vol:	0	0	0	77	0	0	0	0	0	0	0	81
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	323	483	113	184	358	235	149	583	228	140	661	194
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	340	508	119	194	377	247	157	614	240	147	696	204
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	340	508	119	194	377	247	157	614	240	147	696	204
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	340	508	119	194	377	247	157	614	240	147	696	204

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.89	0.89	0.93	0.93	0.83
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.44	0.56	1.00	2.00	1.00
Final Sat.:	1769	1862	1583	1769	1862	1583	1769	2436	953	1769	3538	1583

Capacity Analysis Module:

Vol/Sat:	0.19	0.27	0.08	0.11	0.20	0.16	0.09	0.25	0.25	0.08	0.20	0.13
Crit Moves:	****			****			****			****		
Green/Cycle:	0.23	0.34	0.34	0.14	0.24	0.24	0.13	0.30	0.30	0.10	0.28	0.28
Volume/Cap:	0.83	0.80	0.22	0.80	0.83	0.64	0.71	0.83	0.83	0.83	0.71	0.46
Uniform Del:	36.5	30.0	23.6	41.9	35.8	33.9	41.9	32.4	32.4	44.1	32.4	29.9
IncrcmntDel:	13.2	7.4	0.2	17.5	12.1	3.6	9.9	5.7	5.7	26.6	2.4	0.8
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	49.8	37.4	23.8	59.4	47.9	37.5	51.9	38.1	38.1	70.7	34.8	30.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	49.8	37.4	23.8	59.4	47.9	37.5	51.9	38.1	38.1	70.7	34.8	30.6
LOS by Move:	D	D	C	E	D	D	D	D	D	E	C	C
HCM2k95thQ:	22	28	5	15	24	15	12	27	27	13	21	11

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #23 Gravenstein Hwy (SR 116)/ Redwood Rd

Cycle (sec): 80 Critical Vol./Cap.(X): 0.882
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 35.7
Optimal Cycle: 91 Level Of Service: D

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 12 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueueDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2k95thQ.

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #24 Gravenstein Hwy and SB 101 Ramps

Cycle (sec): 80 Critical Vol./Cap.(X): 0.585
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 17.0
Optimal Cycle: 39 Level Of Service: B

Street Name: SB 101 Ramps Gravenstein Hwy
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Permitted Protected
Rights: Include Include Ignore Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 0 0 0 2 0 0 1 0 0 0 2 0 1 1 0 2 0 0

Volume Module:
Base Vol: 0 0 0 640 0 258 0 953 412 66 998 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: 0 0 0 640 0 258 0 953 412 66 998 0
Added Vol: 0 0 0 0 0 0 0 0 0 77 0 81 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 640 0 258 0 953 489 66 1079 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.00 0.95 0.95 0.95
PHF Volume: 0 0 0 674 0 272 0 1003 0 69 1136 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 0 0 674 0 272 0 1003 0 69 1136 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
Final Vol.: 0 0 0 674 0 272 0 1003 0 69 1136 0

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 1.00 1.00 1.00 0.90 1.00 0.83 1.00 0.93 1.00 0.93 0.93 1.00
Lanes: 0.00 0.00 0.00 2.00 0.00 1.00 0.00 2.00 1.00 1.00 2.00 0.00
Final Sat.: 0 0 0 3432 0 1583 0 3538 1900 1769 3538 0

Capacity Analysis Module:
Vol/Sat: 0.00 0.00 0.00 0.20 0.00 0.17 0.00 0.28 0.00 0.04 0.32 0.00
Crit Moves: ****
Green/Cycle: 0.00 0.00 0.00 0.34 0.00 0.34 0.00 0.48 0.00 0.07 0.55 0.00
Volume/Cap: 0.00 0.00 0.00 0.58 0.00 0.51 0.00 0.59 0.00 0.59 0.58 0.00
Uniform Del: 0.0 0.0 0.0 22.0 0.0 21.3 0.0 14.8 0.0 36.2 11.8 0.0
IncrcmntDel: 0.0 0.0 0.0 0.8 0.0 0.8 0.0 0.5 0.0 7.3 0.4 0.0
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 0.00 0.00 0.00 1.00 0.00 1.00 0.00 1.00 0.00 1.00 1.00 0.00
Delay/Veh: 0.0 0.0 0.0 22.8 0.0 22.2 0.0 15.4 0.0 43.6 12.3 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 0.0 0.0 22.8 0.0 22.2 0.0 15.4 0.0 43.6 12.3 0.0
LOS by Move: A A A C A C A B A D B A
HCM2k95thQ: 0 0 0 15 0 11 0 18 0 5 19 0

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

 Intersection #25 Gravenstein Hwy and NB 101 Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.820
 Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 21.6
 Optimal Cycle: 73 Level Of Service: C

Street Name: NB 101 Ramps Gravenstein Hwy
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R
 -----|-----|-----|-----|

Control: Protected Permitted Permitted Permitted
 Rights: Include Include Include Include
 Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
 Lanes: 1 0 0 0 1 0 0 0 0 0 0 2 0 0 0 0 2 0 0
 -----|-----|-----|-----|

Volume Module:
 Base Vol: 375 0 273 0 0 0 0 1596 0 0 683 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: 375 0 273 0 0 0 0 1596 0 0 683 0
 Added Vol: 81 0 0 0 0 0 0 0 0 0 0 0
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
 Initial Fut: 456 0 273 0 0 0 0 1596 0 0 683 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
 PHF Volume: 480 0 287 0 0 0 0 1680 0 0 719 0
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 Reduced Vol: 480 0 287 0 0 0 0 1680 0 0 719 0
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Final Vol.: 480 0 287 0 0 0 0 1680 0 0 719 0
 -----|-----|-----|-----|

Saturation Flow Module:
 Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
 Adjustment: 0.93 1.00 0.83 1.00 1.00 1.00 1.00 0.93 1.00 1.00 0.93 1.00
 Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 2.00 0.00 0.00 2.00 0.00
 Final Sat.: 1769 0 1583 0 0 0 0 3538 0 0 3538 0
 -----|-----|-----|-----|

Capacity Analysis Module:
 Vol/Sat: 0.27 0.00 0.18 0.00 0.00 0.00 0.00 0.47 0.00 0.00 0.20 0.00
 Crit Moves: **** *
 Green/Cycle: 0.33 0.00 0.33 0.00 0.00 0.00 0.00 0.58 0.00 0.00 0.58 0.00
 Volume/Cap: 0.82 0.00 0.55 0.00 0.00 0.00 0.00 0.82 0.00 0.00 0.35 0.00
 Uniform Del: 30.7 0.0 27.4 0.0 0.0 0.0 0.0 16.9 0.0 0.0 11.1 0.0
 IncremntDel: 9.0 0.0 1.2 0.0 0.0 0.0 0.0 2.8 0.0 0.0 0.1 0.0
 InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 Delay Adj: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 1.00 0.00 0.00 1.00 0.00
 Delay/Veh: 39.7 0.0 28.6 0.0 0.0 0.0 0.0 19.6 0.0 0.0 11.2 0.0
 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 AdjDel/Veh: 39.7 0.0 28.6 0.0 0.0 0.0 0.0 19.6 0.0 0.0 11.2 0.0
 LOS by Move: D A C A A A A B A A B A
 HCM2k95thQ: 28 0 15 0 0 0 0 39 0 0 12 0

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #26 Millbrae Ave/Stony Point Rd

Average Delay (sec/veh): 7.7 Worst Case Level Of Service: F[112.5]

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: 1 0 2 0 1 1 0 1 1 0 0 0 1! 0 0 0 1 0 0 1

Volume Module:

Base Vol: 7 728 26 132 585 7 11 5 8 23 25 219
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: 7 728 26 132 585 7 11 5 8 23 25 219
Added Vol: 0 59 0 0 84 0 0 0 0 0 0 0 15
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 7 787 26 132 669 7 11 5 8 23 25 234
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 7 828 27 139 704 7 12 5 8 24 26 246
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 7 828 27 139 704 7 12 5 8 24 26 246

Critical Gap Module:

Critical Gp: 4.1 xxxx xxxxx 4.1 xxxx xxxxx 7.5 6.5 6.9 7.5 6.5 6.9
FollowUpTim: 2.2 xxxx xxxxx 2.2 xxxx xxxxx 3.5 4.0 3.3 3.5 4.0 3.3

Capacity Module:

Cnflict Vol: 712 xxxx xxxxx 856 xxxx xxxxx 1428 1856 356 1476 1833 414
Potent Cap.: 897 xxxx xxxxx 793 xxxx xxxxx 97 74 646 90 77 593
Move Cap.: 897 xxxx xxxxx 793 xxxx xxxxx 33 61 646 71 63 593
Volume/Cap: 0.01 xxxx xxxxx 0.18 xxxx xxxxx 0.35 0.09 0.01 0.34 0.42 0.42

Level Of Service Module:

2Way95thQ: 0.0 xxxx xxxxx 0.6 xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx 2.0
Control Del: 9.0 xxxx xxxxx 10.5 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx 15.3
LOS by Move: A * * B * * * * * C
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx 57 xxxxx 67 xxxx xxxxx
SharedQueue:xxxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx 1.7 xxxxx 3.5 xxxx xxxxx
Shrd ConDel:xxxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx 112 xxxxx 150.8 xxxx xxxxx
Shared LOS: * * * * * * * F * F *
ApproachDel: xxxxxx xxxxxx 112.5 38.4
ApproachLOS: * * F E

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #27 Millbrae Ave/Primrose Ave

Average Delay (sec/veh): 0.6 Worst Case Level Of Service: B[12.4]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 1 0 0 0 0 1! 0 0 0 0 1! 0 0

Volume Module:

Base Vol: 1 0 2 0 1 0 1 161 5 7 265 2
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: 1 0 2 0 1 0 1 161 5 7 265 2
Added Vol: 15 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 16 0 2 0 1 0 1 161 5 7 265 2
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 17 0 2 0 1 0 1 169 5 7 279 2
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 17 0 2 0 1 0 1 169 5 7 279 2

Critical Gap Module:

Critical Gp: 7.1 6.5 6.2 xxxxx 6.5 xxxxx 4.1 xxxxx xxxxx 4.1 xxxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 xxxxx 4.0 xxxxx 2.2 xxxxx xxxxx 2.2 xxxxx xxxxx

Capacity Module:

Cnflict Vol: 469 470 172 xxxxx 472 xxxxx 281 xxxxx xxxxx 175 xxxxx xxxxx
Potent Cap.: 508 495 877 xxxxx 493 xxxxx 1293 xxxxx xxxxx 1414 xxxxx xxxxx
Move Cap.: 504 492 877 xxxxx 491 xxxxx 1293 xxxxx xxxxx 1414 xxxxx xxxxx
Volume/Cap: 0.03 0.00 0.00 xxxxx 0.00 xxxxx 0.00 xxxxx xxxxx 0.01 xxxxx xxxxx

Level Of Service Module:

2Way95thQ: xxxxx xxxxx xxxxx xxxxx 0.0 xxxxx 0.0 xxxxx xxxxx 0.0 xxxxx xxxxx
Control Del: xxxxx xxxxx xxxxx xxxxx 12.4 xxxxx 7.8 xxxxx xxxxx 7.6 xxxxx xxxxx
LOS by Move: * * * * B * A * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx 529 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue: xxxxx 0.1 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd ConDel: xxxxx 12.1 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: * B * * * * * * * * * *
ApproachDel: 12.1 12.4 xxxxxxx xxxxxxx
ApproachLOS: B B * *

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #28 Millbrae Ave/Whister Ave

Average Delay (sec/veh): 0.5 Worst Case Level Of Service: B[12.4]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 1 0 0 0 0 0 1! 0 0 0 0 1! 0 0 0 0 1! 0 0

Volume Module:

Base Vol: 1 9 0 4 0 1 1 146 2 4 279 8
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 1 9 0 4 0 1 1 146 2 4 279 8
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 1 9 0 4 0 1 1 146 2 4 279 8
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 1 9 0 4 0 1 1 154 2 4 294 8
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 1 9 0 4 0 1 1 154 2 4 294 8

Critical Gap Module:

Critical Gp: 7.1 6.5 xxxxx 7.1 6.5 6.2 4.1 xxxxx xxxxx 4.1 xxxxx xxxxx
FollowUpTim: 3.5 4.0 xxxxx 3.5 4.0 3.3 2.2 xxxxx xxxxx 2.2 xxxxx xxxxx

Capacity Module:

Cnflict Vol: 464 467 xxxxx 468 464 298 302 xxxxx xxxxx 156 xxxxx xxxxx
Potent Cap.: 512 496 xxxxx 509 498 746 1270 xxxxx xxxxx 1437 xxxxx xxxxx
Move Cap.: 510 494 xxxxx 500 496 746 1270 xxxxx xxxxx 1437 xxxxx xxxxx
Volume/Cap: 0.00 0.02 xxxxx 0.01 0.00 0.00 0.00 xxxxx xxxxx 0.00 xxxxx xxxxx

Level Of Service Module:

2Way95thQ: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx 0.0 xxxxx xxxxx
Control Del: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 7.8 xxxxx xxxxx 7.5 xxxxx xxxxx
LOS by Move: * * * * * A * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: 496 xxxxx xxxxx xxxxx 535 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue: 0.1 xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd ConDel: 12.4 xxxxx xxxxx xxxxx 11.8 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: B * * * B * * * * *
ApproachDel: 12.4 11.8 xxxxxxx xxxxxxx
ApproachLOS: B B * *

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #29 Millbrae Ave/Langner Ave

Average Delay (sec/veh): 1.1 Worst Case Level Of Service: B[11.2]

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

Volume Module:

Base Vol:	27	0	25	0	0	0	0	154	27	7	331	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:	27	0	25	0	0	0	0	154	27	7	331	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	27	0	25	0	0	0	0	154	27	7	331	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	28	0	26	0	0	0	0	162	28	7	348	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	28	0	26	0	0	0	0	162	28	7	348	0

Critical Gap Module:

Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	539	539	176	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	191	xxxx	xxxxx
Potent Cap.:	507	452	872	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1395	xxxx	xxxxx
Move Cap.:	505	449	872	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1395	xxxx	xxxxx
Volume/Cap:	0.06	0.00	0.03	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.01	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	633	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	0.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx			
Shrd ConDel:	xxxxx	11.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx			
Shared LOS:	*	B	*	*	*	*	*	*	*	A	*	*			
ApproachDel:	11.2		xxxxxxx			xxxxxxx			xxxxxxx						
ApproachLOS:	B		*			*			*						

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #30 Millbrae Ave/Labath Ave

Average Delay (sec/veh): 3.7 Worst Case Level Of Service: B[13.5]

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

Volume Module:

Base Vol:	114	0	26	0	0	0	0	160	23	36	225	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:	114	0	26	0	0	0	0	160	23	36	225	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	114	0	26	0	0	0	0	160	23	36	225	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	120	0	27	0	0	0	0	168	24	38	237	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	120	0	27	0	0	0	0	168	24	38	237	0

Critical Gap Module:

Critical Gp:	6.4	6.5	6.2	7.1	6.5	6.2	xxxxx	xxxxx	xxxxx	4.1	xxxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	xxxxx	xxxxx	xxxxx	2.2	xxxxx	xxxxx

Capacity Module:

Cnflict Vol:	493	493	181	507	505	237	xxxxx	xxxxx	xxxxx	193	xxxxx	xxxxx
Potent Cap.:	539	480	867	479	472	807	xxxxx	xxxxx	xxxxx	1393	xxxxx	xxxxx
Move Cap.:	527	467	867	454	459	807	xxxxx	xxxxx	xxxxx	1393	xxxxx	xxxxx
Volume/Cap:	0.23	0.00	0.03	0.00	0.00	0.00	xxxxx	xxxxx	xxxxx	0.03	xxxxx	xxxxx

Level Of Service Module:

2Way95thQ:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.1	xxxxx	xxxxx			
Control Del:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	7.7	xxxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxxx	569	xxxxx	xxxxx	0	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
SharedQueue:	xxxxx	1.0	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.1	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shrd ConDel:	xxxxx	13.5	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	7.7	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shared LOS:	*	B	*	*	*	*	*	*	*	A	*	*	*	*	*
ApproachDel:	13.5			xxxxxxx			xxxxxxx			xxxxxxx					
ApproachLOS:	B			*			*			*					*

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #31 Millbrae Ave/Dowdell Ave

Average Delay (sec/veh): 1.4 Worst Case Level Of Service: B[11.6]

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

Volume Module:

Base Vol:	55	0	0	0	0	0	0	131	51	0	235	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:	55	0	0	0	0	0	0	131	51	0	235	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	55	0	0	0	0	0	0	131	51	0	235	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	58	0	0	0	0	0	0	138	54	0	247	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	58	0	0	0	0	0	0	138	54	0	247	0

Critical Gap Module:

Critical Gp:	6.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	412	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Potent Cap.:	600	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Move Cap.:	600	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Volume/Cap:	0.10	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx

Level Of Service Module:

2Way95thQ:	0.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Control Del:	11.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
LOS by Move:	B	*	*	*	*	*	*	*	*	*	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	11.6			xxxxxx			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	B			*			*			*			*		

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

**NEAR-TERM 2008 + ALTERNATIVE E
TRAFFIC CONDITIONS
(TRAFFIX)**

 Impact Analysis Report
 Level Of Service

Intersection	Base		Future		Change in
	Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C	
# 1 Wilfred Ave/Stony Point Rd	F	238.0 0.000	F	967.9 0.000	+729.889 D/V
# 2 Wilfred Ave/Primrose Ave	B	11.3 0.000	D	26.2 0.000	+14.886 D/V
# 3 Wilfred Ave/Whistler Ave	B	11.3 0.000	C	16.1 0.000	+ 4.785 D/V
# 4 Langner Ave/Wilfred Ave	B	11.3 0.000	C	16.0 0.000	+ 4.714 D/V
# 5 Wilfred Ave/Labath Ave	C	4.8 0.000	F	17.2 0.000	+ 0.000 D/V
# 6 Dowell Ave/Wilfred Ave	F	333.5 0.000	F	OVRFL 0.000	+1658.675 D/
# 7 Wilfred Ave/Redwood Dr	E	59.1 0.955	F	117.4 1.198	+58.230 D/V
# 8 Redwood Dr/Commerce Blvd	C	26.6 0.286	C	26.6 0.287	-0.045 D/V
# 9 101 SB Ramp Split node	C	30.6 0.630	C	32.5 0.748	+ 1.852 D/V
# 10 Golf Course Dr/Commerce Blvd	D	44.0 0.925	D	51.0 0.972	+ 6.981 D/V
# 11 Roberts Lake Rd/Golf Course Dr	B	18.9 0.504	B	18.7 0.509	-0.154 D/V
# 12 101 NB Ramps/Commerce Blvd	C	34.9 0.877	D	43.4 0.954	+ 8.490 D/V
# 13 New Driveway/Stony Point Rd	A	0.0 0.000	C	17.1 0.000	+17.113 D/V
# 15 Redwood Dr/Business Park Dr	D	26.5 0.000	D	26.5 0.000	+ 0.000 D/V
# 16 Rohnert Park Expwy/Stony Point	C	24.0 0.665	C	27.1 0.752	+ 3.166 D/V
# 17 Rohnert Park Expwy/Labath Ave	C	29.8 0.576	C	33.6 0.598	+ 3.816 D/V
# 18 Rohnert Park Expwy/Redwood Dr	D	35.6 0.711	D	44.4 0.711	+ 8.782 D/V
# 19 Rohnert Park Expwy/101 SB Ramp	C	24.5 0.693	C	24.6 0.708	+ 0.078 D/V
# 20 Rohnert Park Expwy/101 NB Ramp	B	15.8 0.437	B	16.5 0.464	+ 0.753 D/V
# 21 Rohnert Park Expwy/Commerce Bl	C	33.9 0.815	C	34.0 0.815	+ 0.084 D/V
# 22 Gravenstein Hwy (SR 116)/Stone	D	37.1 0.766	D	38.0 0.766	+ 0.871 D/V
# 23 Gravenstein Hwy (SR 116)/Redwo	C	33.0 0.709	C	33.0 0.715	+ 0.000 D/V
# 24 Gravenstein Hwy (SR 116)/SB US	C	21.0 0.548	C	21.0 0.548	-0.009 D/V
# 25 Gravenstein Hwy (SR 116)/NB US	B	17.3 0.707	B	17.8 0.718	+ 0.490 D/V
# 26 Millbrae Ave/Stony Point Rd	E	38.2 0.000	E	42.2 0.000	+ 4.002 D/V

Intersection		Base		Future		Change in	
		Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C		
# 27 Millbrae Ave/Primrose Ave	B	11.4	0.000	B 11.4	0.000	+ 0.000	D/V
# 28 Millbrae Ave/Whistler Ave	B	11.5	0.000	B 11.5	0.000	+ 0.000	D/V
# 29 Millbrae Ave/Langner Ave	A	9.9	0.000	A 9.9	0.000	+ 0.000	D/V
# 30 Millbrae Ave/Labath Ave	B	11.2	0.000	B 11.2	0.000	+ 0.000	D/V
# 31 Millbrae Ave/Dowdell Ave	B	11.3	0.000	B 11.3	0.000	+ 0.000	D/V

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1 Wilfred Ave/Stony Point Rd

Average Delay (sec/veh): 176.4 Worst Case Level Of Service: F[967.9]

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:	1	0	0	1	0	0	0	0	0	1	0	0

Volume Module:

Base Vol:	12	758	62	75	514	3	0	8	14	106	13	97
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	12	758	62	75	514	3	0	8	14	106	13	97
Added Vol:	0	37	0	16	0	0	0	0	0	116	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	12	795	62	91	514	3	0	8	14	222	13	97
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	13	837	65	96	541	3	0	8	15	234	14	102
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	13	837	65	96	541	3	0	8	15	234	14	102

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflict Vol:	544	xxxx	xxxxx	902	xxxx	xxxxx	xxxx	1662	543	1641	1631	869
Potent Cap.:	1035	xxxx	xxxxx	762	xxxx	xxxxx	xxxx	98	544	81	103	354
Move Cap.:	1035	xxxx	xxxxx	762	xxxx	xxxxx	xxxx	85	544	65	89	354
Volume/Cap:	0.01	xxxx	xxxx	0.13	xxxx	xxxx	xxxx	0.10	0.03	3.58	0.15	0.29

Level Of Service Module:

2Way95thQ:	0.0	xxxx	xxxxx	0.4	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	1.2			
Control Del:	8.5	xxxx	xxxxx	10.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	19.2			
LOS by Move:	A	*	*	B	*	*	*	*	*	*	*	C			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	183	66	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	0.4	26.2	xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	27.5	1359	xxxx	xxxxx			
Shared LOS:	*	*	*	*	*	*	*	*	D	F	*	*			
ApproachDel:	xxxxxx			xxxxxx				27.5				967.9			
ApproachLOS:	*			*				D				F			

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Wilfred Ave/Primrose Ave

Average Delay (sec/veh): 13.9 Worst Case Level Of Service: D[26.2]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 1! 0 0 0 0 1! 0 0

Volume Module:

Base Vol: 10 10 10 10 10 10 10 131 10 10 201 10
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: 10 10 10 10 10 10 10 131 10 10 201 10
Added Vol: 116 9 302 0 0 0 0 0 16 78 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 126 19 312 10 10 10 10 131 26 88 201 10
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 133 20 328 11 11 11 11 138 27 93 212 11
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 133 20 328 11 11 11 11 138 27 93 212 11

Critical Gap Module:

Critical Gp: 7.1 6.5 6.2 7.1 6.5 6.2 4.1 xxxx xxxxx 4.1 xxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 3.5 4.0 3.3 2.2 xxxx xxxxx 2.2 xxxx xxxxx

Capacity Module:

Cnflict Vol: 585 580 152 749 588 217 222 xxxx xxxxx 165 xxxx xxxxx
Potent Cap.: 425 428 900 331 424 828 1359 xxxx xxxxx 1425 xxxx xxxxx
Move Cap.: 388 396 900 190 392 828 1359 xxxx xxxxx 1425 xxxx xxxxx
Volume/Cap: 0.34 0.05 0.36 0.06 0.03 0.01 0.01 xxxx xxxx 0.06 xxxx xxxx

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx 0.0 xxxx xxxxx 0.2 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx 7.7 xxxx xxxxx 7.7 xxxx xxxxx
LOS by Move: * * * * * A * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx 635 xxxxx xxxx 333 xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
SharedQueue:xxxxx 6.9 xxxxx xxxxx 0.3 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 26.2 xxxxx xxxxx 17.0 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS: * D * * C * * * * *
ApproachDel: 26.2 17.0 xxxxxx xxxxxx
ApproachLOS: D C * *

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 Wilfred Ave/Whistler Ave

Average Delay (sec/veh): 1.4 Worst Case Level Of Service: C[16.1]

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

Volume Module:

Base Vol:	10	10	10	10	10	10	10	131	10	10	200	20
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:	10	10	10	10	10	10	10	131	10	10	200	20
Added Vol:	0	0	0	0	0	0	0	302	0	0	78	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	10	10	10	10	10	10	433	10	10	278	20
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	11	11	11	11	11	11	456	11	11	293	21
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	11	11	11	11	11	11	11	456	11	11	293	21

Critical Gap Module:

Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	817	817	461	817	812	303	314	xxxx	xxxxx	466	xxxx	xxxxx
Potent Cap.:	298	313	605	298	316	741	1258	xxxx	xxxxx	1106	xxxx	xxxxx
Move Cap.:	282	308	605	281	310	741	1258	xxxx	xxxxx	1106	xxxx	xxxxx
Volume/Cap:	0.04	0.03	0.02	0.04	0.03	0.01	0.01	xxxx	xxxx	0.01	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.9	xxxx	xxxxx	8.3	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	355	xxxxx	xxxx	369	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	0.3	xxxxx	xxxxx	0.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	16.1	xxxxx	xxxxx	15.7	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	C	*	*	C	*	*	*	*	*	*	*			
ApproachDel:	16.1			15.7			xxxxxxx			xxxxxxx					
ApproachLOS:	C			C			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Langner Ave/Wilfred Ave

Average Delay (sec/veh): 1.4 Worst Case Level Of Service: C[16.0]

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

Volume Module:

Base Vol:	10	10	10	10	10	10	10	130	10	10	200	10
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:	10	10	10	10	10	10	10	130	10	10	200	10
Added Vol:	0	0	0	0	0	0	0	302	0	0	78	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	10	10	10	10	10	10	432	10	10	278	10
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	11	11	11	11	11	11	455	11	11	293	11
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	11	11	11	11	11	11	11	455	11	11	293	11

Critical Gap Module:

Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	811	805	460	811	805	298	303	xxxx	xxxxx	465	xxxx	xxxxx
Potent Cap.:	301	318	605	301	318	746	1269	xxxx	xxxxx	1107	xxxx	xxxxx
Move Cap.:	285	313	605	284	313	746	1269	xxxx	xxxxx	1107	xxxx	xxxxx
Volume/Cap:	0.04	0.03	0.02	0.04	0.03	0.01	0.01	xxxx	xxxx	0.01	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.9	xxxx	xxxxx	8.3	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	359	xxxxx	xxxx	372	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	0.3	xxxxx	xxxxx	0.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	16.0	xxxxx	xxxxx	15.6	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	C	*	*	C	*	*	*	*	*	*	*			
ApproachDel:	16.0			15.6			xxxxxxx			xxxxxxx					
ApproachLOS:	C			C			*			*					

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

Level Of Service Computation Report

1994 HCM Unsignalized Method (Future Volume Alternative)

Intersection #5 Wilfred Ave/Labath Ave

Average Delay (sec/veh): 17.2 Worst Case Level Of Service: F

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

Volume Module:

Base Vol:	35	6	266	112	21	14	60	13	77	116	159	99
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	6	266	112	21	14	60	13	77	116	159	99
Added Vol:	0	0	0	0	0	0	0	302	0	0	78	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	35	6	266	112	21	14	60	315	77	116	237	99
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	37	6	280	118	22	15	63	332	81	122	249	104
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	37	6	280	118	22	15	63	332	81	122	249	104

Adjusted Volume Module:

Grade:	0%			0%			0%			0%		
% Cycle/Cars:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
% Truck/Comb:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
PCE Adj:	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.00	1.00	1.10	1.00	1.00
Cycl/Car PCE:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Trck/Cmb PCE:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Adj Vol.:	41	7	308	130	24	16	69	332	81	134	249	104

Critical Gap Module:

MoveUp Time:	3.4	3.3	2.6	3.4	3.3	2.6	2.1	xxxx	xxxxxx	2.1	xxxx	xxxxxx
Critical Gp:	6.5	6.0	5.5	6.5	6.0	5.5	5.0	xxxx	xxxxxx	5.0	xxxx	xxxxxx

Capacity Module:

Cnflct Vol:	877	911	372	1002	899	302	354	xxxx	xxxxxx	413	xxxx	xxxxxx
Potent Cap.:	329	363	897	278	368	974	1163	xxxx	xxxxxx	1090	xxxx	xxxxxx
Adj Cap:	0.76	0.78	1.00	0.53	0.78	1.00	1.00	xxxx	xxxxxx	1.00	xxxx	xxxxxx
Move Cap.:	251	282	897	149	286	974	1163	xxxx	xxxxxx	1090	xxxx	xxxxxx

Level Of Service Module:

Control Del:	16.8	13.0	5.8	100.9	13.6	3.8	3.3	xxxx	xxxxxx	3.7	xxxx	xxxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	672	xxxxxx	xxxx	175	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx
Shrd ConDel:	xxxxxx	10.3	xxxxxx	xxxxxx	126	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
Shared LOS:	*	C	*	*	F	*	*	*	*	*	*	*
ApproachDel:	10.3			125.7			0.5			1.0		
ApproachLOS:	C			F			A			A		

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #6 Dowell Ave/Wilfred Ave

Average Delay (sec/veh): 298.0 Worst Case Level Of Service: F[1992.2]

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

Volume Module:

Base Vol:	80	45	222	88	13	47	52	191	148	187	247	89
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:	80	45	222	88	13	47	52	191	148	187	247	89
Added Vol:	0	0	0	0	0	0	0	302	0	0	78	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	80	45	222	88	13	47	52	493	148	187	325	89
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	84	47	234	93	14	49	55	519	156	197	342	94
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	84	47	234	93	14	49	55	519	156	197	342	94
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	1521	1536	597	1629	1567	389	436	xxxx	xxxxx	675	xxxx	xxxxx
Potent Cap.:	98	117	507	82	112	664	1135	xxxx	xxxxx	926	xxxx	xxxxx
Move Cap.:	63	85	507	20	81	664	1135	xxxx	xxxxx	926	xxxx	xxxxx
Volume/Cap:	1.34	0.56	0.46	4.63	0.17	0.07	0.05	xxxx	xxxx	0.21	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.2	xxxx	xxxxx	0.8	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.3	xxxx	xxxxx	9.9	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	154	xxxxx	xxxx	32	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	30.8	xxxxx	xxxxx	18.6	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	680	xxxxx	xxxxx	1992	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	F	*	*	F	*	*	*	*	*	*	*			
ApproachDel:	680.2			1992.2			xxxxxx			xxxxxx					
ApproachLOS:	F			F			*			*					

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 Wilfred Ave/Redwood Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 1.198
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 117.4
Optimal Cycle: 180 Level Of Service: F

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected, Split Phase), Rights (Include), Min. Green, and Lanes.

Volume Module:

Table with 13 columns representing different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module:

Table with 13 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with 13 columns. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2k95thQ.

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

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

Intersection #8 Redwood Dr/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.287
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 26.6
Optimal Cycle: 30 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic volumes and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 13 columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, etc.

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

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

Intersection #9 101 SB Ramp Split node

Cycle (sec): 145 Critical Vol./Cap.(X): 0.748
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 32.5
Optimal Cycle: 62 Level Of Service: C

Table with columns: Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Permitted, Protected), Rights (Include), Min. Green, Lanes.

Volume Module: Table with columns: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module: Table with columns: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module: Table with columns: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

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

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

 Intersection #10 Golf Course Dr/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.972
 Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 51.0
 Optimal Cycle: 158 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	0	0	0	1	1	0	1

Volume Module:

Base Vol:	222	108	569	42	41	9	0	558	507	413	344	117
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:	222	108	569	42	41	9	0	558	507	413	344	117
Added Vol:	31	0	0	0	0	0	0	46	88	0	16	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	253	108	569	42	41	9	0	604	595	413	360	117
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	266	114	599	44	43	9	0	636	626	435	379	123
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	266	114	599	44	43	9	0	636	626	435	379	123
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	266	114	599	44	43	9	0	636	626	435	379	123

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.86	0.86	0.93	0.95	0.95	1.00	0.91	0.91	0.93	0.94	0.94
Lanes:	1.00	0.32	1.68	1.00	0.82	0.18	0.00	1.01	0.99	1.00	1.51	0.49
Final Sat.:	1769	519	2736	1769	1486	326	0	1737	1711	1769	2707	880

Capacity Analysis Module:

Vol/Sat:	0.15	0.22	0.22	0.02	0.03	0.03	0.00	0.37	0.37	0.25	0.14	0.14
Crit Moves:	****			****			****			****		
Green/Cycle:	0.21	0.23	0.23	0.03	0.04	0.04	0.00	0.38	0.38	0.25	0.63	0.63
Volume/Cap:	0.72	0.97	0.97	0.97	0.72	0.72	0.00	0.97	0.97	0.97	0.22	0.22
Uniform Del:	36.7	38.4	38.4	48.7	47.4	47.4	0.0	30.7	30.7	37.0	8.0	8.0
IncrcmntDel:	6.5	26.4	26.4	122.7	28.3	28.3	0.0	18.7	18.7	35.3	0.1	0.1
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	43.2	64.8	64.8	171.3	75.7	75.7	0.0	49.3	49.3	72.4	8.0	8.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	43.2	64.8	64.8	171.3	75.7	75.7	0.0	49.3	49.3	72.4	8.0	8.0
LOS by Move:	D	E	E	F	E	E	A	D	D	E	A	A
HCM2k95thQ:	17	28	28	7	6	6	0	41	41	32	5	4

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

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

Intersection #11 Roberts Lake Rd/Golf Course Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.509
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 18.7
Optimal Cycle: 28 Level Of Service: B

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns for different volume types (Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.) and 4 rows of data.

Saturation Flow Module: Table with 13 columns for saturation flow metrics (Sat/Lane, Adjustment, Lanes, Final Sat.) and 4 rows of data.

Capacity Analysis Module: Table with 13 columns for capacity analysis metrics (Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ) and 13 rows of data.

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

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

Intersection #12 101 NB Ramps/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.954
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 43.4
Optimal Cycle: 142 Level Of Service: D

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic volumes and adjustment factors.

Saturation Flow Module: Table with 13 columns representing saturation flow rates and adjustment factors.

Capacity Analysis Module: Table with 13 columns representing capacity analysis metrics like Vol/Sat, Crit Moves, Green/Cycle, etc.

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #13 New Driveway/Stony Point Rd

Average Delay (sec/veh): 0.4 Worst Case Level Of Service: C[17.1]

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	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1

Volume Module:

Base Vol:	0	832	0	0	634	0	0	0	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
Initial Bse:	0	832	0	0	634	0	0	0	0	0	0	0
Added Vol:	0	0	63	0	116	0	0	0	0	0	0	37
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	832	63	0	750	0	0	0	0	0	0	37
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	876	66	0	789	0	0	0	0	0	0	39
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	876	66	0	789	0	0	0	0	0	0	39

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3

Capacity Module:

Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	909
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	336
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	336
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.12

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0.4			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	17.1			
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	C			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*			
ApproachDel:	xxxxxxx			xxxxxxx			xxxxxxx				17.1				
ApproachLOS:	*			*			*				C				

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #15 Redwood Dr/Business Park Dr

Average Delay (sec/veh): 5.6 Worst Case Level Of Service: D[26.5]

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: 1 0 2 0 0 0 0 1 1 0 1 0 0 1 0 0 1 0 0 2

Volume Module:

Base Vol: 33 464 0 0 489 41 172 0 89 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: 33 464 0 0 489 41 172 0 89 0 0 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 33 464 0 0 489 41 172 0 89 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 35 488 0 0 515 43 181 0 94 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 35 488 0 0 515 43 181 0 94 0 0 0

Critical Gap Module:

Critical Gp: 4.1 xxxx xxxxx xxxxx xxxx xxxxx 6.8 6.5 6.9 7.5 6.5 6.9
FollowUpTim: 2.2 xxxx xxxxx xxxxx xxxx xxxxx 3.5 4.0 3.3 3.5 4.0 3.3

Capacity Module:

Cnflict Vol: 558 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 850 1094 279 815 1116 244
Potent Cap.: 1023 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 303 216 724 273 209 762
Move Cap.: 1023 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 296 208 724 231 202 762
Volume/Cap: 0.03 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 0.61 0.00 0.13 0.00 0.00 0.00

Level Of Service Module:

2Way95thQ: 0.1 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 3.8 xxxx xxxxx xxxx xxxx xxxxx
Control Del: 8.6 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 34.7 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move: A * * * * * D * * * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx 724 0 xxxx xxxxx
SharedQueue:xxxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx 0.4 xxxxx xxxx xxxxx
Shrd ConDel:xxxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx 10.7 xxxxx xxxx xxxxx
Shared LOS: * * * * * * * * * * B * * * *
ApproachDel: xxxxxx xxxxxx 26.5 xxxxxx
ApproachLOS: * * * * * D *

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #16 Rohnert Park Expwy/Stony Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.752

Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 27.1

Optimal Cycle: 49 Level Of Service: C

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Permitted Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 1 0 1 1 0 1 0 0 0 0 0 0 0 1

Volume Module:

Base Vol: 0 546 251 212 421 0 0 0 0 257 0 286
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: 0 546 251 212 421 0 0 0 0 257 0 286
Added Vol: 0 16 0 70 46 0 0 0 0 0 0 47
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 562 251 282 467 0 0 0 0 257 0 333
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 0 592 264 297 492 0 0 0 0 271 0 351
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 592 264 297 492 0 0 0 0 271 0 351
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 0 592 264 297 492 0 0 0 0 271 0 351

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 1.00 0.98 0.83 0.93 0.98 1.00 1.00 1.00 1.00 0.93 1.00 0.83
Lanes: 0.00 1.00 1.00 1.00 1.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00
Final Sat.: 0 1862 1583 1769 1862 0 0 0 0 1769 0 1583

Capacity Analysis Module:

Vol/Sat: 0.00 0.32 0.17 0.17 0.26 0.00 0.00 0.00 0.00 0.15 0.00 0.22
Crit Moves: ****
Green/Cycle: 0.00 0.42 0.42 0.22 0.65 0.00 0.00 0.00 0.00 0.29 0.00 0.29
Volume/Cap: 0.00 0.75 0.40 0.75 0.41 0.00 0.00 0.00 0.00 0.52 0.00 0.75
Uniform Del: 0.0 24.4 20.0 36.3 8.5 0.0 0.0 0.0 0.0 29.4 0.0 32.0
IncrcmntDel: 0.0 4.1 0.4 7.9 0.2 0.0 0.0 0.0 0.0 0.9 0.0 6.8
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 0.00 1.00 1.00 1.00 1.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00
Delay/Veh: 0.0 28.6 20.4 44.2 8.8 0.0 0.0 0.0 0.0 30.3 0.0 38.7
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 28.6 20.4 44.2 8.8 0.0 0.0 0.0 0.0 30.3 0.0 38.7
LOS by Move: A C C D A A A A C A D
HCM2k95thQ: 0 29 11 19 14 0 0 0 0 14 0 21

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #17 Rohnert Park Expwy/Labath Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.598

Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 33.6

Optimal Cycle: 48 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	0	1	0	0	1	0	2	1	0	3

Volume Module:

Base Vol:	64	19	154	270	43	99	50	600	36	202	575	154
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:	64	19	154	270	43	99	50	600	36	202	575	154
Added Vol:	0	0	0	0	0	0	0	70	0	0	47	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	64	19	154	270	43	99	50	670	36	202	622	154
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	67	20	162	284	45	104	53	705	38	213	655	162
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	67	20	162	284	45	104	53	705	38	213	655	162
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	67	20	162	284	45	104	53	705	38	213	655	162

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.85	0.85	0.93	0.88	0.88	0.93	0.98	0.83	0.93	0.98	0.83
Lanes:	2.00	0.22	1.78	1.00	0.30	0.70	1.00	2.00	1.00	1.00	3.00	1.00
Final Sat.:	3538	355	2874	1769	505	1162	1769	3724	1583	1769	5586	1583

Capacity Analysis Module:

Vol/Sat:	0.02	0.06	0.06	0.16	0.09	0.09	0.03	0.19	0.02	0.12	0.12	0.10
Crit Moves:	****			****			****			****		
Green/Cycle:	0.07	0.12	0.12	0.25	0.29	0.29	0.26	0.28	0.28	0.24	0.26	0.26
Volume/Cap:	0.27	0.47	0.47	0.64	0.31	0.31	0.11	0.68	0.09	0.50	0.45	0.39
Uniform Del:	44.1	41.0	41.0	33.5	27.7	27.7	28.2	32.0	26.6	32.8	31.0	30.5
IncrcmntDel:	0.6	0.9	0.9	3.2	0.4	0.4	0.1	1.8	0.1	0.9	0.2	0.6
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	44.7	41.9	41.9	36.7	28.1	28.1	28.3	33.8	26.6	33.8	31.2	31.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	44.7	41.9	41.9	36.7	28.1	28.1	28.3	33.8	26.6	33.8	31.2	31.1
LOS by Move:	D	D	D	D	C	C	C	C	C	C	C	C
HCM2k95thQ:	3	6	6	16	7	7	3	19	2	12	11	9

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #18 Rohnert Park Expwy/Redwood Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.711

Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 44.4

Optimal Cycle: 61 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Control:	Protected			Protected			Protected			Protected											
Rights:	Include			Include			Include			Include											
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0									
Lanes:	1	0	1	1	1	1	2	0	1	0	1	1	0	3	0	1	2	0	2	0	1

Volume Module:

Base Vol:	137	252	422	364	264	243	233	701	146	371	656	358
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:	137	252	422	364	264	243	233	701	146	371	656	358
Added Vol:	0	0	0	0	0	0	0	70	0	0	47	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	137	252	422	364	264	243	233	771	146	371	703	358
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	144	265	444	383	278	256	245	812	154	391	740	377
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	144	265	444	383	278	256	245	812	154	391	740	377
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	144	265	444	383	278	256	245	812	154	391	740	377

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.89	0.89	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.83
Lanes:	1.00	1.12	1.88	2.00	1.00	1.00	1.00	3.00	1.00	2.00	2.00	1.00
Final Sat.:	1769	1892	3169	3538	1862	1583	1769	5586	1583	3538	3724	1583

Capacity Analysis Module:

Vol/Sat:	0.08	0.14	0.14	0.11	0.15	0.16	0.14	0.15	0.10	0.11	0.20	0.24
Crit Moves:	****			****			****			****		
Green/Cycle:	0.13	0.22	0.22	0.17	0.26	0.26	0.10	0.27	0.27	0.21	0.38	0.38
Volume/Cap:	0.61	0.62	0.62	0.62	0.56	0.61	1.39	0.53	0.35	0.53	0.52	0.62
Uniform Del:	40.9	35.0	35.0	38.3	31.8	32.2	45.0	30.9	29.2	35.3	23.9	25.1
IncrcmntDel:	4.6	1.1	1.1	2.0	1.5	2.6	204.9	0.4	0.5	0.7	0.3	2.0
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	45.5	36.0	36.0	40.3	33.3	34.9	249.9	31.2	29.7	36.0	24.2	27.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	45.5	36.0	36.0	40.3	33.3	34.9	249.9	31.2	29.7	36.0	24.2	27.1
LOS by Move:	D	D	D	D	C	C	F	C	C	D	C	C
HCM2k95thQ:	10	14	14	12	15	15	31	14	8	11	17	19

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

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

 Intersection #19 Rohnert Park Expwy/101 SB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.708
 Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 24.6
 Optimal Cycle: 60 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1	1	0	0	0	2	1	1	0	2

Volume Module:

Base Vol:	7	0	17	702	1	351	0	1208	278	68	1024	199
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:	7	0	17	702	1	351	0	1208	278	68	1024	199
Added Vol:	0	0	0	0	0	0	0	46	23	0	47	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	7	0	17	702	1	351	0	1254	301	68	1071	199
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00
PHF Volume:	7	0	18	739	1	369	0	1320	317	72	1127	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	7	0	18	739	1	369	0	1320	317	72	1127	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Final Vol.:	7	0	18	739	1	369	0	1320	317	72	1127	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.85	1.00	0.85	0.69	0.69	0.83	1.00	0.95	0.95	0.93	0.98	1.00
Lanes:	0.29	0.00	0.71	1.99	0.01	1.00	0.00	2.42	0.58	1.00	2.00	1.00
Final Sat.:	472	0	1146	2633	4	1583	0	4374	1050	1769	3724	1900

Capacity Analysis Module:

Vol/Sat:	0.02	0.00	0.02	0.28	0.28	0.23	0.00	0.30	0.30	0.04	0.30	0.00
Crit Moves:				****			****			****		
Green/Cycle:	0.40	0.00	0.40	0.40	0.40	0.40	0.00	0.43	0.43	0.06	0.48	0.00
Volume/Cap:	0.04	0.00	0.04	0.71	0.71	0.59	0.00	0.71	0.71	0.71	0.63	0.00
Uniform Del:	18.5	0.0	18.5	25.3	25.3	23.8	0.0	23.6	23.6	46.3	19.1	0.0
IncrcmntDel:	0.0	0.0	0.0	2.3	2.3	1.5	0.0	1.0	1.0	20.6	0.7	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	18.5	0.0	18.5	27.6	27.6	25.2	0.0	24.6	24.6	66.9	19.8	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	18.5	0.0	18.5	27.6	27.6	25.2	0.0	24.6	24.6	66.9	19.8	0.0
LOS by Move:	B	A	B	C	C	C	A	C	C	E	B	A
HCM2k95thQ:	1	0	1	20	20	18	0	26	26	7	24	0

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #20 Rohnert Park Expwy/101 NB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.464

Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 16.5

Optimal Cycle: 26 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Control:	Protected			Protected			Permitted			Permitted													
Rights:	Include			Include			Ignore			Ignore													
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0											
Lanes:	1	0	0	1	1		1	0	0	0	1	1	0	4	0	0	1	0	0	3	0	0	1

Volume Module:

Base Vol:	303	0	306	14	0	3	17	1631	273	0	985	350
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:	303	0	306	14	0	3	17	1631	273	0	985	350
Added Vol:	31	0	0	0	0	0	0	46	0	0	16	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	334	0	306	14	0	3	17	1677	273	0	1001	350
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00	0.95	0.95	0.00
PHF Volume:	352	0	322	15	0	3	18	1765	0	0	1054	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	352	0	322	15	0	3	18	1765	0	0	1054	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Final Vol.:	352	0	322	15	0	3	18	1765	0	0	1054	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	1.00	0.83	0.93	1.00	0.83	0.23	0.98	1.00	1.00	0.98	1.00
Lanes:	1.00	0.00	2.00	1.00	0.00	1.00	1.00	4.00	1.00	0.00	3.00	1.00
Final Sat.:	1769	0	3165	1769	0	1583	430	7448	1900	0	5586	1900

Capacity Analysis Module:

Vol/Sat:	0.20	0.00	0.10	0.01	0.00	0.00	0.04	0.24	0.00	0.00	0.19	0.00
Crit Moves:	****				****			****				
Green/Cycle:	0.43	0.00	0.40	0.03	0.00	0.00	0.51	0.51	0.00	0.00	0.51	0.00
Volume/Cap:	0.46	0.00	0.26	0.26	0.00	xxxx	0.08	0.46	0.00	0.00	0.37	0.00
Uniform Del:	20.4	0.0	20.3	47.2	0.0	0.0	12.5	15.7	0.0	0.0	14.7	0.0
IncrcmntDel:	0.5	0.0	0.1	2.4	0.0	0.0	0.2	0.1	0.0	0.0	0.1	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00
Delay/Veh:	20.8	0.0	20.4	49.6	0.0	0.0	12.6	15.7	0.0	0.0	14.8	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	20.8	0.0	20.4	49.6	0.0	0.0	12.6	15.7	0.0	0.0	14.8	0.0
LOS by Move:	C	A	C	D	A	A	B	B	A	A	B	A
HCM2k95thQ:	15	0	7	2	0	2	1	16	0	0	12	0

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

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

 Intersection #21 Rohnert Park Expwy/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.815
 Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 34.0
 Optimal Cycle: 81 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound										
Movement:	L	T	R	L	T	R	L	T	R	L	T	R								
Control:	Split Phase			Split Phase			Protected			Protected										
Rights:	Include			Include			Include			Include										
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0								
Lanes:	1	1	1	0	1	1	1	1	0	1	2	0	2	0	1	1	0	2	1	0

Volume Module:

Base Vol:	380	286	224	102	230	183	270	1138	545	141	771	170
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:	380	286	224	102	230	183	270	1138	545	141	771	170
Added Vol:	0	0	0	0	0	0	0	46	0	0	16	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	380	286	224	102	230	183	270	1184	545	141	787	170
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	400	301	236	107	242	193	284	1246	574	148	828	179
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	400	301	236	107	242	193	284	1246	574	148	828	179
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	400	301	236	107	242	193	284	1246	574	148	828	179

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.83	0.97	0.97	0.83	0.93	0.98	0.83	0.93	0.95	0.95
Lanes:	1.71	1.29	1.00	1.00	2.00	1.00	2.00	2.00	1.00	1.00	2.47	0.53
Final Sat.:	3098	2332	1583	1834	3668	1583	3538	3724	1583	1769	4470	965

Capacity Analysis Module:

Vol/Sat:	0.13	0.13	0.15	0.06	0.07	0.12	0.08	0.33	0.36	0.08	0.19	0.19
Crit Moves:	****			****			****			****		
Green/Cycle:	0.18	0.18	0.18	0.15	0.15	0.15	0.17	0.44	0.44	0.10	0.38	0.38
Volume/Cap:	0.71	0.71	0.81	0.39	0.44	0.81	0.48	0.75	0.81	0.81	0.48	0.48
Uniform Del:	38.3	38.3	39.2	38.4	38.7	41.2	37.8	23.2	24.2	43.9	23.4	23.4
IncrcmntDel:	2.3	2.3	16.1	0.3	0.4	19.2	0.6	2.0	7.3	23.8	0.2	0.2
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	40.7	40.7	55.4	38.7	39.1	60.4	38.5	25.2	31.5	67.7	23.6	23.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	40.7	40.7	55.4	38.7	39.1	60.4	38.5	25.2	31.5	67.7	23.6	23.6
LOS by Move:	D	D	E	D	D	E	D	C	C	E	C	C
HCM2k95thQ:	15	15	17	7	8	15	9	30	30	13	15	15

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

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

 Intersection #22 Gravenstein Hwy (SR 116)/Stoney Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.766
 Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 38.0
 Optimal Cycle: 70 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	0	1	0	1	0	1	1	0	2

Volume Module:

Base Vol:	321	494	108	96	342	219	133	484	202	128	589	103
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	321	494	108	96	342	219	133	484	202	128	589	103
Added Vol:	0	0	0	46	0	0	0	0	0	0	0	16
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	321	494	108	142	342	219	133	484	202	128	589	119
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	338	520	114	149	360	231	140	509	213	135	620	125
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	338	520	114	149	360	231	140	509	213	135	620	125
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	338	520	114	149	360	231	140	509	213	135	620	125

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.89	0.89	0.93	0.93	0.83
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.41	0.59	1.00	2.00	1.00
Final Sat.:	1769	1862	1583	1769	1862	1583	1769	2386	996	1769	3538	1583

Capacity Analysis Module:

Vol/Sat:	0.19	0.28	0.07	0.08	0.19	0.15	0.08	0.21	0.21	0.08	0.18	0.08
Crit Moves:	****			****			****			****		
Green/Cycle:	0.25	0.39	0.39	0.12	0.25	0.25	0.12	0.28	0.28	0.10	0.26	0.26
Volume/Cap:	0.77	0.72	0.19	0.72	0.77	0.58	0.67	0.77	0.77	0.77	0.67	0.30
Uniform Del:	34.8	26.2	20.4	42.6	34.6	32.7	42.3	33.1	33.1	43.9	33.2	29.7
IncrcmntDel:	7.9	3.7	0.1	12.1	7.4	2.1	8.3	3.8	3.8	18.1	2.0	0.4
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	42.7	29.9	20.5	54.7	42.0	34.8	50.6	36.9	36.9	62.0	35.1	30.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	42.7	29.9	20.5	54.7	42.0	34.8	50.6	36.9	36.9	62.0	35.1	30.1
LOS by Move:	D	C	C	D	D	C	D	D	D	E	D	C
HCM2k95thQ:	21	26	5	12	22	13	11	22	22	11	18	6

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #23 Gravenstein Hwy (SR 116)/Redwood Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.715

Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 33.0

Optimal Cycle: 61 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	0	1	0	1	1	0	2

Volume Module:

Base Vol:	48	24	63	485	29	96	102	625	32	53	738	333
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	24	63	485	29	96	102	625	32	53	738	333
Added Vol:	0	0	0	0	0	0	0	46	0	0	16	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	48	24	63	485	29	96	102	671	32	53	754	333
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	51	25	66	511	31	101	107	706	34	56	794	351
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	51	25	66	511	31	101	107	706	34	56	794	351
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	51	25	66	511	31	101	107	706	34	56	794	351

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.87	0.87	0.93	0.87	0.87	0.93	0.92	0.92	0.93	0.93	0.83
Lanes:	1.00	0.28	0.72	1.00	0.23	0.77	1.00	1.91	0.09	1.00	2.00	1.00
Final Sat.:	1769	458	1201	1769	382	1266	1769	3353	160	1769	3538	1583

Capacity Analysis Module:

Vol/Sat:	0.03	0.06	0.06	0.29	0.08	0.08	0.06	0.21	0.21	0.03	0.22	0.22
Crit Moves:	****			****			****			****		
Green/Cycle:	0.13	0.08	0.08	0.40	0.35	0.35	0.08	0.35	0.35	0.05	0.31	0.31
Volume/Cap:	0.23	0.71	0.71	0.71	0.23	0.23	0.71	0.61	0.61	0.61	0.71	0.71
Uniform Del:	39.2	45.1	45.1	25.0	22.7	22.7	44.6	27.0	27.0	46.4	30.3	30.2
IncrcmntDel:	0.5	17.4	17.4	3.4	0.2	0.2	15.0	0.9	0.9	11.1	2.2	4.6
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	39.8	62.4	62.4	28.4	22.8	22.8	59.6	27.9	27.9	57.6	32.6	34.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	39.8	62.4	62.4	28.4	22.8	22.8	59.6	27.9	27.9	57.6	32.6	34.8
LOS by Move:	D	E	E	C	C	C	E	C	C	E	C	C
HCM2k95thQ:	3	8	8	25	6	6	9	19	19	6	23	20

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #24 Gravenstein Hwy (SR 116)/SB US Ramps101

Cycle (sec): 100 Critical Vol./Cap.(X): 0.548

Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 21.0

Optimal Cycle: 37 Level Of Service: C

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Permitted Protected
Rights: Include Include Ignore Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 0 0 0 2 0 0 1 0 0 0 2 0 0 0

Volume Module:
Base Vol: 0 0 0 639 0 212 0 819 361 99 900 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: 0 0 0 639 0 212 0 819 361 99 900 0
Added Vol: 0 0 0 0 0 0 0 0 46 0 16 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 639 0 212 0 819 407 99 916 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.00 0.95 0.95 0.95
PHF Volume: 0 0 0 673 0 223 0 862 0 104 964 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 0 0 673 0 223 0 862 0 104 964 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
Final Vol.: 0 0 0 673 0 223 0 862 0 104 964 0

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 1.00 1.00 1.00 0.90 1.00 0.83 1.00 0.93 1.00 0.93 0.93 1.00
Lanes: 0.00 0.00 0.00 2.00 0.00 1.00 0.00 2.00 1.00 1.00 2.00 0.00
Final Sat.: 0 0 0 3432 0 1583 0 3538 1900 1769 3538 0

Capacity Analysis Module:
Vol/Sat: 0.00 0.00 0.00 0.20 0.00 0.14 0.00 0.24 0.00 0.06 0.27 0.00
Crit Moves: ****
Green/Cycle: 0.00 0.00 0.00 0.36 0.00 0.36 0.00 0.44 0.00 0.11 0.55 0.00
Volume/Cap: 0.00 0.00 0.00 0.55 0.00 0.39 0.00 0.55 0.00 0.55 0.49 0.00
Uniform Del: 0.0 0.0 0.0 25.7 0.0 24.0 0.0 20.4 0.0 42.3 13.8 0.0
IncrcmntDel: 0.0 0.0 0.0 0.5 0.0 0.5 0.0 0.4 0.0 3.4 0.2 0.0
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 0.00 0.00 0.00 1.00 0.00 1.00 0.00 1.00 0.00 1.00 1.00 0.00
Delay/Veh: 0.0 0.0 0.0 26.2 0.0 24.5 0.0 20.8 0.0 45.7 14.0 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 0.0 0.0 26.2 0.0 24.5 0.0 20.8 0.0 45.7 14.0 0.0
LOS by Move: A A A C A C A C A D B A
HCM2k95thQ: 0 0 0 17 0 10 0 19 0 8 18 0

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

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

 Intersection #25 Gravenstein Hwy (SR 116)/NB US 101 Off Ramp

Cycle (sec): 100 Critical Vol./Cap.(X): 0.718
 Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 17.8
 Optimal Cycle: 54 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	0	0	0	0	0	2	0	0	2

Volume Module:

Base Vol:	351	0	236	0	0	0	0	1461	0	0	617	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:	351	0	236	0	0	0	0	1461	0	0	617	0
Added Vol:	16	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	367	0	236	0	0	0	0	1461	0	0	617	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	386	0	248	0	0	0	0	1538	0	0	649	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	386	0	248	0	0	0	0	1538	0	0	649	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	386	0	248	0	0	0	0	1538	0	0	649	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	1.00	0.83	1.00	1.00	1.00	1.00	0.93	1.00	1.00	0.93	1.00
Lanes:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
Final Sat.:	1769	0	1583	0	0	0	0	3538	0	0	3538	0

Capacity Analysis Module:

Vol/Sat:	0.22	0.00	0.16	0.00	0.00	0.00	0.00	0.43	0.00	0.00	0.18	0.00
Crit Moves:	****			****								
Green/Cycle:	0.30	0.00	0.30	0.00	0.00	0.00	0.00	0.61	0.00	0.00	0.61	0.00
Volume/Cap:	0.72	0.00	0.52	0.00	0.00	0.00	0.00	0.72	0.00	0.00	0.30	0.00
Uniform Del:	31.0	0.0	28.7	0.0	0.0	0.0	0.0	13.8	0.0	0.0	9.5	0.0
IncrcmntDel:	4.6	0.0	1.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.1	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00
Delay/Veh:	35.6	0.0	29.7	0.0	0.0	0.0	0.0	14.9	0.0	0.0	9.6	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	35.6	0.0	29.7	0.0	0.0	0.0	0.0	14.9	0.0	0.0	9.6	0.0
LOS by Move:	D	A	C	A	A	A	A	B	A	A	A	A
HCM2k95thQ:	21	0	13	0	0	0	0	31	0	0	10	0

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #26 Millbrae Ave/Stony Point Rd

Average Delay (sec/veh): 3.3 Worst Case Level Of Service: E[42.2]

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:	1	0	2	0	1	1	0	0	1!	0	0	1

Volume Module:

Base Vol:	19	715	20	116	546	4	7	6	11	2	7	194
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:	19	715	20	116	546	4	7	6	11	2	7	194
Added Vol:	0	37	0	0	16	0	0	0	0	0	0	9
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	19	752	20	116	562	4	7	6	11	2	7	203
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	20	792	21	122	592	4	7	6	12	2	7	214
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	20	792	21	122	592	4	7	6	12	2	7	214

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.5	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflict Vol:	596	xxxx	xxxxx	813	xxxx	xxxxx	1277	1691	298	1375	1672	396
Potent Cap.:	991	xxxx	xxxxx	823	xxxx	xxxxx	125	94	704	106	97	609
Move Cap.:	991	xxxx	xxxxx	823	xxxx	xxxxx	66	79	704	86	81	609
Volume/Cap:	0.02	xxxx	xxxx	0.15	xxxx	xxxx	0.11	0.08	0.02	0.02	0.09	0.35

Level Of Service Module:

2Way95thQ:	0.1	xxxx	xxxxx	0.5	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	1.6			
Control Del:	8.7	xxxx	xxxxx	10.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	14.1			
LOS by Move:	A	*	*	B	*	*	*	*	*	*	*	B			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	122	xxxxx	82	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.7	xxxxx	0.4	xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	42.2	xxxxx	54.6	xxxx	xxxxx			
Shared LOS:	*	*	*	*	*	*	*	E	*	F	*	*			
ApproachDel:	xxxxxx			xxxxxx				42.2				15.8			
ApproachLOS:	*			*				E				C			

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #27 Millbrae Ave/Primrose Ave

Average Delay (sec/veh): 0.4 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:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	1! 0 0	0	0	1 0 0	0	0	1! 0 0	0	0	1! 0 0

Volume Module:

Base Vol:	0	0	1	0	1	0	1	139	3	4	199	2
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	1	0	1	0	1	139	3	4	199	2
Added Vol:	9	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	9	0	1	0	1	0	1	139	3	4	199	2
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	9	0	1	0	1	0	1	146	3	4	209	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	9	0	1	0	1	0	1	146	3	4	209	2

Critical Gap Module:

Critical Gp:	7.1	6.5	6.2	xxxxx	6.5	xxxxx	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	4.0	xxxxx	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	369	370	148	xxxx	371	xxxxx	212	xxxx	xxxxx	149	xxxx	xxxxx
Potent Cap.:	591	563	904	xxxx	562	xxxxx	1371	xxxx	xxxxx	1444	xxxx	xxxxx
Move Cap.:	588	561	904	xxxx	560	xxxxx	1371	xxxx	xxxxx	1444	xxxx	xxxxx
Volume/Cap:	0.02	0.00	0.00	xxxx	0.00	xxxx	0.00	xxxx	xxxx	0.00	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	0.0	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	11.4	xxxxx	7.6	xxxx	xxxxx	7.5	xxxx	xxxxx			
LOS by Move:	*	*	*	*	B	*	A	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	610	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	0.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	11.0	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	B	*	*	*	*	*	*	*	*	*	*			
ApproachDel:	11.0				11.4		xxxxxxx			xxxxxxx					
ApproachLOS:	B				B		*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #28 Millbrae Ave/Whistler Ave

Average Delay (sec/veh): 0.6 Worst Case Level Of Service: B[11.5]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 1 0 0 0 0 0 1! 0 0 0 0 1! 0 0 0 0 1! 0 0

Volume Module:

Base Vol: 1 9 0 4 0 1 1 123 2 4 208 8
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 1 9 0 4 0 1 1 123 2 4 208 8
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 1 9 0 4 0 1 1 123 2 4 208 8
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 1 9 0 4 0 1 1 129 2 4 219 8
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 1 9 0 4 0 1 1 129 2 4 219 8

Critical Gap Module:

Critical Gp: 7.1 6.5 xxxxx 7.1 6.5 6.2 4.1 xxxxx xxxxx 4.1 xxxxx xxxxx
FollowUpTim: 3.5 4.0 xxxxx 3.5 4.0 3.3 2.2 xxxxx xxxxx 2.2 xxxxx xxxxx

Capacity Module:

Cnflict Vol: 365 368 xxxxx 369 365 223 227 xxxxx xxxxx 132 xxxxx xxxxx
Potent Cap.: 595 564 xxxxx 591 566 821 1353 xxxxx xxxxx 1466 xxxxx xxxxx
Move Cap.: 593 562 xxxxx 582 564 821 1353 xxxxx xxxxx 1466 xxxxx xxxxx
Volume/Cap: 0.00 0.02 xxxxx 0.01 0.00 0.00 0.00 xxxxx xxxxx 0.00 xxxxx xxxxx

Level Of Service Module:

2Way95thQ: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx 0.0 xxxxx xxxxx
Control Del: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 7.7 xxxxx xxxxx 7.5 xxxxx xxxxx
LOS by Move: * * * * * A * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: 565 xxxxx xxxxx xxxxx 618 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue: 0.1 xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd ConDel: 11.5 xxxxx xxxxx xxxxx 10.9 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: B * * * B * * * * *
ApproachDel: 11.5 10.9 xxxxxxx xxxxxxx
ApproachLOS: B B * *

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #29 Millbrae Ave/Langner Ave

Average Delay (sec/veh): 0.4 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:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled										
Rights:	Include			Include			Include			Include										
Lanes:	0	0	1!	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0

Volume Module:

Base Vol:	5	0	11	0	0	0	0	149	9	4	270	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:	5	0	11	0	0	0	0	149	9	4	270	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	5	0	11	0	0	0	0	149	9	4	270	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	5	0	12	0	0	0	0	157	9	4	284	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	5	0	12	0	0	0	0	157	9	4	284	0

Critical Gap Module:

Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	454	454	162	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	166	xxxx	xxxxx
Potent Cap.:	567	505	889	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1424	xxxx	xxxxx
Move Cap.:	566	503	889	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1424	xxxx	xxxxx
Volume/Cap:	0.01	0.00	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	754	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	0.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx			
Shrd ConDel:	xxxxx	9.9	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx			
Shared LOS:	*	A	*	*	*	*	*	*	*	A	*	*			
ApproachDel:	9.9			xxxxxxx			xxxxxxx			xxxxxxx					
ApproachLOS:	A			*			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #30 Millbrae Ave/Labath Ave

Average Delay (sec/veh): 1.0 Worst Case Level Of Service: B[11.2]

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

Volume Module:

Base Vol:	25	0	8	0	0	0	0	155	9	11	250	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:	25	0	8	0	0	0	0	155	9	11	250	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	25	0	8	0	0	0	0	155	9	11	250	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	26	0	8	0	0	0	0	163	9	12	263	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	26	0	8	0	0	0	0	163	9	12	263	0

Critical Gap Module:

Critical Gp:	6.4	6.5	6.2	7.1	6.5	6.2	xxxxx	xxxxx	xxxxx	4.1	xxxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	xxxxx	xxxxx	xxxxx	2.2	xxxxx	xxxxx

Capacity Module:

Cnflict Vol:	454	454	168	458	459	263	xxxxx	xxxxx	xxxxx	173	xxxxx	xxxxx
Potent Cap.:	567	505	881	516	502	780	xxxxx	xxxxx	xxxxx	1416	xxxxx	xxxxx
Move Cap.:	564	501	881	508	498	780	xxxxx	xxxxx	xxxxx	1416	xxxxx	xxxxx
Volume/Cap:	0.05	0.00	0.01	0.00	0.00	0.00	xxxxx	xxxxx	xxxxx	0.01	xxxxx	xxxxx

Level Of Service Module:

2Way95thQ:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx			
Control Del:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	7.6	xxxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxxx	618	xxxxx	xxxxx	0	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
SharedQueue:	xxxxx	0.2	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shrd ConDel:	xxxxx	11.2	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	7.6	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shared LOS:	*	B	*	*	*	*	*	*	*	A	*	*	*	*	*
ApproachDel:	11.2			xxxxxxx			xxxxxxx			xxxxxxx					
ApproachLOS:	B			*			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #31 Millbrae Ave/Dowdell Ave

Average Delay (sec/veh): 1.0 Worst Case Level Of Service: B[11.3]

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

Volume Module:

Base Vol:	37	0	0	0	0	0	0	135	22	0	235	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:	37	0	0	0	0	0	0	135	22	0	235	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	37	0	0	0	0	0	0	135	22	0	235	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	39	0	0	0	0	0	0	142	23	0	247	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	39	0	0	0	0	0	0	142	23	0	247	0

Critical Gap Module:

Critical Gp:	6.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	401	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	609	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	609	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.06	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	0.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	11.3	xxxx	xxxxx	xxxxx	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	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	11.3			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	B			*			*			*		

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

**CUMULATIVE 2020 + ALTERNATIVE E
TRAFFIC CONDITIONS
(TRAFFIX)**

 Impact Analysis Report
 Level Of Service

Intersection	Base		Future		Change in
	Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C	
# 1 Wilfred Ave/Stony Point Rd	F	401.6 0.000	F	OVRFL 0.000	+803.008 D/V
# 2 Wilfred Ave/Primrose Ave	B	12.4 0.000	E	38.8 0.000	+26.386 D/V
# 3 Wilfred Ave/Whistler Ave	B	12.4 0.000	C	18.1 0.000	+ 5.659 D/V
# 4 Langer Ave/Wilfred Ave	B	12.4 0.000	C	18.1 0.000	+ 5.659 D/V
# 5 Wilfred Ave/Labath Ave	F	910.1 0.000	F	OVRFL 0.000	+3307.828 D/
# 6 Wilfred Ave/Dowell Ave	F	OVRFL 0.000	F	OVRFL 0.000	+ 0.000 D/V
# 7 Wilfred Ave/Redwood Dr	F	281.8 1.627	F	364.3 1.872	+82.485 D/V
# 9 Wilfred Ave/101 SB Ramp	C	33.2 0.823	D	39.9 0.940	+ 6.673 D/V
# 10 Golf Course Dr/Commerce Blvd	F	96.5 1.161	F	113.8 1.245	+17.347 D/V
# 11 Roberts Lake Rd/Golf Course Dr	B	10.9 0.453	B	10.9 0.469	+ 0.001 D/V
# 12 101 NB Ramps/Commerce Blvd	E	69.8 1.098	F	89.0 1.175	+19.161 D/V
# 13 New Driveway/Stony Point Rd	A	0.0 0.000	C	15.9 0.000	+15.906 D/V
# 15 Redwood Dr/Business Park Dr	C	16.5 0.000	C	16.5 0.000	+ 0.000 D/V
# 16 Rohnert Park Expwy/Stony Point	C	22.1 0.619	C	24.8 0.699	+ 2.700 D/V
# 17 Rohnert Park Expwy/Labath Ave	C	30.7 0.522	C	33.4 0.545	+ 2.691 D/V
# 18 Rohnert Park Expwy/Redwood Dr	D	36.0 0.697	D	42.1 0.697	+ 6.159 D/V
# 19 Rohnert Park Expwy/101 SB Ramp	C	24.5 0.710	C	24.6 0.726	+ 0.099 D/V
# 20 Rohnert Park Expwy/101 NB Ramp	B	17.1 0.449	B	17.7 0.475	+ 0.644 D/V
# 21 Rohnert Park Expwy/Commerce Bl	C	34.9 0.802	D	35.1 0.817	+ 0.226 D/V
# 22 Gravenstein Hwy (SR 116)/Stone	D	39.9 0.829	D	40.8 0.829	+ 0.886 D/V
# 23 Gravenstein Hwy (SR 116)/Redwo	D	37.8 0.852	D	38.0 0.852	+ 0.201 D/V
# 24 Gravenstein Hwy (SR 116)/SB US	C	20.1 0.570	C	20.2 0.570	+ 0.004 D/V
# 25 Gravenstein Hwy (SR 116)/NB US	B	18.7 0.767	B	19.3 0.778	+ 0.519 D/V
# 26 Millbrae Ave/Stony Point Rd	F	260.8 0.000	F	388.8 0.000	+127.931 D/V
# 27 Millbrae Ave/Primrose Ave	B	12.4 0.000	B	12.4 0.000	+ 0.000 D/V

Intersection		Base		Future		Change in	
		Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C		
# 28 Millbrae Ave/Whistler Ave	B	12.4	0.000	B 12.4	0.000	+ 0.000	D/V
# 29 Millbrae Ave/Langner Ave	B	11.2	0.000	B 11.2	0.000	+ 0.000	D/V
# 30 Millbrae Ave/Labath Ave	B	13.5	0.000	B 13.5	0.000	+ 0.000	D/V
# 31 Millbrae Ave/Dowdell Ave	B	11.6	0.000	B 11.6	0.000	+ 0.000	D/V

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1 Wilfred Ave/Stony Point Rd

Average Delay (sec/veh): 267.8 Worst Case Level Of Service: F[1204.6]

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:	1	0	0	1	0	0	0	0	0	1	0	0

Volume Module:

Base Vol:	14	677	74	102	508	3	0	13	16	143	22	134
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:	14	677	74	102	508	3	0	13	16	143	22	134
Added Vol:	0	37	0	16	0	0	0	0	0	116	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	14	714	74	118	508	3	0	13	16	259	22	134
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	15	752	78	124	535	3	0	14	17	273	23	141
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	15	752	78	124	535	3	0	14	17	273	23	141

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflict Vol:	538	xxxx	xxxxx	829	xxxx	xxxxx	xxxx	1644	536	1620	1606	791
Potent Cap.:	1041	xxxx	xxxxx	811	xxxx	xxxxx	xxxx	101	548	84	106	393
Move Cap.:	1041	xxxx	xxxxx	811	xxxx	xxxxx	xxxx	84	548	62	89	393
Volume/Cap:	0.01	xxxx	xxxx	0.15	xxxx	xxxx	xxxx	0.16	0.03	4.38	0.26	0.36

Level Of Service Module:

2Way95thQ:	0.0	xxxx	xxxxx	0.5	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	1.6			
Control Del:	8.5	xxxx	xxxxx	10.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	19.2			
LOS by Move:	A	*	*	B	*	*	*	*	*	*	*	C			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	158	64	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	0.7	32.4	xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	33.2	1770	xxxx	xxxxx			
Shared LOS:	*	*	*	*	*	*	*	*	D	F	*	*			
ApproachDel:	xxxxxx			xxxxxx				33.2		1204.6					
ApproachLOS:	*			*				D		F					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Wilfred Ave/Primrose Ave

Average Delay (sec/veh): 17.9 Worst Case Level Of Service: E[38.8]

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

Volume Module:

Base Vol:	10	10	10	10	10	10	10	170	10	9	280	9
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:	10	10	10	10	10	10	10	170	10	9	280	9
Added Vol:	116	9	302	0	0	0	0	0	16	78	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	126	19	312	10	10	10	10	170	26	87	280	9
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	133	20	328	11	11	11	11	179	27	92	295	9
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	133	20	328	11	11	11	11	179	27	92	295	9
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	707	701	193	871	710	299	304	xxxx	xxxxx	206	xxxx	xxxxx
Potent Cap.:	353	365	854	274	361	745	1268	xxxx	xxxxx	1377	xxxx	xxxxx
Move Cap.:	319	337	854	151	333	745	1268	xxxx	xxxxx	1377	xxxx	xxxxx
Volume/Cap:	0.42	0.06	0.38	0.07	0.03	0.01	0.01	xxxx	xxxx	0.07	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.2	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.9	xxxx	xxxxx	7.8	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	560	xxxxx	xxxx	274	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	9.4	xxxxx	xxxxx	0.4	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	38.8	xxxxx	xxxxx	19.8	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	E	*	*	C	*	*	*	*	*	*	*			
ApproachDel:	38.8			19.8			xxxxxxx			xxxxxxx					
ApproachLOS:	E			C			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 Wilfred Ave/Whistler Ave

Average Delay (sec/veh): 1.3 Worst Case Level Of Service: C[18.1]

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

Volume Module:

Base Vol:	10	10	10	10	10	10	10	170	10	9	280	9
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:	10	10	10	10	10	10	10	170	10	9	280	9
Added Vol:	0	0	0	0	0	0	0	302	0	0	78	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	10	10	10	10	10	10	472	10	9	358	9
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	11	11	11	11	11	11	497	11	9	377	9
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	11	11	11	11	11	11	11	497	11	9	377	9

Critical Gap Module:

Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	934	928	502	934	929	382	386	xxxx	xxxxx	507	xxxx	xxxxx
Potent Cap.:	248	270	573	248	270	670	1183	xxxx	xxxxx	1068	xxxx	xxxxx
Move Cap.:	234	265	573	233	265	670	1183	xxxx	xxxxx	1068	xxxx	xxxxx
Volume/Cap:	0.05	0.04	0.02	0.05	0.04	0.02	0.01	xxxx	xxxx	0.01	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.1	xxxx	xxxxx	8.4	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	306	xxxxx	xxxx	314	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	0.3	xxxxx	xxxxx	0.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	18.1	xxxxx	xxxxx	17.8	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	C	*	*	C	*	*	*	*	*	*	*			
ApproachDel:	18.1			17.8			xxxxxx			xxxxxx					
ApproachLOS:	C			C			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Langer Ave/Wilfred Ave

Average Delay (sec/veh): 1.3 Worst Case Level Of Service: C[18.1]

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

Volume Module:

Base Vol:	10	10	10	10	10	10	10	170	10	9	280	9
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:	10	10	10	10	10	10	10	170	10	9	280	9
Added Vol:	0	0	0	0	0	0	0	302	0	0	78	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	10	10	10	10	10	10	472	10	9	358	9
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	11	11	11	11	11	11	497	11	9	377	9
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	11	11	11	11	11	11	11	497	11	9	377	9

Critical Gap Module:

Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	934	928	502	934	929	382	386	xxxx	xxxxx	507	xxxx	xxxxx
Potent Cap.:	248	270	573	248	270	670	1183	xxxx	xxxxx	1068	xxxx	xxxxx
Move Cap.:	234	265	573	233	265	670	1183	xxxx	xxxxx	1068	xxxx	xxxxx
Volume/Cap:	0.05	0.04	0.02	0.05	0.04	0.02	0.01	xxxx	xxxx	0.01	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.1	xxxx	xxxxx	8.4	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	306	xxxxx	xxxx	314	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	0.3	xxxxx	xxxxx	0.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	18.1	xxxxx	xxxxx	17.8	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	C	*	*	C	*	*	*	*	*	*	*			
ApproachDel:	18.1			17.8			xxxxxxx			xxxxxxx					
ApproachLOS:	C			C			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #5 Wilfred Ave/Labath Ave

Average Delay (sec/veh): 563.3 Worst Case Level Of Service: F[4217.9]

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

Volume Module:

Base Vol:	44	14	396	180	31	11	40	109	41	188	245	189
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	14	396	180	31	11	40	109	41	188	245	189
Added Vol:	0	0	0	0	0	0	0	302	0	0	78	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	44	14	396	180	31	11	40	411	41	188	323	189
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	46	15	417	189	33	12	42	433	43	198	340	199
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	46	15	417	189	33	12	42	433	43	198	340	199

Critical Gap Module:

Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	1396	1473	454	1589	1395	439	539	xxxx	xxxxx	476	xxxx	xxxxx
Potent Cap.:	120	128	610	88	143	622	1040	xxxx	xxxxx	1097	xxxx	xxxxx
Move Cap.:	75	98	610	20	109	622	1040	xxxx	xxxxx	1097	xxxx	xxxxx
Volume/Cap:	0.62	0.15	0.68	9.36	0.30	0.02	0.04	xxxx	xxxx	0.18	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	0.7	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.6	xxxx	xxxxx	9.0	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	329	xxxxx	xxxx	24	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	25.6	xxxxx	xxxxx	29.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	251	xxxxx	xxxxx	4218	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	F	*	*	F	*	*	*	*	*	*	*			
ApproachDel:	250.6			4217.9			xxxxxx			xxxxxx					
ApproachLOS:	F			F			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #6 Wilfred Ave/Dowell Ave

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

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 1! 0 0 0 0 1! 0 0

Volume Module:

Base Vol: 143 105 559 217 41 119 53 359 273 509 360 273
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: 143 105 559 217 41 119 53 359 273 509 360 273
Added Vol: 0 0 0 0 0 0 0 302 0 0 78 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 143 105 559 217 41 119 53 661 273 509 438 273
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 151 111 588 228 43 125 56 696 287 536 461 287
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 151 111 588 228 43 125 56 696 287 536 461 287

Critical Gap Module:

Critical Gp: 7.1 6.5 6.2 7.1 6.5 6.2 4.1 xxxx xxxxx 4.1 xxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 3.5 4.0 3.3 2.2 xxxx xxxxx 2.2 xxxx xxxxx

Capacity Module:

Cnflict Vol: 2712 2771 839 2977 2771 605 748 xxxx xxxxx 983 xxxx xxxxx
Potent Cap.: 14 20 368 9 20 502 869 xxxx xxxxx 710 xxxx xxxxx
Move Cap.: 0 0 368 0 0 502 869 xxxx xxxxx 710 xxxx xxxxx
Volume/Cap: xxxx xxxx 1.60 xxxx xxxx 0.25 0.06 xxxx xxxx 0.75 xxxx xxxx

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx 0.2 xxxx xxxxx 7.0 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx 9.4 xxxx xxxxx 23.9 xxxx xxxxx
LOS by Move: * * * * * A * * C * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx 0 xxxxx xxxx 0 xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS: * * * * * * * * * * * * *
ApproachDel: xxxxxx xxxxxx xxxxxx xxxxxx
ApproachLOS: F F * *

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 Wilfred Ave/Redwood Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 1.872

Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 364.3

Optimal Cycle: 180 Level Of Service: F

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 2 0 1 2 0 0 1 0 0 0 1! 0 0 0 1 0 0 2

Volume Module:

Base Vol: 556 103 350 453 70 222 146 734 255 73 364 730
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: 556 103 350 453 70 222 146 734 255 73 364 730
Added Vol: 0 0 0 0 0 2 5 297 0 0 77 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 556 103 350 453 70 224 151 1031 255 73 441 730
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 585 108 368 477 74 236 159 1085 268 77 464 768
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 585 108 368 477 74 236 159 1085 268 77 464 768
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 585 108 368 477 74 236 159 1085 268 77 464 768

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.93 0.98 0.83 0.93 0.87 0.87 0.95 0.95 0.95 0.97 0.97 0.83
Lanes: 1.00 2.00 1.00 2.00 0.24 0.76 0.10 0.72 0.18 0.14 0.86 2.00
Final Sat.: 1769 3724 1583 3538 393 1257 190 1297 321 263 1586 3165

Capacity Analysis Module:

Vol/Sat: 0.33 0.03 0.23 0.13 0.19 0.19 0.84 0.84 0.84 0.29 0.29 0.24
Crit Moves: **** **** ****
Green/Cycle: 0.18 0.18 0.18 0.10 0.10 0.10 0.45 0.45 0.45 0.16 0.16 0.16
Volume/Cap: 1.87 0.17 1.33 1.33 1.87 1.87 1.87 1.87 1.87 1.87 1.87 1.55
Uniform Del: 41.2 35.0 41.2 44.9 45.0 45.0 27.7 27.7 27.7 42.2 42.2 42.2
IncrcmntDel:404.5 0.1 170.1 165.4 415 414.7 397.3 397 397.3 405.5 405 258.8
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Delay/Veh: 445.7 35.1 211.3 210.3 460 459.6 424.9 425 424.9 447.7 448 301.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 445.7 35.1 211.3 210.3 460 459.6 424.9 425 424.9 447.7 448 301.0
LOS by Move: F D F F F F F F F F F
HCM2k95thQ: 80 3 41 29 46 46 198 198 198 75 75 49

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

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

 Intersection #9 Wilfred Ave/101 SB Ramp

Cycle (sec): 145 Critical Vol./Cap.(X): 0.940
 Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 39.9
 Optimal Cycle: 157 Level Of Service: D

Street Name: US-101 SB Ramp Wilfred Avenue
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Permitted			Protected			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	1	0	1	0	0	1	2	0	2

Volume Module:

Base Vol:	0	0	0	355	288	482	0	1257	283	77	682	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:	0	0	0	355	288	482	0	1257	283	77	682	0
Added Vol:	0	0	0	0	0	30	0	135	162	0	47	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	355	288	512	0	1392	445	77	729	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	374	303	539	0	1465	468	81	767	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	374	303	539	0	1465	468	81	767	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	374	303	539	0	1465	468	81	767	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.83	0.89	0.89	1.00	0.94	0.94	0.93	0.98	1.00
Lanes:	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.52	0.48	2.00	2.00	0.00
Final Sat.:	0	0	0	1583	1683	1683	0	2720	870	3538	3724	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.24	0.18	0.32	0.00	0.54	0.54	0.02	0.21	0.00
Crit Moves:						****		****		****		
Green/Cycle:	0.00	0.00	0.00	0.34	0.34	0.34	0.00	0.57	0.57	0.02	0.60	0.00
Volume/Cap:	0.00	0.00	0.00	0.69	0.53	0.94	0.00	0.94	0.94	0.94	0.34	0.00
Uniform Del:	0.0	0.0	0.0	41.3	38.4	46.4	0.0	28.7	28.7	70.6	14.8	0.0
IncrcmntDel:	0.0	0.0	0.0	3.9	0.3	17.3	0.0	9.2	9.2	76.5	0.1	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	0.0	0.0	0.0	45.1	38.8	63.7	0.0	37.9	37.9	147.1	14.9	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	45.1	38.8	63.7	0.0	37.9	37.9	147.1	14.9	0.0
LOS by Move:	A	A	A	D	D	E	A	D	D	F	B	A
HCM2k95thQ:	0	0	0	26	20	45	0	68	68	7	16	0

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

Intersection #10 Golf Course Dr/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 1.245
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 113.8
Optimal Cycle: 180 Level Of Service: F

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns for different volume metrics (Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.) and 4 rows for North, South, East, and West bounds.

Saturation Flow Module: Table with 13 columns for saturation flow metrics (Sat/Lane, Adjustment, Lanes, Final Sat.) and 4 rows for North, South, East, and West bounds.

Capacity Analysis Module: Table with 13 columns for capacity analysis metrics (Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ) and 4 rows for North, South, East, and West bounds.

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

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

Intersection #11 Roberts Lake Rd/Golf Course Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.469
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 10.9
Optimal Cycle: 26 Level Of Service: B

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns for different volume metrics and 13 rows for various adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 13 columns for saturation flow metrics and 4 rows for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns for capacity analysis metrics and 13 rows for Vol/Sat, Crit Moves, Green/Cycle, etc.

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

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

Intersection #12 101 NB Ramps/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 1.175
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 89.0
Optimal Cycle: 180 Level Of Service: F

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R). Rows include Control, Rights, Min. Green, and Lanes.

Volume Module: Table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module: Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #13 New Driveway/Stony Point Rd

Average Delay (sec/veh): 0.4 Worst Case Level Of Service: C[15.9]

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	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1

Volume Module:

Base Vol:	0	765	0	0	664	0	0	0	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
Initial Bse:	0	765	0	0	664	0	0	0	0	0	0	0
Added Vol:	0	0	63	0	116	0	0	0	0	0	0	37
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	765	63	0	780	0	0	0	0	0	0	37
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	805	66	0	821	0	0	0	0	0	0	39
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	805	66	0	821	0	0	0	0	0	0	39

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3

Capacity Module:

Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	838
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	369
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	369
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.11

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0.4			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	15.9			
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	C			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*			
ApproachDel:	xxxxxxx			xxxxxxx			xxxxxxx			xxxxxxx		15.9			
ApproachLOS:	*			*			*			*		C			

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #15 Redwood Dr/Business Park Dr

Average Delay (sec/veh): 3.2 Worst Case Level Of Service: C[16.5]

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:	1	0	2	0	0	1	1	0	0	0	0	0

Volume Module:

Base Vol:	12	359	0	0	363	25	144	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:	12	359	0	0	363	25	144	0	31	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	12	359	0	0	363	25	144	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	13	378	0	0	382	26	152	0	33	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	13	378	0	0	382	26	152	0	33	0	0	0

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.8	xxxx	6.9	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	408	xxxx	xxxxx	xxxxx	xxxx	xxxxx	609	xxxx	204	xxxx	xxxx	xxxxx
Potent Cap.:	1161	xxxx	xxxxx	xxxxx	xxxx	xxxxx	431	xxxx	809	xxxx	xxxx	xxxxx
Move Cap.:	1161	xxxx	xxxxx	xxxxx	xxxx	xxxxx	428	xxxx	809	xxxx	xxxx	xxxxx
Volume/Cap:	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	0.35	xxxx	0.04	xxxx	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	1.6	xxxx	0.1	xxxx	xxxx	xxxxx			
Control Del:	8.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	18.0	xxxx	9.6	xxxxx	xxxx	xxxxx			
LOS by Move:	A	*	*	*	*	*	C	*	A	*	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*			
ApproachDel:	xxxxxxx			xxxxxxx			16.5			xxxxxxx					
ApproachLOS:	*			*			C			*					

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #16 Rohnert Park Expwy/Stony Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.699

Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 24.8

Optimal Cycle: 42 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Control:	Permitted			Protected			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1	0	1	0	0	0	0	1	0	0

Volume Module:

Base Vol:	0	547	253	205	460	0	0	0	0	253	0	217
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	547	253	205	460	0	0	0	0	253	0	217
Added Vol:	0	16	0	70	46	0	0	0	0	0	0	47
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	563	253	275	506	0	0	0	0	253	0	264
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	593	266	289	533	0	0	0	0	266	0	278
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	593	266	289	533	0	0	0	0	266	0	278
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	593	266	289	533	0	0	0	0	266	0	278

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.98	0.83	0.93	0.98	1.00	1.00	1.00	1.00	0.93	1.00	0.83
Lanes:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	1862	1583	1769	1862	0	0	0	0	1769	0	1583

Capacity Analysis Module:

Vol/Sat:	0.00	0.32	0.17	0.16	0.29	0.00	0.00	0.00	0.00	0.15	0.00	0.18
Crit Moves:	****			****						****		
Green/Cycle:	0.00	0.46	0.46	0.23	0.69	0.00	0.00	0.00	0.00	0.25	0.00	0.25
Volume/Cap:	0.00	0.70	0.37	0.70	0.42	0.00	0.00	0.00	0.00	0.60	0.00	0.70
Uniform Del:	0.0	21.8	17.9	35.1	6.8	0.0	0.0	0.0	0.0	33.0	0.0	34.0
IncrcmntDel:	0.0	2.6	0.3	5.2	0.2	0.0	0.0	0.0	0.0	2.3	0.0	5.5
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Delay/Veh:	0.0	24.4	18.2	40.3	7.0	0.0	0.0	0.0	0.0	35.3	0.0	39.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	24.4	18.2	40.3	7.0	0.0	0.0	0.0	0.0	35.3	0.0	39.5
LOS by Move:	A	C	B	D	A	A	A	A	A	D	A	D
HCM2k95thQ:	0	27	11	17	14	0	0	0	0	15	0	17

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #17 Rohnert Park Expwy/Labath Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.545

Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 33.4

Optimal Cycle: 44 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	0	1	0	0	1	0	2	1	0	3

Volume Module:

Base Vol:	69	26	153	281	40	97	83	585	53	116	492	92
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:	69	26	153	281	40	97	83	585	53	116	492	92
Added Vol:	0	0	0	0	0	0	0	70	0	0	47	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	69	26	153	281	40	97	83	655	53	116	539	92
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	73	27	161	296	42	102	87	689	56	122	567	97
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	73	27	161	296	42	102	87	689	56	122	567	97
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	73	27	161	296	42	102	87	689	56	122	567	97

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.85	0.85	0.93	0.88	0.88	0.93	0.98	0.83	0.93	0.98	0.83
Lanes:	2.00	0.29	1.71	1.00	0.29	0.71	1.00	2.00	1.00	1.00	3.00	1.00
Final Sat.:	3538	472	2776	1769	486	1179	1769	3724	1583	1769	5586	1583

Capacity Analysis Module:

Vol/Sat:	0.02	0.06	0.06	0.17	0.09	0.09	0.05	0.19	0.04	0.07	0.10	0.06
Crit Moves:	****			****			****			****		
Green/Cycle:	0.07	0.12	0.12	0.25	0.29	0.29	0.26	0.28	0.28	0.24	0.26	0.26
Volume/Cap:	0.29	0.48	0.48	0.67	0.30	0.30	0.19	0.66	0.13	0.29	0.39	0.24
Uniform Del:	44.2	41.1	41.1	33.8	27.6	27.6	28.8	31.8	26.9	31.0	30.5	29.2
IncrcmntDel:	0.7	0.9	0.9	3.9	0.3	0.3	0.2	1.6	0.1	0.4	0.2	0.3
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	44.8	42.1	42.1	37.7	27.9	27.9	29.0	33.4	27.0	31.4	30.7	29.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	44.8	42.1	42.1	37.7	27.9	27.9	29.0	33.4	27.0	31.4	30.7	29.5
LOS by Move:	D	D	D	D	C	C	C	C	C	C	C	C
HCM2k95thQ:	3	7	7	17	7	7	4	19	3	6	10	5

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #18 Rohnert Park Expwy/Redwood Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.697

Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 42.1

Optimal Cycle: 59 Level Of Service: D

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 1 1 1 2 0 1 0 1 1 0 3 0 1 2 0 2 0 1

Volume Module:
Base Vol: 173 326 510 339 301 236 216 700 163 377 603 318
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: 173 326 510 339 301 236 216 700 163 377 603 318
Added Vol: 0 0 0 0 0 0 0 70 0 0 47 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 173 326 510 339 301 236 216 770 163 377 650 318
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 182 343 537 357 317 248 227 811 172 397 684 335
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 182 343 537 357 317 248 227 811 172 397 684 335
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 182 343 537 357 317 248 227 811 172 397 684 335

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.93 0.89 0.89 0.93 0.98 0.83 0.93 0.98 0.83 0.93 0.98 0.83
Lanes: 1.00 1.17 1.83 2.00 1.00 1.00 1.00 3.00 1.00 2.00 2.00 1.00
Final Sat.: 1769 1980 3098 3538 1862 1583 1769 5586 1583 3538 3724 1583

Capacity Analysis Module:
Vol/Sat: 0.10 0.17 0.17 0.10 0.17 0.16 0.13 0.15 0.11 0.11 0.18 0.21
Crit Moves: **** **** ****
Green/Cycle: 0.17 0.28 0.28 0.16 0.27 0.27 0.10 0.25 0.25 0.19 0.34 0.34
Volume/Cap: 0.62 0.62 0.62 0.62 0.62 0.57 1.29 0.58 0.44 0.58 0.54 0.62
Uniform Del: 38.8 31.5 31.5 39.1 31.8 31.3 45.0 33.0 31.7 36.8 26.6 27.6
IncrcmntDel: 4.1 0.9 0.9 2.2 2.4 1.9 164.2 0.6 0.8 1.3 0.5 2.2
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Delay/Veh: 42.9 32.4 32.4 41.2 34.1 33.1 209.2 33.7 32.5 38.1 27.1 29.8
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 42.9 32.4 32.4 41.2 34.1 33.1 209.2 33.7 32.5 38.1 27.1 29.8
LOS by Move: D C C D C C F C C D C C
HCM2k95thQ: 12 16 16 12 17 14 27 15 9 12 16 17

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #19 Rohnert Park Expwy/101 SB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.726

Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 24.6

Optimal Cycle: 63 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1	1	0	0	0	2	1	1	0	2

Volume Module:

Base Vol:	6	0	17	611	1	427	0	1252	297	68	862	255
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:	6	0	17	611	1	427	0	1252	297	68	862	255
Added Vol:	0	0	0	0	0	0	0	46	23	0	47	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	6	0	17	611	1	427	0	1298	320	68	909	255
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00
PHF Volume:	6	0	18	643	1	449	0	1366	337	72	957	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	6	0	18	643	1	449	0	1366	337	72	957	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Final Vol.:	6	0	18	643	1	449	0	1366	337	72	957	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.85	1.00	0.85	0.69	0.69	0.83	1.00	0.95	0.95	0.93	0.98	1.00
Lanes:	0.26	0.00	0.74	1.99	0.01	1.00	0.00	2.41	0.59	1.00	2.00	1.00
Final Sat.:	423	0	1198	2632	4	1583	0	4347	1072	1769	3724	1900

Capacity Analysis Module:

Vol/Sat:	0.01	0.00	0.01	0.24	0.24	0.28	0.00	0.31	0.31	0.04	0.26	0.00
Crit Moves:						****		****		****		
Green/Cycle:	0.39	0.00	0.39	0.39	0.39	0.39	0.00	0.43	0.43	0.06	0.49	0.00
Volume/Cap:	0.04	0.00	0.04	0.62	0.62	0.73	0.00	0.73	0.73	0.73	0.53	0.00
Uniform Del:	18.8	0.0	18.8	24.5	24.5	25.9	0.0	23.4	23.4	46.5	17.6	0.0
IncrcmntDel:	0.0	0.0	0.0	1.2	1.2	4.3	0.0	1.2	1.2	23.4	0.3	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	18.8	0.0	18.8	25.7	25.7	30.2	0.0	24.6	24.6	69.9	17.9	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	18.8	0.0	18.8	25.7	25.7	30.2	0.0	24.6	24.6	69.9	17.9	0.0
LOS by Move:	B	A	B	C	C	C	A	C	C	E	B	A
HCM2k95thQ:	1	0	1	16	16	23	0	27	27	7	19	0

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

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

 Intersection #20 Rohnert Park Expwy/101 NB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.475
 Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 17.7
 Optimal Cycle: 26 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	0	1	0	4	0	3	0

Volume Module:

Base Vol:	339	0	345	14	0	3	21	1556	298	0	841	383
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:	339	0	345	14	0	3	21	1556	298	0	841	383
Added Vol:	31	0	0	0	0	0	0	46	0	0	16	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	370	0	345	14	0	3	21	1602	298	0	857	383
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00	0.95	0.95	0.00
PHF Volume:	389	0	363	15	0	3	22	1686	0	0	902	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	389	0	363	15	0	3	22	1686	0	0	902	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Final Vol.:	389	0	363	15	0	3	22	1686	0	0	902	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	1.00	0.83	0.93	1.00	0.83	0.26	0.98	1.00	1.00	0.98	1.00
Lanes:	1.00	0.00	2.00	1.00	0.00	1.00	1.00	4.00	1.00	0.00	3.00	1.00
Final Sat.:	1769	0	3165	1769	0	1583	501	7448	1900	0	5586	1900

Capacity Analysis Module:

Vol/Sat:	0.22	0.00	0.11	0.01	0.00	0.00	0.04	0.23	0.00	0.00	0.16	0.00
Crit Moves:	****			****			****					
Green/Cycle:	0.46	0.00	0.43	0.03	0.00	0.00	0.48	0.48	0.00	0.00	0.48	0.00
Volume/Cap:	0.48	0.00	0.27	0.27	0.00	xxxx	0.09	0.48	0.00	0.00	0.34	0.00
Uniform Del:	18.5	0.0	18.2	47.3	0.0	0.0	14.3	17.7	0.0	0.0	16.3	0.0
IncrcmntDel:	0.4	0.0	0.1	2.6	0.0	0.0	0.2	0.1	0.0	0.0	0.1	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00
Delay/Veh:	18.9	0.0	18.3	49.9	0.0	0.0	14.5	17.8	0.0	0.0	16.4	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	18.9	0.0	18.3	49.9	0.0	0.0	14.5	17.8	0.0	0.0	16.4	0.0
LOS by Move:	B	A	B	D	A	A	B	B	A	A	B	A
HCM2k95thQ:	16	0	7	2	0	2	1	16	0	0	11	0

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

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

 Intersection #21 Rohnert Park Expwy/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.817
 Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 35.1
 Optimal Cycle: 81 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound										
Movement:	L	T	R	L	T	R	L	T	R	L	T	R								
Control:	Split Phase			Split Phase			Protected			Protected										
Rights:	Include			Include			Include			Include										
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0								
Lanes:	1	1	1	0	1	1	1	1	0	1	2	0	2	0	1	1	0	2	1	0

Volume Module:

Base Vol:	384	293	241	179	354	152	235	1221	462	165	682	202
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:	384	293	241	179	354	152	235	1221	462	165	682	202
Added Vol:	0	0	0	0	0	0	0	46	0	0	16	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	384	293	241	179	354	152	235	1267	462	165	698	202
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	404	308	254	188	373	160	247	1334	486	174	735	213
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	404	308	254	188	373	160	247	1334	486	174	735	213
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	404	308	254	188	373	160	247	1334	486	174	735	213

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.83	0.96	0.96	0.83	0.93	0.98	0.83	0.93	0.95	0.95
Lanes:	1.70	1.30	1.00	1.01	1.99	1.00	2.00	2.00	1.00	1.00	2.33	0.67
Final Sat.:	3080	2350	1583	1844	3647	1583	3538	3724	1583	1769	4185	1211

Capacity Analysis Module:

Vol/Sat:	0.13	0.13	0.16	0.10	0.10	0.10	0.07	0.36	0.31	0.10	0.18	0.18
Crit Moves:	****			****			****			****		
Green/Cycle:	0.20	0.20	0.20	0.13	0.13	0.13	0.16	0.44	0.44	0.12	0.40	0.40
Volume/Cap:	0.67	0.67	0.82	0.82	0.82	0.81	0.44	0.82	0.70	0.82	0.44	0.44
Uniform Del:	37.2	37.2	38.5	42.6	42.6	42.6	38.0	24.6	22.8	42.9	21.9	21.9
IncrcmntDel:	1.7	1.7	15.4	7.6	7.6	21.3	0.6	3.3	3.2	21.2	0.1	0.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	38.8	38.8	53.9	50.2	50.2	63.9	38.6	27.9	26.0	64.1	22.0	22.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	38.8	38.8	53.9	50.2	50.2	63.9	38.6	27.9	26.0	64.1	22.0	22.0
LOS by Move:	D	D	D	D	D	E	D	C	C	E	C	C
HCM2k95thQ:	15	15	18	15	15	13	8	34	23	14	14	14

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

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

 Intersection #22 Gravenstein Hwy (SR 116)/Stoney Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.829
 Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 40.8
 Optimal Cycle: 84 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound							
Movement:	L	T	R	L	T	R	L	T	R	L	T	R					
Control:	Protected			Protected			Protected			Protected							
Rights:	Include			Include			Include			Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0					
Lanes:	1	0	1	0	1	0	1	1	0	1	1	0	1	0	2	0	1

Volume Module:

Base Vol:	323	483	113	107	358	235	149	583	228	140	661	113
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:	323	483	113	107	358	235	149	583	228	140	661	113
Added Vol:	0	0	0	46	0	0	0	0	0	0	0	16
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	323	483	113	153	358	235	149	583	228	140	661	129
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	340	508	119	161	377	247	157	614	240	147	696	136
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	340	508	119	161	377	247	157	614	240	147	696	136
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	340	508	119	161	377	247	157	614	240	147	696	136

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.89	0.89	0.93	0.93	0.83
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.44	0.56	1.00	2.00	1.00
Final Sat.:	1769	1862	1583	1769	1862	1583	1769	2436	953	1769	3538	1583

Capacity Analysis Module:

Vol/Sat:	0.19	0.27	0.08	0.09	0.20	0.16	0.09	0.25	0.25	0.08	0.20	0.09
Crit Moves:	****			****			****			****		
Green/Cycle:	0.23	0.36	0.36	0.12	0.24	0.24	0.13	0.30	0.30	0.10	0.28	0.28
Volume/Cap:	0.83	0.77	0.21	0.77	0.83	0.64	0.71	0.83	0.83	0.83	0.71	0.31
Uniform Del:	36.5	28.5	22.4	42.7	35.8	33.9	41.9	32.4	32.4	44.1	32.4	28.5
IncrcmntDel:	13.2	5.3	0.2	15.4	12.1	3.6	9.9	5.7	5.7	26.6	2.4	0.4
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	49.8	33.8	22.6	58.1	47.9	37.5	51.9	38.1	38.1	70.7	34.8	28.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	49.8	33.8	22.6	58.1	47.9	37.5	51.9	38.1	38.1	70.7	34.8	28.9
LOS by Move:	D	C	C	E	D	D	D	D	D	E	C	C
HCM2k95thQ:	22	27	5	13	24	15	12	27	27	13	21	7

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #23 Gravenstein Hwy (SR 116)/Redwood Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.852

Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 38.0

Optimal Cycle: 91 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	0	1	0	1	1	0	2

Volume Module:

Base Vol:	48	28	59	592	28	110	122	708	32	53	797	406
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	28	59	592	28	110	122	708	32	53	797	406
Added Vol:	0	0	0	0	0	0	0	46	0	0	16	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	48	28	59	592	28	110	122	754	32	53	813	406
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	51	29	62	623	29	116	128	794	34	56	856	427
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	51	29	62	623	29	116	128	794	34	56	856	427
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	51	29	62	623	29	116	128	794	34	56	856	427

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.88	0.88	0.93	0.86	0.86	0.93	0.93	0.93	0.93	0.93	0.83
Lanes:	1.00	0.32	0.68	1.00	0.20	0.80	1.00	1.92	0.08	1.00	2.00	1.00
Final Sat.:	1769	538	1134	1769	332	1306	1769	3373	143	1769	3538	1583

Capacity Analysis Module:

Vol/Sat:	0.03	0.05	0.05	0.35	0.09	0.09	0.07	0.24	0.24	0.03	0.24	0.27
Crit Moves:	****			****			****			****		
Green/Cycle:	0.12	0.06	0.06	0.41	0.36	0.36	0.09	0.35	0.35	0.05	0.32	0.32
Volume/Cap:	0.25	0.85	0.85	0.85	0.25	0.25	0.85	0.66	0.66	0.66	0.76	0.85
Uniform Del:	40.2	46.3	46.3	26.6	22.4	22.4	45.1	27.2	27.2	46.8	30.8	32.0
IncrcmntDel:	0.6	44.2	44.2	9.5	0.2	0.2	34.5	1.4	1.4	18.1	3.2	13.2
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	40.8	90.5	90.5	36.0	22.6	22.6	79.6	28.6	28.6	65.0	33.9	45.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	40.8	90.5	90.5	36.0	22.6	22.6	79.6	28.6	28.6	65.0	33.9	45.1
LOS by Move:	D	F	F	D	C	C	E	C	C	E	C	D
HCM2k95thQ:	3	10	10	34	6	6	12	22	22	6	25	27

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

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

 Intersection #24 Gravenstein Hwy (SR 116)/SB US 101 Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.570
 Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 20.2
 Optimal Cycle: 39 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Protected			Permitted			Protected		
Rights:	Include			Include			Ignore			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	2	0	1	0	2	1	1	0	2

Volume Module:

Base Vol:	0	0	0	640	0	258	0	953	412	66	998	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:	0	0	0	640	0	258	0	953	412	66	998	0
Added Vol:	0	0	0	0	0	0	0	0	46	0	16	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	640	0	258	0	953	458	66	1014	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00	0.95	0.95	0.95
PHF Volume:	0	0	0	674	0	272	0	1003	0	69	1067	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	674	0	272	0	1003	0	69	1067	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Final Vol.:	0	0	0	674	0	272	0	1003	0	69	1067	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.90	1.00	0.83	1.00	0.93	1.00	0.93	0.93	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	0.00	2.00	1.00	1.00	2.00	0.00
Final Sat.:	0	0	0	3432	0	1583	0	3538	1900	1769	3538	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.20	0.00	0.17	0.00	0.28	0.00	0.04	0.30	0.00
Crit Moves:				****				****				
Green/Cycle:	0.00	0.00	0.00	0.34	0.00	0.34	0.00	0.50	0.00	0.07	0.57	0.00
Volume/Cap:	0.00	0.00	0.00	0.57	0.00	0.50	0.00	0.57	0.00	0.57	0.53	0.00
Uniform Del:	0.0	0.0	0.0	26.8	0.0	26.0	0.0	17.7	0.0	45.1	13.5	0.0
IncrcmntDel:	0.0	0.0	0.0	0.7	0.0	0.7	0.0	0.5	0.0	6.4	0.3	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
Delay/Veh:	0.0	0.0	0.0	27.4	0.0	26.7	0.0	18.1	0.0	51.5	13.8	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	27.4	0.0	26.7	0.0	18.1	0.0	51.5	13.8	0.0
LOS by Move:	A	A	A	C	A	C	A	B	A	D	B	A
HCM2k95thQ:	0	0	0	17	0	13	0	21	0	6	20	0

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #25 Gravenstein Hwy (SR 116)/NB US 101 Off-Ramp

Cycle (sec): 100 Critical Vol./Cap.(X): 0.778

Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 19.3

Optimal Cycle: 64 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Control:	Protected			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	0	0	0	0	0	2	0	0	2

Volume Module:

Base Vol:	375	0	273	0	0	0	0	1596	0	0	683	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:	375	0	273	0	0	0	0	1596	0	0	683	0
Added Vol:	16	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	391	0	273	0	0	0	0	1596	0	0	683	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	412	0	287	0	0	0	0	1680	0	0	719	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	412	0	287	0	0	0	0	1680	0	0	719	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	412	0	287	0	0	0	0	1680	0	0	719	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	1.00	0.83	1.00	1.00	1.00	1.00	0.93	1.00	1.00	0.93	1.00
Lanes:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
Final Sat.:	1769	0	1583	0	0	0	0	3538	0	0	3538	0

Capacity Analysis Module:

Vol/Sat:	0.23	0.00	0.18	0.00	0.00	0.00	0.00	0.47	0.00	0.00	0.20	0.00
Crit Moves:	****			****								
Green/Cycle:	0.30	0.00	0.30	0.00	0.00	0.00	0.00	0.61	0.00	0.00	0.61	0.00
Volume/Cap:	0.78	0.00	0.61	0.00	0.00	0.00	0.00	0.78	0.00	0.00	0.33	0.00
Uniform Del:	32.0	0.0	30.0	0.0	0.0	0.0	0.0	14.4	0.0	0.0	9.5	0.0
IncrcmntDel:	7.2	0.0	2.3	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.1	0.0
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00
Delay/Veh:	39.2	0.0	32.3	0.0	0.0	0.0	0.0	16.3	0.0	0.0	9.6	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	39.2	0.0	32.3	0.0	0.0	0.0	0.0	16.3	0.0	0.0	9.6	0.0
LOS by Move:	D	A	C	A	A	A	A	B	A	A	A	A
HCM2k95thQ:	24	0	16	0	0	0	0	36	0	0	11	0

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #26 Millbrae Ave/Stony Point Rd

Average Delay (sec/veh): 12.1 Worst Case Level Of Service: F[388.8]

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:	1	0	1	0	1	0	0	0	1!	0	0	1

Volume Module:

Base Vol:	7	728	26	132	585	7	11	5	8	23	25	219
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:	7	728	26	132	585	7	11	5	8	23	25	219
Added Vol:	0	37	0	0	16	0	0	0	0	0	0	9
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	7	765	26	132	601	7	11	5	8	23	25	228
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	7	805	27	139	633	7	12	5	8	24	26	240
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	7	805	27	139	633	7	12	5	8	24	26	240

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflict Vol:	640	xxxx	xxxxx	833	xxxx	xxxxx	1881	1762	320	1417	1738	805
Potent Cap.:	954	xxxx	xxxxx	809	xxxx	xxxxx	55	85	725	116	88	385
Move Cap.:	954	xxxx	xxxxx	809	xxxx	xxxxx	13	70	725	93	72	385
Volume/Cap:	0.01	xxxx	xxxx	0.17	xxxx	xxxx	0.89	0.08	0.01	0.26	0.36	0.62

Level Of Service Module:

2Way95thQ:	0.0	xxxx	xxxxx	0.6	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	4.0			
Control Del:	8.8	xxxx	xxxxx	10.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	28.6			
LOS by Move:	A	*	*	B	*	*	*	*	*	*	*	D			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	26	xxxxx	81	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	3.0	xxxxx	2.8	xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	389	xxxxx	104.6	xxxx	xxxxx			
Shared LOS:	*	*	*	*	*	*	*	F	*	F	*	*			
ApproachDel:	xxxxxx			xxxxxx			388.8			41.8					
ApproachLOS:	*			*			F			E					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #27 Millbrae Ave/Primrose Ave

Average Delay (sec/veh): 0.5 Worst Case Level Of Service: B[12.4]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 1 0 0 0 0 1! 0 0 0 0 1! 0 0

Volume Module:

Base Vol: 1 0 2 0 1 0 1 161 5 7 265 2
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: 1 0 2 0 1 0 1 161 5 7 265 2
Added Vol: 9 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 10 0 2 0 1 0 1 161 5 7 265 2
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 11 0 2 0 1 0 1 169 5 7 279 2
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 11 0 2 0 1 0 1 169 5 7 279 2

Critical Gap Module:

Critical Gp: 7.1 6.5 6.2 xxxxx 6.5 xxxxx 4.1 xxxxx xxxxx 4.1 xxxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 xxxxx 4.0 xxxxx 2.2 xxxxx xxxxx 2.2 xxxxx xxxxx

Capacity Module:

Cnflict Vol: 469 470 172 xxxxx 472 xxxxx 281 xxxxx xxxxx 175 xxxxx xxxxx
Potent Cap.: 508 495 877 xxxxx 493 xxxxx 1293 xxxxx xxxxx 1414 xxxxx xxxxx
Move Cap.: 504 492 877 xxxxx 491 xxxxx 1293 xxxxx xxxxx 1414 xxxxx xxxxx
Volume/Cap: 0.02 0.00 0.00 xxxxx 0.00 xxxxx 0.00 xxxxx xxxxx 0.01 xxxxx xxxxx

Level Of Service Module:

2Way95thQ: xxxxx xxxxx xxxxx xxxxx 0.0 xxxxx 0.0 xxxxx xxxxx 0.0 xxxxx xxxxx
Control Del: xxxxx xxxxx xxxxx xxxxx 12.4 xxxxx 7.8 xxxxx xxxxx 7.6 xxxxx xxxxx
LOS by Move: * * * * B * A * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx 543 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue: xxxxx 0.1 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd ConDel: xxxxx 11.8 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: * B * * * * * * * * * *
ApproachDel: 11.8 12.4 xxxxxxx xxxxxxx
ApproachLOS: B B * *

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #28 Millbrae Ave/Whistler Ave

Average Delay (sec/veh): 0.5 Worst Case Level Of Service: B[12.4]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 1 0 0 0 0 0 1! 0 0 0 0 1! 0 0 0 0 1! 0 0

Volume Module:

Base Vol: 1 9 0 4 0 1 1 146 2 4 279 8
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 1 9 0 4 0 1 1 146 2 4 279 8
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 1 9 0 4 0 1 1 146 2 4 279 8
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 1 9 0 4 0 1 1 154 2 4 294 8
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 1 9 0 4 0 1 1 154 2 4 294 8

Critical Gap Module:

Critical Gp: 7.1 6.5 xxxxx 7.1 6.5 6.2 4.1 xxxxx xxxxx 4.1 xxxxx xxxxx
FollowUpTim: 3.5 4.0 xxxxx 3.5 4.0 3.3 2.2 xxxxx xxxxx 2.2 xxxxx xxxxx

Capacity Module:

Cnflict Vol: 464 467 xxxxx 468 464 298 302 xxxxx xxxxx 156 xxxxx xxxxx
Potent Cap.: 512 496 xxxxx 509 498 746 1270 xxxxx xxxxx 1437 xxxxx xxxxx
Move Cap.: 510 494 xxxxx 500 496 746 1270 xxxxx xxxxx 1437 xxxxx xxxxx
Volume/Cap: 0.00 0.02 xxxxx 0.01 0.00 0.00 0.00 xxxxx xxxxx 0.00 xxxxx xxxxx

Level Of Service Module:

2Way95thQ: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx 0.0 xxxxx xxxxx
Control Del: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 7.8 xxxxx xxxxx 7.5 xxxxx xxxxx
LOS by Move: * * * * * A * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: 496 xxxxx xxxxx xxxxx 535 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue: 0.1 xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd ConDel: 12.4 xxxxx xxxxx xxxxx 11.8 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: B * * * B * * * * *
ApproachDel: 12.4 11.8 xxxxxxx xxxxxxx
ApproachLOS: B B * *

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #29 Millbrae Ave/Langner Ave

Average Delay (sec/veh): 1.1 Worst Case Level Of Service: B[11.2]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 0 0 0 1 0 0 1 0 0 0 0

Volume Module:

Base Vol: 27 0 25 0 0 0 0 154 27 7 331 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: 27 0 25 0 0 0 0 154 27 7 331 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 27 0 25 0 0 0 0 154 27 7 331 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 28 0 26 0 0 0 0 162 28 7 348 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 28 0 26 0 0 0 0 162 28 7 348 0

Critical Gap Module:

Critical Gp: 6.4 6.5 6.2 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 4.1 xxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 2.2 xxxx xxxxx

Capacity Module:

Cnflict Vol: 539 539 176 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 191 xxxx xxxxx
Potent Cap.: 507 452 872 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 1395 xxxx xxxxx
Move Cap.: 505 449 872 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 1395 xxxx xxxxx
Volume/Cap: 0.06 0.00 0.03 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 0.01 xxxx xxxxx

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx 0.0 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxxx xxxx xxxxx xxxxxx xxxx xxxxx xxxxx 7.6 xxxx xxxxx
LOS by Move: * * * * * * * * * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx 633 xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
SharedQueue:xxxxx 0.3 xxxxx xxxxx xxxx xxxxx xxxxxx xxxx xxxxx 0.0 xxxx xxxxx
Shrd ConDel:xxxxx 11.2 xxxxx xxxxx xxxx xxxxx xxxxxx xxxx xxxxx 7.6 xxxx xxxxx
Shared LOS: * B * * * * * * * * * A * *
ApproachDel: 11.2 xxxxxxx xxxxxxx xxxxxxx
ApproachLOS: B * * *

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #30 Millbrae Ave/Labath Ave

Average Delay (sec/veh): 3.7 Worst Case Level Of Service: B[13.5]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 1! 0 0 0 0 0 1 0 0 0 0 0

Volume Module:

Base Vol: 114 0 26 0 0 0 0 160 23 36 225 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: 114 0 26 0 0 0 0 160 23 36 225 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 114 0 26 0 0 0 0 160 23 36 225 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 120 0 27 0 0 0 0 168 24 38 237 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 120 0 27 0 0 0 0 168 24 38 237 0

Critical Gap Module:

Critical Gp: 6.4 6.5 6.2 7.1 6.5 6.2 xxxxx xxxxx xxxxx 4.1 xxxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 3.5 4.0 3.3 xxxxx xxxxx xxxxx 2.2 xxxxx xxxxx

Capacity Module:

Cnflict Vol: 493 493 181 507 505 237 xxxxx xxxxx xxxxx 193 xxxxx xxxxx
Potent Cap.: 539 480 867 479 472 807 xxxxx xxxxx xxxxx 1393 xxxxx xxxxx
Move Cap.: 527 467 867 454 459 807 xxxxx xxxxx xxxxx 1393 xxxxx xxxxx
Volume/Cap: 0.23 0.00 0.03 0.00 0.00 0.00 xxxxx xxxxx xxxxx 0.03 xxxxx xxxxx

Level Of Service Module:

2Way95thQ: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.1 xxxxx xxxxx
Control Del: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 7.7 xxxxx xxxxx
LOS by Move: * * * * * * * * * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx 569 xxxxx xxxxx 0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue: xxxxx 1.0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.1 xxxxx xxxxx
Shrd ConDel: xxxxx 13.5 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 7.7 xxxxx xxxxx
Shared LOS: * B * * * * * * * * * A * *
ApproachDel: 13.5 xxxxxxx xxxxxxx xxxxxxx
ApproachLOS: B * * *

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #31 Millbrae Ave/Dowdell Ave

Average Delay (sec/veh): 1.4 Worst Case Level Of Service: B[11.6]

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

Volume Module:

Base Vol:	55	0	0	0	0	0	0	131	51	0	235	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:	55	0	0	0	0	0	0	131	51	0	235	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	55	0	0	0	0	0	0	131	51	0	235	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	58	0	0	0	0	0	0	138	54	0	247	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	58	0	0	0	0	0	0	138	54	0	247	0

Critical Gap Module:

Critical Gp:	6.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	412	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Potent Cap.:	600	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Move Cap.:	600	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Volume/Cap:	0.10	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx

Level Of Service Module:

2Way95thQ:	0.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Control Del:	11.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
LOS by Move:	B	*	*	*	*	*	*	*	*	*	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	11.6			xxxxxx			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	B			*			*			*			*		

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

SIGNAL WARRANT ANALYSIS
No BUILD

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Stony Point Rd and Wilfred Ave](#)

COUNT DATE: [Existing](#)

MAJOR STREET: [Stony Point Rd](#)

OF APPROACH LANES: [2](#)

MINOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: [2](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [Y](#)

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3	
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET			
THRESHOLD VALUES			420	140		630	70				
06:00 AM	TO	07:00 AM									
07:00 AM	TO	08:00 AM									
08:00 AM	TO	09:00 AM	806	42	Y		Y				
09:00 AM	TO	10:00 AM									
10:00 AM	TO	11:00 AM									
11:00 AM	TO	12:00 PM									
12:00 PM	TO	01:00 PM									
01:00 PM	TO	02:00 PM									
02:00 PM	TO	03:00 PM									
03:00 PM	TO	04:00 PM									
04:00 PM	TO	05:00 PM									
05:00 PM	TO	06:00 PM	1,186	122	Y		Y	Y	Y		
06:00 PM	TO	07:00 PM									
07:00 PM	TO	08:00 PM									
08:00 PM	TO	09:00 PM									
09:00 PM	TO	10:00 PM									
			1,992	164	0			1			
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED		1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-2

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-4

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Primrose Ave](#)

COUNT DATE: [Existing](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Primrose Ave](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM	70	30						
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	108	30						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			178	60						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Whistler Ave](#)

COUNT DATE: [Existing](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Whistler Ave](#)

OF APPROACH LANES: [2](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [Y](#)

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			350	140		525	70			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM	70	30						
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	108	30						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			178	60						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-2

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-4

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Langer Ave](#)

COUNT DATE: [Existing](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Langer Ave](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [Y](#)

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			350	105		525	53			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM	70	30						
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	108	30						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			178	60						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-2

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-4

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: **Wilfred Ave and Labath Ave**

COUNT DATE: **Existing**

MAJOR STREET: **Wilfred Ave**

OF APPROACH LANES: **1**

MINOR STREET: **Labath Ave**

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM	41	3						
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	83	7						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			124	10						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: **Based on 2000 MUTCD**

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Dowdell Ave](#)

COUNT DATE: [Existing](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: 1

MINOR STREET: [Dowdell Ave](#)

OF APPROACH LANES: 1

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): N

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM	45	10						
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	91	19						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			136	29	0	0	0	0	0	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: Redwood Drive and Business Park Drive

COUNT DATE: Existing

MAJOR STREET: Redwood Drive

OF APPROACH LANES: 2

MINOR STREET: Business Park Drive

OF APPROACH LANES: 2

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): N

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	200		900	100			
06:00 AM TO 07:00 AM										
07:00 AM TO 08:00 AM										
08:00 AM TO 09:00 AM	469	50								
09:00 AM TO 10:00 AM										
10:00 AM TO 11:00 AM										
11:00 AM TO 12:00 PM										
12:00 PM TO 01:00 PM										
01:00 PM TO 02:00 PM										
02:00 PM TO 03:00 PM										
03:00 PM TO 04:00 PM										
04:00 PM TO 05:00 PM										
05:00 PM TO 06:00 PM	1,003	160	Y			Y	Y	Y		
06:00 PM TO 07:00 PM										
07:00 PM TO 08:00 PM										
08:00 PM TO 09:00 PM										
09:00 PM TO 10:00 PM										
	1,472	210	0			1			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: Based on 2000 MUTCD

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Stony Point Rd and Milbrae Ave](#)

COUNT DATE: [Existing](#)

MAJOR STREET: [Stony Point Rd](#)

OF APPROACH LANES: **1**

MINOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	1,407	187	Y	Y	Y	Y	Y	
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			1,407	187	1			1		
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Stony Point Rd and Wilfred Ave](#)

COUNT DATE: [Near-Term No Build](#)

MAJOR STREET: [Stony Point Rd](#)

OF APPROACH LANES: **2**

MINOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **2**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **Y**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			420	140		630	70			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	1,424	216	Y	Y	Y	Y	Y	
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			1,424	216	1			1		
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	
									1 HR NEEDED SATISFIED	

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-2

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-4

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Primrose Ave](#)

COUNT DATE: [Near-Term No Build](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Primrose Ave](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	372	30						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			372	30	0	0	0	0	0	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Whistler Ave](#)

COUNT DATE: [Near-Term No Build](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Whistler Ave](#)

OF APPROACH LANES: [2](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [Y](#)

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			350	140		525	70			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	381	30	Y					
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			381	30						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-2

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-4

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Langer Ave](#)

COUNT DATE: [Near-Term No Build](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Langer Ave](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [Y](#)

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			350	105		525	53			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	370	30	Y					
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			370	30		0	0	0	0	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-2

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-4

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Labath Ave](#)

COUNT DATE: [Near-Term No Build](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Labath Ave](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	524	307	Y	Y	Y	Y		
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			524	307	1			0		
					8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED		
					4 HRS NEEDED NOT SATISFIED			1 HR NEEDED NOT SATISFIED		

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Dowdell Ave](#)

COUNT DATE: [Near-Term No Build](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Dowdell Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	833	347	Y	Y	Y	Y	Y	
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			833	347	1			1		
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	
									1 HR NEEDED SATISFIED	

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Redwood Drive and Business Park Drive](#)

COUNT DATE: [Near-Term No Build](#)

MAJOR STREET: [Redwood Drive](#)

OF APPROACH LANES: **2**

MINOR STREET: [Business Park Drive](#)

OF APPROACH LANES: **2**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	200		900	100			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	1,027	261	Y	Y	Y	Y	Y	
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			1,027	261	1			1		
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	
									1 HR NEEDED NOT SATISFIED	

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Stony Point Rd and Milbrae Ave](#)

COUNT DATE: [Near-Term No Build](#)

MAJOR STREET: [Stony Point Rd](#)

OF APPROACH LANES: **1**

MINOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	1,420	203	Y	Y	Y	Y	Y	
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			1,420	203	1			1		
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	
									1 HR NEEDED SATISFIED	

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Primrose Ave and Milbrae Ave](#)

COUNT DATE: [Near-Term No Build](#)

MAJOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Primrose Ave](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	348	1						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			348	1	0	0	0	0	0	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Whistler Ave and Milbrae Ave](#)

COUNT DATE: [Near-Term No Build](#)

MAJOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Whistler Ave](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	346	10						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			346	10						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Langner Ave and Milbrae Ave](#)

COUNT DATE: [Near-Term No Build](#)

MAJOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Langner Ave](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	432	16						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			432	16						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Labath Ave and Milbrae Ave](#)

COUNT DATE: [Near-Term No Build](#)

MAJOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Labath Ave](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	425	33						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			425	33	0			0	0	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Dowdell Ave and Milbrae Ave](#)

COUNT DATE: [Near-Term No Build](#)

MAJOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Dowdell Ave](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	392	37						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			392	37						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Stony Point Rd and Wilfred Ave](#)

COUNT DATE: [Cumulative No Build](#)

MAJOR STREET: [Stony Point Rd](#)

OF APPROACH LANES: **2**

MINOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **2**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **Y**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			420	140		630	70			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	1,378	299	Y	Y	Y	Y	Y	
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			1,378	299	1			1		
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-2

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-4

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Primrose Ave](#)

COUNT DATE: [Cumulative No Build](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Primrose Ave](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	488	30						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			488	30						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Whistler Ave](#)

COUNT DATE: [Cumulative No Build](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Whistler Ave](#)

OF APPROACH LANES: [2](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	200		750	100			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	488	30						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			488	30						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Langner Ave](#)

COUNT DATE: [Cumulative No Build](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Langner Ave](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	488	30						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			488	30						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Labath Ave](#)

COUNT DATE: [Cumulative No Build](#)

MAJOR STREET: [Labath Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	812	622	Y	Y	Y	Y	Y	
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			812	622	1			1		
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	
									1 HR NEEDED SATISFIED	

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Dowdell Ave](#)

COUNT DATE: [Cumulative No Build](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Dowdell Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	1,827	807	Y	Y	Y	Y	Y	
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			1,827	807	1			1		
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: Redwood Drive and Business Park Drive

COUNT DATE: Cumulative No Build

MAJOR STREET: Redwood Drive

OF APPROACH LANES: 2

MINOR STREET: Business Park Drive

OF APPROACH LANES: 2

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): N

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	200		900	100			
06:00 AM TO 07:00 AM										
07:00 AM TO 08:00 AM										
08:00 AM TO 09:00 AM										
09:00 AM TO 10:00 AM										
10:00 AM TO 11:00 AM										
11:00 AM TO 12:00 PM										
12:00 PM TO 01:00 PM										
01:00 PM TO 02:00 PM										
02:00 PM TO 03:00 PM										
03:00 PM TO 04:00 PM										
04:00 PM TO 05:00 PM										
05:00 PM TO 06:00 PM	759	175	Y				Y			
06:00 PM TO 07:00 PM										
07:00 PM TO 08:00 PM										
08:00 PM TO 09:00 PM										
09:00 PM TO 10:00 PM										
	759	175	0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: Based on 2000 MUTCD

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Story Point Rd and Milbrae Ave](#)

COUNT DATE: [Cumulative No Build](#)

MAJOR STREET: [Story Point Rd](#)

OF APPROACH LANES: **1**

MINOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	1,485	291	Y	Y	Y	Y	Y	
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			1,485	291	1			1		
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Primrose Ave and Milbrae Ave](#)

COUNT DATE: [Cumulative No Build](#)

MAJOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Primrose Ave](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	441	3						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			441	3						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Whistler Ave and Milbrae Ave](#)

COUNT DATE: [Cumulative No Build](#)

MAJOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Whistler Ave](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	440	10						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			440	10						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Langner Ave and Milbrae Ave](#)

COUNT DATE: [Cumulative No Build](#)

MAJOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Langner Ave](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	519	140	Y		Y			
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			519	140						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Labath Ave and Milbrae Ave](#)

COUNT DATE: [Cumulative No Build](#)

MAJOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Labath Ave](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	444	140			Y			
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			444	140						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Dowdell Ave and Milbrae Ave](#)

COUNT DATE: [Cumulative No Build](#)

MAJOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Dowdell Ave](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	417	55						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			417	55	0	0	0	0	0	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

**SIGNAL WARRANT ANALYSIS
ALTERNATIVE A**

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Stony Point Rd and Wilfred Ave](#)

COUNT DATE: [Near-Term Alt A](#)

MAJOR STREET: [Stony Point Rd](#)

OF APPROACH LANES: **2**

MINOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **2**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	200		900	100			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	1,586	305	Y	Y	Y	Y	Y	
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			1,586	305	1			1		
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	
									1 HR NEEDED SATISFIED	

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Primrose Ave](#)

COUNT DATE: [Near-Term Alt A](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Primrose Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	609	30	Y					
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			609	30	0	0	0	0	0	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Whistler Ave](#)

COUNT DATE: [Near-Term Alt A](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Whistler Ave](#)

OF APPROACH LANES: **2**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	200		750	100			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	610	30	Y					
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			610	30						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Langer Ave](#)

COUNT DATE: [Near-Term Alt A](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Langer Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	694	299	Y	Y	Y	Y		
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			694	299	1			0		
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Labath Ave](#)

COUNT DATE: [Near-Term Alt A](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Labath Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	1,284	582	Y	Y	Y	Y	Y	
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			1,284	582	1			1		
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	
									1 HR NEEDED SATISFIED	

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Dowdell Ave](#)

COUNT DATE: [Near-Term Alt A](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Dowdell Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	1,833	110	Y		Y	Y	Y	
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			1,833	110	0			1		
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Stony Point Rd and Project Driveway](#)

COUNT DATE: [Near-Term Alt A](#)

MAJOR STREET: [Stony Point Rd](#)

OF APPROACH LANES: **2**

MINOR STREET: [Project Driveway](#)

OF APPROACH LANES: **1**

Project Driveay

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	150		900	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	1,534	0	Y	Y				
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			1,534	0						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Labath Ave and Business Park Dr](#)

COUNT DATE: [Near-Term Alt A](#)

MAJOR STREET: [Labath Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Business Park Dr](#)

OF APPROACH LANES: **1**

Project Driveay

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	423	322				Y		
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			423	322	0	0	0	1	0	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Redwood Drive and Business Park Drive](#)

COUNT DATE: [Near-Term Alt A](#)

MAJOR STREET: [Redwood Drive](#)

OF APPROACH LANES: **2**

MINOR STREET: [Business Park Drive](#)

OF APPROACH LANES: **2**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	200		900	100			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	847	229	Y	Y	Y	Y		
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			847	229	1			0		
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Stony Point Rd and Milbrae Ave](#)

COUNT DATE: [Near-Term Alt A](#)

MAJOR STREET: [Stony Point Rd](#)

OF APPROACH LANES: **1**

MINOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	1,614	228	Y	Y	Y	Y	Y	
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			1,614	228	1			1		
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Primrose Ave and Milbrae Ave](#)

COUNT DATE: [Near-Term Alt A](#)

MAJOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Primrose Ave](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	32	0						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			32	0	0	0	0	0	0	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Whistler Ave and Milbrae Ave](#)

COUNT DATE: [Near-Term Alt A](#)

MAJOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Whistler Ave](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	32	0						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			32	0	0	0	0	0	0	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Langner Ave and Milbrae Ave](#)

COUNT DATE: [Near-Term Alt A](#)

MAJOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Langner Ave](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	22	11						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			22	11	0	0	0	0	0	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Labath Ave and Milbrae Ave](#)

COUNT DATE: [Near-Term Alt A](#)

MAJOR STREET: [Labath Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	22	0						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			22	0	0	0	0	0	0	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Dowdell Ave and Milbrae Ave](#)

COUNT DATE: [Near-Term Alt A](#)

MAJOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Dowdell Ave](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	398	32						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			398	32						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Stony Point Rd and Wilfred Ave](#)

COUNT DATE: [Cumulative All A](#)

MAJOR STREET: [Stony Point Rd](#)

OF APPROACH LANES: **2**

MINOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **2**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	200		900	100			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	1,699	321	Y	Y	Y	Y	Y	
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			1,699	321	1			1		
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	
									1 HR NEEDED SATISFIED	

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Primrose Ave](#)

COUNT DATE: [Cumulative All A](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Primrose Ave](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	749	30	Y					
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			749	30		0	0	0	0	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Whistler Ave](#)

COUNT DATE: [Cumulative All A](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Whistler Ave](#)

OF APPROACH LANES: [2](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	200		750	100			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	741	30	Y					
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			741	30						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Langner Ave](#)

COUNT DATE: [Cumulative Alt A](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Langner Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	832	293	Y	Y	Y	Y	Y	
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			832	293	1			1		
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	
									1 HR NEEDED SATISFIED	

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Labath Ave](#)

COUNT DATE: [Cumulative All A](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Labath Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	1,478	781	Y	Y	Y	Y	Y	
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			1,478	781	1			1	1	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Dowdell Ave](#)

COUNT DATE: [Cumulative All A](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Dowdell Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	2,429	517	Y	Y	Y	Y	Y	
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			1			1		1	1	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Stony Point Rd and Project Driveway](#)

COUNT DATE: [Cumulative Alt A](#)

MAJOR STREET: [Stony Point Rd](#)

OF APPROACH LANES: **2**

MINOR STREET: [Project Driveway](#)

OF APPROACH LANES: **1**

Project Driveay

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	150		900	75			
06:00 AM TO 07:00 AM										
07:00 AM TO 08:00 AM										
08:00 AM TO 09:00 AM										
09:00 AM TO 10:00 AM										
10:00 AM TO 11:00 AM										
11:00 AM TO 12:00 PM										
12:00 PM TO 01:00 PM										
01:00 PM TO 02:00 PM										
02:00 PM TO 03:00 PM										
03:00 PM TO 04:00 PM										
04:00 PM TO 05:00 PM										
05:00 PM TO 06:00 PM	1,534	0	Y			Y				
06:00 PM TO 07:00 PM										
07:00 PM TO 08:00 PM										
08:00 PM TO 09:00 PM										
09:00 PM TO 10:00 PM										
	1,534	0	0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Labath Ave and Business Park Dr](#)

COUNT DATE: [Cumulative All A](#)

MAJOR STREET: [Labath Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Business Park Dr](#)

OF APPROACH LANES: **1**

Project Driveay

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	423	322				Y		
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			423	322	0	0	0	1	0	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Redwood Drive and Business Park Drive](#)

COUNT DATE: [Cumulative All A](#)

MAJOR STREET: [Redwood Drive](#)

OF APPROACH LANES: **2**

MINOR STREET: [Business Park Drive](#)

OF APPROACH LANES: **2**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	200		900	100			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	847	229	Y	Y	Y	Y		
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			847	229	1			0		
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Stony Point Rd and Milbrae Ave](#)

COUNT DATE: [Cumulative All A](#)

MAJOR STREET: [Stony Point Rd](#)

OF APPROACH LANES: **1**

MINOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	1,675	274	Y	Y	Y	Y	Y	
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			1,675	274	1			1		
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Primrose Ave and Milbrae Ave](#)

COUNT DATE: [Cumulative Alt A](#)

MAJOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Primrose Ave](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	427	4						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			427	4	0	0	0	0	0	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Whistler Ave and Milbrae Ave](#)

COUNT DATE: [Cumulative Alt A](#)

MAJOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Whistler Ave](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	430	11						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			430	11						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Langner Ave and Milbrae Ave](#)

COUNT DATE: [Cumulative All A](#)

MAJOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Langner Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	510	26	Y					
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			510	26	0	0	0	0	0	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Labath Ave and Milbrae Ave](#)

COUNT DATE: [Cumulative All A](#)

MAJOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Labath Ave](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	427	136			Y			
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			427	136	0	0	0	0	0	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Dowdell Ave and Milbrae Ave](#)

COUNT DATE: [Cumulative Alt A](#)

MAJOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Dowdell Ave](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	404	32						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			404	32						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

**SIGNAL WARRANT ANALYSIS
ALTERNATIVE B**

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Stony Point Rd and Wilfred Ave](#)

COUNT DATE: [Near-Term Alt B](#)

MAJOR STREET: [Stony Point Rd](#)

OF APPROACH LANES: **2**

MINOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **2**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **Y**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			420	140		630	70			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	1,631	390	Y	Y	Y	Y	Y	
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			1,631	390	1			1		
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-2

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-4

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Primrose Ave](#)

COUNT DATE: [Near-Term Alt B](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Primrose Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	1,103	1020	Y	Y	Y	Y	Y	
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			1,103	1,020	1			1	1	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Whistler Ave](#)

COUNT DATE: [Near-Term Alt B](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Whistler Ave](#)

OF APPROACH LANES: **2**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **Y**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			350	140		525	70			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	1,785	30	Y	Y				
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			1,785	30	0			0	0	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-2

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-4

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Langner Ave](#)

COUNT DATE: [Near-Term Alt B](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Langner Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **Y**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			350	105		525	53			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	1,774	30	Y	Y				
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			1,774	30						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-2

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-4

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Labath Ave](#)

COUNT DATE: [Near-Term Alt B](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Labath Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	1,928	307	Y	Y	Y	Y	Y	
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			1,928	307	1			1		
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	
									1 HR NEEDED SATISFIED	

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Dowdell Ave](#)

COUNT DATE: [Near-Term Alt B](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Dowdell Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	2,318	347	Y	Y	Y	Y	Y	
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			2,318	347	1			1		
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Stony Point Rd and Project Driveway](#)

COUNT DATE: [Near-Term Alt B](#)

MAJOR STREET: [Stony Point Rd](#)

OF APPROACH LANES: **2**

MINOR STREET: [Project Driveway](#)

OF APPROACH LANES: **1**

Project Driveay

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	150		900	75			
06:00 AM TO 07:00 AM										
07:00 AM TO 08:00 AM										
08:00 AM TO 09:00 AM										
09:00 AM TO 10:00 AM										
10:00 AM TO 11:00 AM										
11:00 AM TO 12:00 PM										
12:00 PM TO 01:00 PM										
01:00 PM TO 02:00 PM										
02:00 PM TO 03:00 PM										
03:00 PM TO 04:00 PM										
04:00 PM TO 05:00 PM										
05:00 PM TO 06:00 PM	2,120	108	Y			Y	Y	Y	Y	
06:00 PM TO 07:00 PM										
07:00 PM TO 08:00 PM										
08:00 PM TO 09:00 PM										
09:00 PM TO 10:00 PM										
	2,120	108	0			1			1	1
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Redwood Drive and Business Park Drive](#)

COUNT DATE: [Near-Term Alt B](#)

MAJOR STREET: [Redwood Drive](#)

OF APPROACH LANES: **2**

MINOR STREET: [Business Park Drive](#)

OF APPROACH LANES: **2**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	200		900	100			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	1,027	261	Y	Y	Y	Y		
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			1,027	261	1			1		
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Stony Point Rd and Milbrae Ave](#)

COUNT DATE: [Near-Term Alt B](#)

MAJOR STREET: [Stony Point Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	1,627	225	Y	Y	Y	Y	Y	
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			1,627	225	1			1		
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Primrose Ave and Milbrae Ave](#)

COUNT DATE: [Near-Term Alt B](#)

MAJOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Primrose Ave](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	348	23						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			0	0	0	0	0	0	0	
			8 HOURS NEEDED NOT SATISFIED	8 HOURS NEEDED NOT SATISFIED	4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED				

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Whistler Ave and Milbrae Ave](#)

COUNT DATE: [Near-Term Alt B](#)

MAJOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Whistler Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	346	10						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			346	10						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Langner Ave and Milbrae Ave](#)

COUNT DATE: [Near-Term Alt B](#)

MAJOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Langner Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	432	16						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			432	16						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Labath Ave and Milbrae Ave](#)

COUNT DATE: [Near-Term Alt B](#)

MAJOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Labath Ave](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	425	33						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			425	33	0			0	0	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Dowdell Ave and Milbrae Ave](#)

COUNT DATE: [Near-Term Alt B](#)

MAJOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Dowdell Ave](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	392	37						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			392	37						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Stony Point Rd and Wilfred Ave](#)

COUNT DATE: [Cumulative All B](#)

MAJOR STREET: [Stony Point Rd](#)

OF APPROACH LANES: **2**

MINOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **2**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **Y**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3	
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET			
THRESHOLD VALUES			420	140		630	70				
06:00 AM	TO	07:00 AM									
07:00 AM	TO	08:00 AM									
08:00 AM	TO	09:00 AM									
09:00 AM	TO	10:00 AM									
10:00 AM	TO	11:00 AM									
11:00 AM	TO	12:00 PM									
12:00 PM	TO	01:00 PM									
01:00 PM	TO	02:00 PM									
02:00 PM	TO	03:00 PM									
03:00 PM	TO	04:00 PM									
04:00 PM	TO	05:00 PM									
05:00 PM	TO	06:00 PM	1,585	473	Y	Y	Y	Y	Y		
06:00 PM	TO	07:00 PM									
07:00 PM	TO	08:00 PM									
08:00 PM	TO	09:00 PM									
09:00 PM	TO	10:00 PM									
			1,585	473	1			1			
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED		1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-2

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-4

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Primrose Ave](#)

COUNT DATE: [Cumulative All B](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Primrose Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	1,219	1020	Y	Y	Y	Y	Y	
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			1	1	1	1	1	1	1	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Whistler Ave](#)

COUNT DATE: [Cumulative All B](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Whistler Ave](#)

OF APPROACH LANES: [2](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	200		750	100			
06:00 AM TO 07:00 AM										
07:00 AM TO 08:00 AM										
08:00 AM TO 09:00 AM										
09:00 AM TO 10:00 AM										
10:00 AM TO 11:00 AM										
11:00 AM TO 12:00 PM										
12:00 PM TO 01:00 PM										
01:00 PM TO 02:00 PM										
02:00 PM TO 03:00 PM										
03:00 PM TO 04:00 PM										
04:00 PM TO 05:00 PM										
05:00 PM TO 06:00 PM	1,892	30	Y			Y				
06:00 PM TO 07:00 PM										
07:00 PM TO 08:00 PM										
08:00 PM TO 09:00 PM										
09:00 PM TO 10:00 PM										
	1,892	30	0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Langner Ave](#)

COUNT DATE: [Cumulative All B](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Langner Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	1,892	30	Y	Y				
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			1,892	30	0			0	0	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Labath Ave](#)

COUNT DATE: [Cumulative All B](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Labath Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	2,216	454	Y	Y	Y	Y	Y	
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			2,216	454	1			1		
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Dowdell Ave](#)

COUNT DATE: [Cumulative All B](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Dowdell Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	3,231	807	Y	Y	Y	Y	Y	
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			3,231	807	1			1		
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Stony Point Rd and Project Driveway](#)

COUNT DATE: [Cum Alt B](#)

MAJOR STREET: [Stony Point Rd](#)

OF APPROACH LANES: **2**

MINOR STREET: [Project Driveway](#)

OF APPROACH LANES: **1**

Project Driveay

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	150		900	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	2,083	108	Y		Y	Y	Y	
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			2,083	108	0			1		
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Redwood Drive and Business Park Drive](#)

COUNT DATE: [Cumulative All B](#)

MAJOR STREET: [Redwood Drive](#) # OF APPROACH LANES: [2](#)

MINOR STREET: [Business Park Drive](#) # OF APPROACH LANES: [2](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	200		900	100			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	759	175	Y		Y			
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			759	175						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Stony Point Rd and Milbrae Ave](#)

COUNT DATE: [Cumulative All B](#)

MAJOR STREET: [Stony Point Rd](#)

OF APPROACH LANES: **1**

MINOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	1,692	289	Y	Y	Y	Y	Y	
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			1	1	1	1	1	1	1	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Primrose Ave and Milbrae Ave](#)

COUNT DATE: [Cumulative All B](#)

MAJOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Primrose Ave](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	441	25						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			441	25						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Whistler Ave and Milbrae Ave](#)

COUNT DATE: [Cumulative All B](#)

MAJOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Whistler Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	440	10						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			440	10						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Langner Ave and Milbrae Ave](#)

COUNT DATE: [Cumulative All B](#)

MAJOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Langner Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	519	52	Y					
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			519	52		0	0	0	0	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Labath Ave and Milbrae Ave](#)

COUNT DATE: [Cumulative All B](#)

MAJOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Labath Ave](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	444	140			Y			
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			444	140						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Dowdell Ave and Milbrae Ave](#)

COUNT DATE: [Cumulative All B](#)

MAJOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Dowdell Ave](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	417	55						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			417	55						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

**SIGNAL WARRANT ANALYSIS
ALTERNATIVE C**

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Stony Point Rd and Wilfred Ave](#)

COUNT DATE: [Near-Term Alt C](#)

MAJOR STREET: [Stony Point Rd](#)

OF APPROACH LANES: **2**

MINOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **2**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **Y**

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3	
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET			
THRESHOLD VALUES			420	140		630	70				
06:00 AM	TO	07:00 AM									
07:00 AM	TO	08:00 AM									
08:00 AM	TO	09:00 AM									
09:00 AM	TO	10:00 AM									
10:00 AM	TO	11:00 AM									
11:00 AM	TO	12:00 PM									
12:00 PM	TO	01:00 PM									
01:00 PM	TO	02:00 PM									
02:00 PM	TO	03:00 PM									
03:00 PM	TO	04:00 PM									
04:00 PM	TO	05:00 PM									
05:00 PM	TO	06:00 PM	1,800	517	Y	Y	Y	Y	Y		
06:00 PM	TO	07:00 PM									
07:00 PM	TO	08:00 PM									
08:00 PM	TO	09:00 PM									
09:00 PM	TO	10:00 PM									
			1,800	517	1			1			
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED		1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-2

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-4

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Primrose Ave](#)

COUNT DATE: [Near-Term Alt C](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Primrose Ave](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	1,049	41	Y	Y				
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			1,049	41	0			0	0	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Whistler Ave](#)

COUNT DATE: [Near-Term Alt C](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Whistler Ave](#)

OF APPROACH LANES: **2**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **Y**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			350	140		525	70			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	1,593	1095	Y	Y	Y	Y	Y	
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			1,593	1,095	1			1		
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	
									1 HR NEEDED SATISFIED	

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-2

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-4

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Langer Ave](#)

COUNT DATE: [Near-Term Alt C](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Langer Ave](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [Y](#)

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			350	105		525	53			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	1,948	30	Y		Y			
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			1,948	30	0			0	0	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-2

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-4

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Labath Ave](#)

COUNT DATE: [Near-Term Alt C](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Labath Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	2,102	307	Y	Y	Y	Y	Y	
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			2,102	307	1			1		
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	
									1 HR NEEDED SATISFIED	

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Dowdell Ave](#)

COUNT DATE: [Near-Term Alt C](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Dowdell Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	2,492	347	Y	Y	Y	Y	Y	
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			2,492	347	1			1	1	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Stony Point Rd and Project Driveway](#)

COUNT DATE: [Near-Term Alt C](#)

MAJOR STREET: [Stony Point Rd](#)

OF APPROACH LANES: **2**

MINOR STREET: [Project Driveway](#)

OF APPROACH LANES: **1**

Project Driveay

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	150		900	75			
06:00 AM TO 07:00 AM										
07:00 AM TO 08:00 AM										
08:00 AM TO 09:00 AM										
09:00 AM TO 10:00 AM										
10:00 AM TO 11:00 AM										
11:00 AM TO 12:00 PM										
12:00 PM TO 01:00 PM										
01:00 PM TO 02:00 PM										
02:00 PM TO 03:00 PM										
03:00 PM TO 04:00 PM										
04:00 PM TO 05:00 PM										
05:00 PM TO 06:00 PM	1,947	0	Y			Y				
06:00 PM TO 07:00 PM										
07:00 PM TO 08:00 PM										
08:00 PM TO 09:00 PM										
09:00 PM TO 10:00 PM										
	1,947	0	0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Redwood Drive and Business Park Drive](#)

COUNT DATE: [Near-Term Alt C](#)

MAJOR STREET: [Redwood Drive](#)

OF APPROACH LANES: **2**

MINOR STREET: [Business Park Drive](#)

OF APPROACH LANES: **2**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	200		900	100			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	1,027	261	Y	Y	Y	Y	Y	
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			1,027	261	1			1	1	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Stony Point Rd and Milbrae Ave](#)

COUNT DATE: [Near-Term Alt C](#)

MAJOR STREET: [Stony Point Rd](#)

OF APPROACH LANES: **1**

MINOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	1,616	235	Y	Y	Y	Y	Y	
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			1,616	235	1			1	1	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Primrose Ave and Milbrae Ave](#)

COUNT DATE: [Near-Term Alt C](#)

MAJOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Primrose Ave](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	370	12						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			370	12						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Whistler Ave and Milbrae Ave](#)

COUNT DATE: [Near-Term Alt C](#)

MAJOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Whistler Ave](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	346	32						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			346	32						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Langner Ave and Milbrae Ave](#)

COUNT DATE: [Near-Term Alt C](#)

MAJOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Langner Ave](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	432	16						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			432	16						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Labath Ave and Milbrae Ave](#)

COUNT DATE: [Near-Term Alt C](#)

MAJOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Labath Ave](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	425	33						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			425	33	0			0	0	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Dowdell Ave and Milbrae Ave](#)

COUNT DATE: [Near-Term Alt C](#)

MAJOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Dowdell Ave](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	392	37						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			392	37						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Stony Point Rd and Wilfred Ave](#)

COUNT DATE: [Cumulative All C](#)

MAJOR STREET: [Stony Point Rd](#)

OF APPROACH LANES: **2**

MINOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **2**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **Y**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3	
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET			
THRESHOLD VALUES			420	140		630	70				
06:00 AM	TO	07:00 AM									
07:00 AM	TO	08:00 AM									
08:00 AM	TO	09:00 AM									
09:00 AM	TO	10:00 AM									
10:00 AM	TO	11:00 AM									
11:00 AM	TO	12:00 PM									
12:00 PM	TO	01:00 PM									
01:00 PM	TO	02:00 PM									
02:00 PM	TO	03:00 PM									
03:00 PM	TO	04:00 PM									
04:00 PM	TO	05:00 PM									
05:00 PM	TO	06:00 PM	1,754	600	Y	Y	Y	Y	Y		
06:00 PM	TO	07:00 PM									
07:00 PM	TO	08:00 PM									
08:00 PM	TO	09:00 PM									
09:00 PM	TO	10:00 PM									
			1,754	600	1			1			
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED		1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-2

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-4

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Primrose Ave](#)

COUNT DATE: [Cumulative All C](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Primrose Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	1,165	41	Y	Y				
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			1,165	41	0			0	0	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Whistler Ave](#)

COUNT DATE: [Cumulative All C](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Whistler Ave](#)

OF APPROACH LANES: **2**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	200		750	100			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	1,700	1095	Y	Y	Y	Y	Y	
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			1,700	1,095	1			1	1	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Langer Ave](#)

COUNT DATE: [Cumulative All C](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Langer Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3	
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET			
THRESHOLD VALUES			500	150		750	75				
06:00 AM	TO	07:00 AM									
07:00 AM	TO	08:00 AM									
08:00 AM	TO	09:00 AM									
09:00 AM	TO	10:00 AM									
10:00 AM	TO	11:00 AM									
11:00 AM	TO	12:00 PM									
12:00 PM	TO	01:00 PM									
01:00 PM	TO	02:00 PM									
02:00 PM	TO	03:00 PM									
03:00 PM	TO	04:00 PM									
04:00 PM	TO	05:00 PM									
05:00 PM	TO	06:00 PM	2,066	30	Y	Y					
06:00 PM	TO	07:00 PM									
07:00 PM	TO	08:00 PM									
08:00 PM	TO	09:00 PM									
09:00 PM	TO	10:00 PM									
			2,066	30	0			0			
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED		1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Labath Ave](#)

COUNT DATE: [Cumulative All C](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Labath Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	2,390	454	Y	Y	Y	Y	Y	
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			2,390	454	1			1	1	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Dowdell Ave](#)

COUNT DATE: [Cumulative All C](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Dowdell Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	3,405	807	Y	Y	Y	Y	Y	
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			3,405	807	1			1		
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Stony Point Rd and Project Driveway](#)

COUNT DATE: [Cum Alt C](#)

MAJOR STREET: [Stony Point Rd](#)

OF APPROACH LANES: **2**

MINOR STREET: [Project Driveway](#)

OF APPROACH LANES: **1**

Project Driveay

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	150		900	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	1,910	0	Y		Y			
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			1,910	0	0	0	0	0	0	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Redwood Drive and Business Park Drive](#)

COUNT DATE: [Cumulative All C](#)

MAJOR STREET: [Redwood Drive](#)

OF APPROACH LANES: **2**

MINOR STREET: [Business Park Drive](#)

OF APPROACH LANES: **2**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	200		900	100			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	759	175	Y		Y			
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			759	175						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Stony Point Rd and Milbrae Ave](#)

COUNT DATE: [Cumulative All C](#)

MAJOR STREET: [Stony Point Rd](#)

OF APPROACH LANES: **2**

MINOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: **2**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	200		900	100			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	1,681	299	Y	Y	Y	Y	Y	
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			1,681	299	1			1	1	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Primrose Ave and Milbrae Ave](#)

COUNT DATE: [Cumulative All C](#)

MAJOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: [2](#)

MINOR STREET: [Primrose Ave](#)

OF APPROACH LANES: [2](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	200		900	100			
06:00 AM TO 07:00 AM										
07:00 AM TO 08:00 AM										
08:00 AM TO 09:00 AM										
09:00 AM TO 10:00 AM										
10:00 AM TO 11:00 AM										
11:00 AM TO 12:00 PM										
12:00 PM TO 01:00 PM										
01:00 PM TO 02:00 PM										
02:00 PM TO 03:00 PM										
03:00 PM TO 04:00 PM										
04:00 PM TO 05:00 PM										
05:00 PM TO 06:00 PM	463	14								
06:00 PM TO 07:00 PM										
07:00 PM TO 08:00 PM										
08:00 PM TO 09:00 PM										
09:00 PM TO 10:00 PM										
	463	14	0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Whistler Ave and Milbrae Ave](#)

COUNT DATE: [Cumulative All C](#)

MAJOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: [2](#)

MINOR STREET: [Whistler Ave](#)

OF APPROACH LANES: [2](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	200		900	100			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	440	32						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			440	32	0	0	0	0	0	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Langner Ave and Milbrae Ave](#)

COUNT DATE: [Cumulative All C](#)

MAJOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: [2](#)

MINOR STREET: [Langner Ave](#)

OF APPROACH LANES: [2](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	200		900	100			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	519	52						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			519	52						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Labath Ave and Milbrae Ave](#)

COUNT DATE: [Cumulative All C](#)

MAJOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: [2](#)

MINOR STREET: [Labath Ave](#)

OF APPROACH LANES: [2](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	200		900	100			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	444	140			Y			
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			444	140	0	0	0	0	0	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Dowdell Ave and Milbrae Ave](#)

COUNT DATE: [Cumulative All C](#)

MAJOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: [2](#)

MINOR STREET: [Dowdell Ave](#)

OF APPROACH LANES: [2](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	200		900	100			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	417	55						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			417	55						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

**SIGNAL WARRANT ANALYSIS
ALTERNATIVE D**

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Stony Point Rd and Wilfred Ave](#)

COUNT DATE: [Near-Term Alt D](#)

MAJOR STREET: [Stony Point Rd](#)

OF APPROACH LANES: **2**

MINOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **2**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **Y**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			420	140		630	70			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	1,567	336	Y	Y	Y	Y	Y	
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			1,567	336	1			1		
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	
									1 HR NEEDED SATISFIED	

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-2

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-4

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Primrose Ave](#)

COUNT DATE: [Near-Term Alt D](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Primrose Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	878	713	Y	Y	Y	Y	Y	
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			878	713	1			1		
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Whistler Ave](#)

COUNT DATE: [Near-Term Alt D](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Whistler Ave](#)

OF APPROACH LANES: **2**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **Y**

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			350	140		525	70			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	1,351	30	Y	Y				
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			1,351	30						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-2

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-4

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Langner Ave](#)

COUNT DATE: [Near-Term Alt D](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Langner Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **Y**

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			350	105		525	53			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	1,340	30	Y	Y				
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			1,340	30						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-2

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-4

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Labath Ave](#)

COUNT DATE: [Near-Term Alt D](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Labath Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	1,494	307	Y	Y	Y	Y	Y	
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			1,494	307	1			1		
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	
									1 HR NEEDED SATISFIED	

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Dowdell Ave](#)

COUNT DATE: [Near-Term Alt D](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Dowdell Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	1,884	347	Y	Y	Y	Y	Y	
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			1,884	347	1			1		
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Stony Point Rd and Project Driveway](#)

COUNT DATE: [Near-Term Alt D](#)

MAJOR STREET: [Stony Point Rd](#)

OF APPROACH LANES: **2**

MINOR STREET: [Project Driveway](#)

OF APPROACH LANES: **1**

Project Driveay

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	150		900	75			
06:00 AM TO 07:00 AM										
07:00 AM TO 08:00 AM										
08:00 AM TO 09:00 AM										
09:00 AM TO 10:00 AM										
10:00 AM TO 11:00 AM										
11:00 AM TO 12:00 PM										
12:00 PM TO 01:00 PM										
01:00 PM TO 02:00 PM										
02:00 PM TO 03:00 PM										
03:00 PM TO 04:00 PM										
04:00 PM TO 05:00 PM										
05:00 PM TO 06:00 PM	1,918	74	Y			Y				
06:00 PM TO 07:00 PM										
07:00 PM TO 08:00 PM										
08:00 PM TO 09:00 PM										
09:00 PM TO 10:00 PM										
	1,918	74	0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Redwood Drive and Business Park Drive](#)

COUNT DATE: [Near-Term Alt D](#)

MAJOR STREET: [Redwood Drive](#)

OF APPROACH LANES: **2**

MINOR STREET: [Business Park Drive](#)

OF APPROACH LANES: **2**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	200		900	100			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	1,027	261	Y	Y	Y	Y		
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			1,027	261	1			1		
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Stony Point Rd and Milbrae Ave](#)

COUNT DATE: [Near-Term Alt D](#)

MAJOR STREET: [Stony Point Rd](#)

OF APPROACH LANES: **1**

MINOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	1,563	218	Y	Y	Y	Y	Y	
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			1,563	218	1			1		
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Primrose Ave and Milbrae Ave](#)

COUNT DATE: [Near-Term Alt D](#)

MAJOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Primrose Ave](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	348	16						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			348	16	0	0	0	0	0	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Langner Ave and Milbrae Ave](#)

COUNT DATE: [Near-Term Alt D](#)

MAJOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Langner Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	432	16						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			432	16						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Whistler Ave and Milbrae Ave](#)

COUNT DATE: [Near-Term Alt D](#)

MAJOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Whistler Ave](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	346	10						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			346	10						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Labath Ave and Milbrae Ave](#)

COUNT DATE: [Near-Term Alt D](#)

MAJOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Labath Ave](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	425	33						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			425	33						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Dowdell Ave and Milbrae Ave](#)

COUNT DATE: [Near-Term Alt D](#)

MAJOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Dowdell Ave](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	392	37						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			392	37						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Stony Point Rd and Wilfred Ave](#)

COUNT DATE: [Cumulative All D](#)

MAJOR STREET: [Stony Point Rd](#)

OF APPROACH LANES: **2**

MINOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **2**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **Y**

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3	
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET			
THRESHOLD VALUES			420	140		630	70				
06:00 AM	TO	07:00 AM									
07:00 AM	TO	08:00 AM									
08:00 AM	TO	09:00 AM									
09:00 AM	TO	10:00 AM									
10:00 AM	TO	11:00 AM									
11:00 AM	TO	12:00 PM									
12:00 PM	TO	01:00 PM									
01:00 PM	TO	02:00 PM									
02:00 PM	TO	03:00 PM									
03:00 PM	TO	04:00 PM									
04:00 PM	TO	05:00 PM									
05:00 PM	TO	06:00 PM	1,521	419	Y	Y	Y	Y	Y		
06:00 PM	TO	07:00 PM									
07:00 PM	TO	08:00 PM									
08:00 PM	TO	09:00 PM									
09:00 PM	TO	10:00 PM									
			1,521	419	1			1			
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED		1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-2

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-4

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Primrose Ave](#)

COUNT DATE: [Cumulative All D](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Primrose Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	994	713	Y	Y	Y	Y	Y	
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			994	713	1			1		
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	
									1 HR NEEDED SATISFIED	

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Whistler Ave](#)

COUNT DATE: [Cumulative All D](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Whistler Ave](#)

OF APPROACH LANES: [2](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	200		750	100			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	1,458	30	Y		Y			
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			1,458	30						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Langner Ave](#)

COUNT DATE: [Cumulative All D](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Langner Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	1,458	30	Y	Y				
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			1,458	30	0	0	0	0	0	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Labath Ave](#)

COUNT DATE: [Cumulative All D](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Labath Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3	
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET			
THRESHOLD VALUES			500	150		750	75				
06:00 AM	TO	07:00 AM									
07:00 AM	TO	08:00 AM									
08:00 AM	TO	09:00 AM									
09:00 AM	TO	10:00 AM									
10:00 AM	TO	11:00 AM									
11:00 AM	TO	12:00 PM									
12:00 PM	TO	01:00 PM									
01:00 PM	TO	02:00 PM									
02:00 PM	TO	03:00 PM									
03:00 PM	TO	04:00 PM									
04:00 PM	TO	05:00 PM									
05:00 PM	TO	06:00 PM	1,782	454	Y	Y	Y	Y	Y		
06:00 PM	TO	07:00 PM									
07:00 PM	TO	08:00 PM									
08:00 PM	TO	09:00 PM									
09:00 PM	TO	10:00 PM									
			1,782	454	1			1			
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED		1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Dowdell Ave](#)

COUNT DATE: [Cumulative All D](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Dowdell Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	2,797	807	Y	Y	Y	Y	Y	
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			2,797	807	1			1		
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Stony Point Rd and Project Driveway](#)

COUNT DATE: [Cum Alt D](#)

MAJOR STREET: [Stony Point Rd](#)

OF APPROACH LANES: **2**

MINOR STREET: [Project Driveway](#)

OF APPROACH LANES: **1**

Project Driveay

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	150		900	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	1,881	74	Y	Y				
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			1,881	74	0			0	0	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Redwood Drive and Business Park Drive](#)

COUNT DATE: [Cumulative All D](#)

MAJOR STREET: [Redwood Drive](#)

OF APPROACH LANES: **2**

MINOR STREET: [Business Park Drive](#)

OF APPROACH LANES: **2**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	200		900	100			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	759	175	Y		Y			
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			759	175						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Stony Point Rd and Milbrae Ave](#)

COUNT DATE: [Cumulative All D](#)

MAJOR STREET: [Stony Point Rd](#)

OF APPROACH LANES: **1**

MINOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	1,628	282	Y	Y	Y	Y	Y	
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			1,628	282	1			1	1	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Primrose Ave and Milbrae Ave](#)

COUNT DATE: [Cumulative All D](#)

MAJOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Primrose Ave](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	441	18						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			441	18						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Whistler Ave and Milbrae Ave](#)

COUNT DATE: [Cumulative All D](#)

MAJOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Whistler Ave](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	440	10						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			440	10						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Langner Ave and Milbrae Ave](#)

COUNT DATE: [Cumulative All D](#)

MAJOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Langner Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	519	52	Y					
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			519	52						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Lebath Ave and Milbrae Ave](#)

COUNT DATE: [Cumulative All D](#)

MAJOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Lebath Ave](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	444	140			Y			
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			444	140	0	0	0	0	0	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Dowdell Ave and Milbrae Ave](#)

COUNT DATE: [Cumulative All D](#)

MAJOR STREET: [Milbrae Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Dowdell Ave](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	417	55						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			417	55						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

**SIGNAL WARRANT ANALYSIS
ALTERNATIVE E**

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Stony Point Rd and Wilfred Ave](#)

COUNT DATE: [Near-Term Alt E](#)

MAJOR STREET: [Stony Point Rd](#)

OF APPROACH LANES: **2**

MINOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **2**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **Y**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			420	140		630	70			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	1,477	332	Y	Y	Y	Y	Y	
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			1,477	332	1			1		
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-2

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-4

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Primrose Ave](#)

COUNT DATE: [Near-Term Alt E](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Primrose Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3	
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET			
THRESHOLD VALUES			500	150		750	75				
06:00 AM	TO	07:00 AM									
07:00 AM	TO	08:00 AM									
08:00 AM	TO	09:00 AM									
09:00 AM	TO	10:00 AM									
10:00 AM	TO	11:00 AM									
11:00 AM	TO	12:00 PM									
12:00 PM	TO	01:00 PM									
01:00 PM	TO	02:00 PM									
02:00 PM	TO	03:00 PM									
03:00 PM	TO	04:00 PM									
04:00 PM	TO	05:00 PM									
05:00 PM	TO	06:00 PM	466	457	Y		Y	Y	Y		
06:00 PM	TO	07:00 PM									
07:00 PM	TO	08:00 PM									
08:00 PM	TO	09:00 PM									
09:00 PM	TO	10:00 PM									
			466	457	0			0			
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED		1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Whistler Ave](#)

COUNT DATE: [Near-Term Alt E](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Whistler Ave](#)

OF APPROACH LANES: **2**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **Y**

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			350	140		525	70			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	761	30	Y	Y				
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			761	30						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-2

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-4

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Langer Ave](#)

COUNT DATE: [Near-Term Alt E](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Langer Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **Y**

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			350	105		525	53			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	750	30	Y	Y				
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			750	30						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-2

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-4

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Labath Ave](#)

COUNT DATE: [Near-Term Alt E](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Labath Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3	
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET			
THRESHOLD VALUES			500	150		750	75				
06:00 AM	TO	07:00 AM									
07:00 AM	TO	08:00 AM									
08:00 AM	TO	09:00 AM									
09:00 AM	TO	10:00 AM									
10:00 AM	TO	11:00 AM									
11:00 AM	TO	12:00 PM									
12:00 PM	TO	01:00 PM									
01:00 PM	TO	02:00 PM									
02:00 PM	TO	03:00 PM									
03:00 PM	TO	04:00 PM									
04:00 PM	TO	05:00 PM									
05:00 PM	TO	06:00 PM	904	307	Y	Y	Y	Y	Y		
06:00 PM	TO	07:00 PM									
07:00 PM	TO	08:00 PM									
08:00 PM	TO	09:00 PM									
09:00 PM	TO	10:00 PM									
			904	307	1			1			
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED		1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Dowdell Ave](#)

COUNT DATE: [Near-Term Alt E](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Dowdell Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	1,294	347	Y	Y	Y	Y	Y	
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			1,294	347	1			1		
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	
									1 HR NEEDED SATISFIED	

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Stony Point Rd and Project Driveway](#)

COUNT DATE: [Near-Term Alt E](#)

MAJOR STREET: [Stony Point Rd](#)

OF APPROACH LANES: **2**

MINOR STREET: [Project Driveway](#)

OF APPROACH LANES: **1**

Project Driveway

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	150		900	75			
06:00 AM TO 07:00 AM										
07:00 AM TO 08:00 AM										
08:00 AM TO 09:00 AM										
09:00 AM TO 10:00 AM										
10:00 AM TO 11:00 AM										
11:00 AM TO 12:00 PM										
12:00 PM TO 01:00 PM										
01:00 PM TO 02:00 PM										
02:00 PM TO 03:00 PM										
03:00 PM TO 04:00 PM										
04:00 PM TO 05:00 PM										
05:00 PM TO 06:00 PM	1,645	37	Y			Y				
06:00 PM TO 07:00 PM										
07:00 PM TO 08:00 PM										
08:00 PM TO 09:00 PM										
09:00 PM TO 10:00 PM										
	1,645	37	0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Redwood Drive and Business Park Drive](#)

COUNT DATE: [Near-Term Alt E](#)

MAJOR STREET: [Redwood Drive](#)

OF APPROACH LANES: **2**

MINOR STREET: [Business Park Drive](#)

OF APPROACH LANES: **2**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	200		900	100			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	1,027	261	Y	Y	Y	Y		
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			1,027	261	1			1		
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Stony Point Road and Millbrae Avenue](#)

COUNT DATE: [Near-Term Alt E](#)

MAJOR STREET: [Stony Point Road](#)

OF APPROACH LANES: **2**

MINOR STREET: [Millbrae Avenue](#)

OF APPROACH LANES: **2**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **Y**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			420	140		630	70			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	1,473	212	Y	Y	Y	Y	Y	
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			1,473	212	1			1	1	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-2

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-4

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Primrose Avenue and Millbrae Avenue](#)

COUNT DATE: [Near-Term Alt E](#)

MAJOR STREET: [Millbrae Avenue](#)

OF APPROACH LANES: **1**

MINOR STREET: [Primrose Avenue](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	348	10						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			348	10						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Whistler Avenue and Millbrae Avenue](#)

COUNT DATE: [Near-Term Alt E](#)

MAJOR STREET: [Millbrae Avenue](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Whistler Avenue](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	346	10						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			346	10						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Langner Avenue and Millbrae Avenue](#)

COUNT DATE: [Near-Term Alt E](#)

MAJOR STREET: [Millbrae Avenue](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Langner Avenue](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	432	16						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			432	16						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Labath Avenue and Millbrae Avenue](#)

COUNT DATE: [Near-Term Alt E](#)

MAJOR STREET: [Millbrae Avenue](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Labath Avenue](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	425	33						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			425	33	0			0	0	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Dowdell Avenue and Millbrae Avenue](#)

COUNT DATE: [Near-Term Alt E](#)

MAJOR STREET: [Millbrae Avenue](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Dowdell Avenue](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	392	37						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			392	37						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Stony Point Rd and Wilfred Ave](#)

COUNT DATE: [Cumulative All E](#)

MAJOR STREET: [Stony Point Rd](#)

OF APPROACH LANES: **2**

MINOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **2**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **Y**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			420	140		630	70			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	1,431	415	Y	Y	Y	Y	Y	
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			1,431	415	1			1	1	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-2

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-4

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Primrose Ave](#)

COUNT DATE: [Cumulative All E](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Primrose Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	582	457	Y	Y	Y	Y	Y	
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			582	457	1			0		
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	
						1 HR NEEDED SATISFIED				

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Whistler Ave](#)

COUNT DATE: [Cumulative All E](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Whistler Ave](#)

OF APPROACH LANES: [2](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	200		750	100			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	868	30	Y	Y				
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			868	30	0	0	0	0	0	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Langer Ave](#)

COUNT DATE: [Cumulative All E](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Langer Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	868	30	Y	Y				
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			868	30	0	0	0	0	0	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Labath Ave](#)

COUNT DATE: [Cumulative All E](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Labath Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	1,192	454	Y	Y	Y	Y	Y	
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			1,192	454	1			1		
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	
									1 HR NEEDED SATISFIED	

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Wilfred Ave and Dowdell Ave](#)

COUNT DATE: [Cumulative All E](#)

MAJOR STREET: [Wilfred Ave](#)

OF APPROACH LANES: **1**

MINOR STREET: [Dowdell Ave](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	2,207	807	Y	Y	Y	Y	Y	
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			2,207	807	1			1		
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Stony Point Rd and Project Driveway](#)

COUNT DATE: [Cum Alt E](#)

MAJOR STREET: [Stony Point Rd](#)

OF APPROACH LANES: [2](#)

MINOR STREET: [Project Driveway](#)

OF APPROACH LANES: [1](#)

Project Driveway

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	150		900	75			
06:00 AM TO 07:00 AM										
07:00 AM TO 08:00 AM										
08:00 AM TO 09:00 AM										
09:00 AM TO 10:00 AM										
10:00 AM TO 11:00 AM										
11:00 AM TO 12:00 PM										
12:00 PM TO 01:00 PM										
01:00 PM TO 02:00 PM										
02:00 PM TO 03:00 PM										
03:00 PM TO 04:00 PM										
04:00 PM TO 05:00 PM										
05:00 PM TO 06:00 PM	1,608	37	Y			Y				
06:00 PM TO 07:00 PM										
07:00 PM TO 08:00 PM										
08:00 PM TO 09:00 PM										
09:00 PM TO 10:00 PM										
	1,608	37	0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: Redwood Drive and Business Park Drive

COUNT DATE: Cumulative All E

MAJOR STREET: Redwood Drive

OF APPROACH LANES: 2

MINOR STREET: Business Park Drive

OF APPROACH LANES: 2

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): N

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	200		900	100			
06:00 AM TO 07:00 AM										
07:00 AM TO 08:00 AM										
08:00 AM TO 09:00 AM										
09:00 AM TO 10:00 AM										
10:00 AM TO 11:00 AM										
11:00 AM TO 12:00 PM										
12:00 PM TO 01:00 PM										
01:00 PM TO 02:00 PM										
02:00 PM TO 03:00 PM										
03:00 PM TO 04:00 PM										
04:00 PM TO 05:00 PM										
05:00 PM TO 06:00 PM	759	175	Y				Y			
06:00 PM TO 07:00 PM										
07:00 PM TO 08:00 PM										
08:00 PM TO 09:00 PM										
09:00 PM TO 10:00 PM										
	759	175	0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: Based on 2000 MUTCD

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Stony Point Road and Millbrae Avenue](#)

COUNT DATE: [Cumulative All E](#)

MAJOR STREET: [Stony Point Road](#)

OF APPROACH LANES: **2**

MINOR STREET: [Millbrae Avenue](#)

OF APPROACH LANES: **2**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **Y**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			420	140		630	70			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	1,538	276	Y	Y	Y	Y	Y	
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			1,538	276	1			1	1	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-2

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-4

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Primrose Avenue and Millbrae Avenue](#)

COUNT DATE: [Cumulative All E](#)

MAJOR STREET: [Millbrae Avenue](#)

OF APPROACH LANES: **1**

MINOR STREET: [Primrose Avenue](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	441	12						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			441	12						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Whistler Avenue and Millbrae Avenue](#)

COUNT DATE: [Cumulative All E](#)

MAJOR STREET: [Millbrae Avenue](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Whistler Avenue](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	440	10						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			440	10						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Langner Avenue and Millbrae Avenue](#)

COUNT DATE: [Cumulative All E](#)

MAJOR STREET: [Millbrae Avenue](#)

OF APPROACH LANES: **1**

MINOR STREET: [Langner Avenue](#)

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	519	32	Y					
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			519	32		0	0	0	0	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Labath Avenue and Millbrae Avenue](#)

COUNT DATE: [Cumulative All E](#)

MAJOR STREET: [Millbrae Avenue](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Labath Avenue](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	444	140			Y			
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			444	140	0	0	0	0	0	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: [Dowdell Avenue and Millbrae Avenue](#)

COUNT DATE: [Cumulative All E](#)

MAJOR STREET: [Millbrae Avenue](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Dowdell Avenue](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75			
06:00 AM	TO	07:00 AM								
07:00 AM	TO	08:00 AM								
08:00 AM	TO	09:00 AM								
09:00 AM	TO	10:00 AM								
10:00 AM	TO	11:00 AM								
11:00 AM	TO	12:00 PM								
12:00 PM	TO	01:00 PM								
01:00 PM	TO	02:00 PM								
02:00 PM	TO	03:00 PM								
03:00 PM	TO	04:00 PM								
04:00 PM	TO	05:00 PM								
05:00 PM	TO	06:00 PM	417	55						
06:00 PM	TO	07:00 PM								
07:00 PM	TO	08:00 PM								
08:00 PM	TO	09:00 PM								
09:00 PM	TO	10:00 PM								
			417	55						
			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: [Based on 2000 MUTCD](#)

**NEAR-TERM 2008 + ALTERNATIVE A
MITIGATED TRAFFIC CONDITIONS
(TRAFFIX)**

 Impact Analysis Report
 Level Of Service

Intersection	Base LOS	Base		Future LOS	Future		Change in	
		Del/ Veh	V/ C		Del/ Veh	V/ C		
# 1 Wilfred Ave/Stony Point Rd	B	13.6	0.635	C	25.0	0.803	+11.381	D/V
# 2 Wilfred Ave/Primrose Ave	B	10.7	0.000	B	13.7	0.000	+ 3.008	D/V
# 3 Wilfred Ave/Whistler Ave	B	10.7	0.000	B	13.7	0.000	+ 3.005	D/V
# 4 Langner Ave/Wilfred Ave	B	10.8	0.000	C	23.5	0.000	+12.712	D/V
# 5 Wilfred Ave/Labath Ave	B	17.4	0.194	D	52.8	0.984	+35.441	D/V
# 6 Dowell Ave/Wilfred Ave	B	19.6	0.246	B	12.4	0.694	-7.143	D/V
# 7 Wilfred Ave/Redwood Dr	D	37.6	0.781	D	43.1	0.905	+ 5.537	D/V
# 8 Redwood Dr/Commerce Blvd	C	26.9	0.297	C	26.8	0.301	-0.088	D/V
# 9 Wilfred Ave/101 SB Ramp	C	29.7	0.539	D	37.8	0.883	+ 8.044	D/V
# 10 Golf Course Dr/Commerce Blvd	C	34.7	0.845	D	44.1	0.969	+ 9.425	D/V
# 11 Roberts Lake Dr/Golf Course Dr	B	18.4	0.475	B	18.3	0.479	-0.082	D/V
# 12 101 NB Ramps/Commerce Blvd	C	26.5	0.655	C	27.4	0.703	+ 0.907	D/V
# 13 New Driveway/Stony Point Rd	A	0.0	0.000	A	0.0	0.000	+ 0.000	D/V
# 14 New Driveway/Labath Ave	A	0.0	0.000	B	10.5	0.000	+10.531	D/V
# 15 Redwood Dr/Business Park Dr	D	26.5	0.000	D	26.5	0.000	+ 0.000	D/V
# 16 Rohnert Park Expwy/Stony Point	C	24.0	0.665	C	24.0	0.700	+ 0.040	D/V
# 17 Rohnert Park Expwy/Labath Ave	C	29.9	0.584	C	31.8	0.744	+ 1.982	D/V
# 18 Rohnert Park Expwy/Redwood Dr	D	35.6	0.711	D	35.5	0.749	-0.099	D/V
# 19 Rohnert Park Expwy/101 SB Ramp	C	24.5	0.693	C	25.4	0.772	+ 0.859	D/V
# 20 Rohnert Park Expwy/101 NB Ramp	B	15.8	0.437	C	22.8	0.624	+ 7.071	D/V
# 21 Rohnert Park Expwy/Commerce Bl	C	33.9	0.815	C	33.9	0.815	-0.003	D/V
# 22 Gravenstein Hwy (SR 116)/ Ston	D	37.1	0.766	D	38.1	0.766	+ 0.949	D/V
# 23 Gravenstein Hwy (SR 116)/ Redw	C	28.6	0.734	C	28.5	0.755	-0.050	D/V
# 24 Gravenstein Hwy and SB 101 Ram	B	17.6	0.562	B	17.6	0.562	+ 0.005	D/V
# 25 Gravenstein Hwy and NB 101 Ram	B	17.3	0.707	B	19.2	0.746	+ 1.845	D/V

Intersection		Base			Future		Change in
		Del/ LOS	V/ Veh C		Del/ LOS	V/ Veh C	
# 26 Millbrae Ave/Stony Point Rd	C	20.9	0.478	C	21.2	0.528	+ 0.354 D/V
# 27 Millbrae Ave/Primrose Ave	B	11.3	0.000	B	11.6	0.000	+ 0.281 D/V
# 28 Millbrae Ave/Whistler Ave	B	11.4	0.000	B	11.7	0.000	+ 0.295 D/V
# 29 Millbrae Ave/Langner Ave	A	9.8	0.000	B	10.9	0.000	+ 1.088 D/V
# 30 Millbrae Ave/Labath Ave	B	10.7	0.000	B	11.4	0.000	+ 0.709 D/V
# 31 Millbrae Ave/Dowdell Ave	B	11.3	0.000	B	11.3	0.000	+ 0.000 D/V

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

Intersection #1 Wilfred Ave/Stony Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.803
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 25.0
Optimal Cycle: 69 Level Of Service: C

Table with columns: Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Protected, Permitted), Rights (Include), Min. Green, Lanes.

Volume Module:

Table with columns: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module:

Table with columns: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with columns: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Wilfred Ave/Primrose Ave

Average Delay (sec/veh): 1.4 Worst Case Level Of Service: B[13.7]

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

Volume Module:

Base Vol:	10	10	10	10	10	10	10	109	10	8	157	8
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	10	10	10	10	10	10	10	109	10	8	157	8
Added Vol:	0	0	0	0	0	0	0	180	0	0	127	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	10	10	10	10	10	10	289	10	8	284	8
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	11	11	11	11	11	11	304	11	8	299	8
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	11	11	11	11	11	11	11	304	11	8	299	8
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	661	655	309	661	656	303	307	xxxx	xxxxx	315	xxxx	xxxxx
Potent Cap.:	379	388	735	379	388	741	1265	xxxx	xxxxx	1257	xxxx	xxxxx
Move Cap.:	361	383	735	361	382	741	1265	xxxx	xxxxx	1257	xxxx	xxxxx
Volume/Cap:	0.03	0.03	0.01	0.03	0.03	0.01	0.01	xxxx	xxxx	0.01	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.9	xxxx	xxxxx	7.9	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	445	xxxxx	xxxx	445	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	0.2	xxxxx	xxxxx	0.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	13.7	xxxxx	xxxxx	13.7	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	B	*	*	B	*	*	*	*	*	*	*			
ApproachDel:	13.7			13.7			xxxxxxx			xxxxxxx					
ApproachLOS:	B			B			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 Wilfred Ave/Whistler Ave

Average Delay (sec/veh): 1.4 Worst Case Level Of Service: B[13.7]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 1! 0 0 0 0 1! 0 0

Volume Module:

Base Vol: 10 10 10 10 10 10 10 108 10 7 153 15
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: 10 10 10 10 10 10 10 108 10 7 153 15
Added Vol: 0 0 0 0 0 0 0 0 180 0 0 127 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 10 10 10 10 10 10 10 288 10 7 280 15
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 11 11 11 11 11 11 11 303 11 7 295 16
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 11 11 11 11 11 11 11 303 11 7 295 16

Critical Gap Module:

Critical Gp: 7.1 6.5 6.2 7.1 6.5 6.2 4.1 xxxx xxxxx 4.1 xxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 3.5 4.0 3.3 2.2 xxxx xxxxx 2.2 xxxx xxxxx

Capacity Module:

Cnflct Vol: 657 655 308 657 652 303 311 xxxx xxxxx 314 xxxx xxxxx
Potent Cap.: 381 388 736 381 390 742 1261 xxxx xxxxx 1258 xxxx xxxxx
Move Cap.: 363 383 736 363 384 742 1261 xxxx xxxxx 1258 xxxx xxxxx
Volume/Cap: 0.03 0.03 0.01 0.03 0.03 0.01 0.01 xxxx xxxx 0.01 xxxx xxxx

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx 0.0 xxxx xxxxx 0.0 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxxx xxxx xxxxx 7.9 xxxx xxxxx 7.9 xxxx xxxxx
LOS by Move: * * * * * A * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx 446 xxxxx xxxx 448 xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
SharedQueue:xxxxx 0.2 xxxxx xxxxx 0.2 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 13.7 xxxxx xxxxx 13.7 xxxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
Shared LOS: * B * * B * * * * *
ApproachDel: 13.7 13.7 xxxxxxx xxxxxxx
ApproachLOS: B B * *

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Langner Ave/Wilfred Ave

Average Delay (sec/veh): 9.2 Worst Case Level Of Service: C[23.5]

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

Volume Module:

Base Vol:	10	10	10	10	10	10	10	108	10	8	166	8
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	10	10	10	10	10	10	10	108	10	8	166	8
Added Vol:	108	11	150	0	0	0	0	30	149	186	19	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	118	21	160	10	10	10	10	138	159	194	185	8
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	124	22	168	11	11	11	11	145	167	204	195	8
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	124	22	168	11	11	11	11	145	167	204	195	8
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	868	862	229	953	941	199	203	xxxx	xxxxx	313	xxxx	xxxxx
Potent Cap.:	275	295	815	241	265	847	1381	xxxx	xxxxx	1259	xxxx	xxxxx
Move Cap.:	224	239	815	152	215	847	1381	xxxx	xxxxx	1259	xxxx	xxxxx
Volume/Cap:	0.56	0.09	0.21	0.07	0.05	0.01	0.01	xxxx	xxxx	0.16	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	3.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.6	xxxx	xxxxx			
Control Del:	39.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx	8.4	xxxx	xxxxx			
LOS by Move:	E	*	*	*	*	*	A	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	637	xxxx	242	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	1.3	xxxxx	0.4	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	13.0	xxxxx	22.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	*	B	*	C	*	*	*	*	*	*	*			
ApproachDel:	23.5			22.1			xxxxxx			xxxxxx					
ApproachLOS:	C			C			*			*					

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

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

Intersection #5 Wilfred Ave/Labath Ave

Cycle (sec): 90 Critical Vol./Cap.(X): 0.984
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 52.8
Optimal Cycle: 162 Level Of Service: D

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Permitted, Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic volumes and adjustment factors like Base Vol, Growth Adj, Initial Bse, Added Vol, etc.

Saturation Flow Module: Table with 13 columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, etc.

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

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

Intersection #6 Dowell Ave/Wilfred Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.694
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 12.4
Optimal Cycle: 51 Level Of Service: B

Table with columns: Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Permitted, Protected), Rights (Include), Min. Green, Lanes.

Volume Module:

Table with columns: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module:

Table with columns: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with columns: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

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

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

Intersection #7 Wilfred Ave/Redwood Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.905
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 43.1
Optimal Cycle: 112 Level Of Service: D

Table with columns: Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Protected), Rights (Include), Min. Green, Lanes.

Volume Module:

Table with columns: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module:

Table with columns: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with columns: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

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

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

 Intersection #8 Redwood Dr/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.301
 Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 26.8
 Optimal Cycle: 31 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	2	0	1	1	1	0	1	1	0	1

Volume Module:

Base Vol:	164	140	5	30	225	5	5	30	138	5	95	95
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:	164	140	5	30	225	5	5	30	138	5	95	95
Added Vol:	0	11	0	0	12	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	164	151	5	30	237	5	5	30	138	5	95	95
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	173	159	5	32	249	5	5	32	145	5	100	100
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	173	159	5	32	249	5	5	32	145	5	100	100
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	173	159	5	32	249	5	5	32	145	5	100	100

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.83	0.93	0.93	0.93	0.93	0.98	0.83	0.93	0.86	0.86
Lanes:	1.00	2.00	1.00	1.00	1.96	0.04	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1769	3538	1583	1769	3454	73	1769	1862	1583	1769	1636	1636

Capacity Analysis Module:

Vol/Sat:	0.10	0.04	0.00	0.02	0.07	0.07	0.00	0.02	0.09	0.00	0.06	0.06
Crit Moves:	****			****			****			****		
Green/Cycle:	0.32	0.40	0.40	0.16	0.24	0.24	0.01	0.31	0.31	0.01	0.30	0.30
Volume/Cap:	0.30	0.11	0.01	0.11	0.30	0.30	0.20	0.06	0.30	0.30	0.20	0.20
Uniform Del:	25.3	18.6	17.8	35.9	31.1	31.1	48.7	24.5	26.6	49.2	26.1	26.1
IncrcmntDel:	0.3	0.0	0.0	0.2	0.2	0.2	3.9	0.0	0.4	9.4	0.1	0.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	25.6	18.6	17.8	36.0	31.3	31.3	52.6	24.6	26.9	58.6	26.2	26.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	25.6	18.6	17.8	36.0	31.3	31.3	52.6	24.6	26.9	58.6	26.2	26.2
LOS by Move:	C	B	B	D	C	C	D	C	C	E	C	C
HCM2kAvgQ:	4	2	0	1	3	3	0	1	4	0	2	2

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

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

Intersection #9 Wilfred Ave/101 SB Ramp

Cycle (sec): 145 Critical Vol./Cap.(X): 0.883
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 37.8
Optimal Cycle: 108 Level Of Service: D

Street Name: US-101 SB Ramp Wilfred Avenue
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Permitted Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 0 0 0 1 0 1 1 0 0 0 1 1 0 2 0 2 0 0

Volume Module:
Base Vol: 0 0 0 327 327 401 0 610 179 93 383 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: 0 0 0 327 327 401 0 610 179 93 383 0
Added Vol: 0 0 0 0 0 218 0 204 378 0 497 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 327 327 619 0 814 557 93 880 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 0 0 0 344 344 652 0 857 586 98 926 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 0 0 344 344 652 0 857 586 98 926 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 0 0 0 344 344 652 0 857 586 98 926 0

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 1.00 1.00 1.00 0.83 0.88 0.88 1.00 0.92 0.92 0.93 0.98 1.00
Lanes: 0.00 0.00 0.00 1.00 1.00 1.00 0.00 1.19 0.81 2.00 2.00 0.00
Final Sat.: 0 0 0 1583 1680 1680 0 2076 1421 3538 3724 0

Capacity Analysis Module:
Vol/Sat: 0.00 0.00 0.00 0.22 0.20 0.39 0.00 0.41 0.41 0.03 0.25 0.00
Crit Moves: ****
Green/Cycle: 0.00 0.00 0.00 0.44 0.44 0.44 0.00 0.47 0.47 0.03 0.50 0.00
Volume/Cap: 0.00 0.00 0.00 0.50 0.47 0.88 0.00 0.88 0.88 0.88 0.50 0.00
Uniform Del: 0.0 0.0 0.0 29.1 28.7 37.2 0.0 35.0 35.0 70.0 24.3 0.0
IncrcmntDel: 0.0 0.0 0.0 0.6 0.2 8.4 0.0 6.1 6.1 51.0 0.2 0.0
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 0.00 0.00 0.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 0.00
Delay/Veh: 0.0 0.0 0.0 29.7 28.8 45.7 0.0 41.1 41.1 121.0 24.5 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 0.0 0.0 29.7 28.8 45.7 0.0 41.1 41.1 121.0 24.5 0.0
LOS by Move: A A A C C D A D D F C A
HCM2kAvgQ: 0 0 0 11 11 29 0 32 32 4 13 0

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

Intersection #10 Golf Course Dr/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.969
Loss Time (sec): 12 (Y+R=12.0 sec) Average Delay (sec/veh): 44.1
Optimal Cycle: 155 Level Of Service: D

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different volume metrics and 13 rows of data.

Saturation Flow Module: Table with 13 columns representing saturation flow metrics and 4 rows of data.

Capacity Analysis Module: Table with 13 columns representing capacity analysis metrics and 13 rows of data.

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

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

Intersection #11 Roberts Lake Dr/Golf Course Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.479
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 18.3
Optimal Cycle: 26 Level Of Service: B

Table with columns: Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Protected), Rights (Include), Min. Green, Lanes.

Volume Module: Table with columns: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module: Table with columns: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module: Table with columns: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

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

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

Intersection #12 101 NB Ramps/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.703
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 27.4
Optimal Cycle: 60 Level Of Service: C

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R). Rows include Control, Rights, Min. Green, and Lanes.

Volume Module: Table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module: Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #13 New Driveway/Stony Point Rd

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

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	1	0	0	1	0	0	0	0	0	0

Volume Module:

Base Vol:	0	832	0	0	634	0	0	0	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
Initial Bse:	0	832	0	0	634	0	0	0	0	0	0	0
Added Vol:	0	59	0	0	52	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	891	0	0	686	0	0	0	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
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	938	0	0	722	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	938	0	0	722	0	0	0	0	0	0	0

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3

Capacity Module:

Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	938
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	323
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	323
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.00

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*			
ApproachDel:	xxxxxxx			xxxxxxx			xxxxxxx			xxxxxxx					
ApproachLOS:	*			*			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #14 New Driveway/Labath Ave

Average Delay (sec/veh): 7.2 Worst Case Level Of Service: B[10.5]

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

Volume Module:

Base Vol:	0	0	0	0	0	0	0	105	0	0	74	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:	0	0	0	0	0	0	0	105	0	0	74	0
Added Vol:	0	0	0	0	0	322	305	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	0	0	322	305	105	0	0	74	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	0	0	339	321	111	0	0	78	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	0	0	339	321	111	0	0	78	0

Critical Gap Module:

Critical Gp:	xxxxx	6.5	6.2	xxxxx	xxxx	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	4.0	3.3	xxxxx	xxxx	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	xxxx	831	111	xxxx	xxxx	78	78	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	308	948	xxxx	xxxx	988	1533	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	229	948	xxxx	xxxx	988	1533	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	0.00	0.00	xxxx	xxxx	0.34	0.21	xxxx	xxxx	xxxx	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	1.5	0.8	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	10.5	8.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	B	A	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	0	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	A	*	*	*	*	*
ApproachDel:	xxxxxxx			10.5			xxxxxxx			xxxxxxx		
ApproachLOS:	*			B			*			*		

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #15 Redwood Dr/Business Park Dr

Average Delay (sec/veh): 5.6 Worst Case Level Of Service: D[26.5]

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:	1	0	2	0	0	1	1	0	0	0	0	0

Volume Module:

Base Vol:	33	464	0	0	489	41	172	0	89	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:	33	464	0	0	489	41	172	0	89	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	33	464	0	0	489	41	172	0	89	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	35	488	0	0	515	43	181	0	94	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	35	488	0	0	515	43	181	0	94	0	0	0

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.8	xxxx	6.9	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	558	xxxx	xxxxx	xxxxx	xxxx	xxxxx	850	xxxx	279	xxxx	xxxx	xxxxx
Potent Cap.:	1023	xxxx	xxxxx	xxxxx	xxxx	xxxxx	303	xxxx	724	xxxx	xxxx	xxxxx
Move Cap.:	1023	xxxx	xxxxx	xxxxx	xxxx	xxxxx	296	xxxx	724	xxxx	xxxx	xxxxx
Volume/Cap:	0.03	xxxx	xxxx	xxxx	xxxx	xxxx	0.61	xxxx	0.13	xxxx	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.8	xxxx	0.4	xxxx	xxxx	xxxxx	
Control Del:	8.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	34.7	xxxx	10.7	xxxxx	xxxx	xxxxx	
LOS by Move:	A	*	*	*	*	*	D	*	B	*	*	*	
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR
Shared Cap.:	xxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*	
ApproachDel:	xxxxxx			xxxxxx			26.5			xxxxxx			
ApproachLOS:	*			*			D			*			

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #16 Rohnert Park Expwy/Stony Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.700
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 24.0
Optimal Cycle: 42 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Permitted, Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic volumes and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 13 columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, etc.

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #17 Rohnert Park Expwy/Labath Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.744

Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 31.8

Optimal Cycle: 66 Level Of Service: C

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 2 0 0 1 1 1 0 1 0 0 1 1 0 3 0 1

Volume Module:

Base Vol: 64 19 154 270 43 99 50 600 36 202 575 154
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: 64 19 154 270 43 99 50 600 36 202 575 154
Added Vol: 0 0 0 322 0 0 0 0 0 0 0 305
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 64 19 154 592 43 99 50 600 36 202 575 459
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 67 20 162 623 45 104 53 632 38 213 605 483
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 67 20 162 623 45 104 53 632 38 213 605 483
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 67 20 162 623 45 104 53 632 38 213 605 483

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.93 0.85 0.85 0.92 0.92 0.92 0.93 0.98 0.83 0.93 0.98 0.83
Lanes: 2.00 0.22 1.78 1.67 0.10 0.23 1.00 2.00 1.00 1.00 3.00 1.00
Final Sat.: 3538 355 2874 2939 172 396 1769 3724 1583 1769 5586 1583

Capacity Analysis Module:

Vol/Sat: 0.02 0.06 0.06 0.21 0.26 0.26 0.03 0.17 0.02 0.12 0.11 0.31
Crit Moves: ****
Green/Cycle: 0.08 0.08 0.08 0.35 0.35 0.35 0.04 0.26 0.26 0.19 0.41 0.41
Volume/Cap: 0.25 0.74 0.74 0.60 0.74 0.74 0.74 0.64 0.09 0.64 0.26 0.74
Uniform Del: 43.5 45.3 45.3 26.5 28.3 28.3 47.5 32.6 27.8 37.6 19.5 25.0
IncrcmntDel: 0.5 11.6 11.6 0.8 2.9 2.9 34.2 1.5 0.1 4.3 0.1 4.6
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Delay/Veh: 44.0 56.9 56.9 27.3 31.3 31.3 81.7 34.1 27.9 41.9 19.5 29.6
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 44.0 56.9 56.9 27.3 31.3 31.3 81.7 34.1 27.9 41.9 19.5 29.6
LOS by Move: D E E C C C F C C D B C
HCM2kAvgQ: 1 4 4 10 14 14 3 9 1 7 4 14

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #18 Rohnert Park Expwy/Redwood Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.749
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 35.5
Optimal Cycle: 67 Level Of Service: D

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module:

Table with 13 columns representing different traffic metrics and 13 rows of data including Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module:

Table with 13 columns representing saturation flow metrics and 4 rows of data including Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with 13 columns representing capacity analysis metrics and 13 rows of data including Vol/Sat, Crit Moves, Green/Cycle, etc.

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

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

 Intersection #19 Rohnert Park Expwy/101 SB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.772
 Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 25.4
 Optimal Cycle: 71 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Protected		
Rights:	Include			Include			Include			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1	0	0	0	0	0	2	1	0	1

Volume Module:

Base Vol:	7	0	17	702	1	351	0	1208	278	68	1024	199
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:	7	0	17	702	1	351	0	1208	278	68	1024	199
Added Vol:	0	0	0	0	0	0	0	11	312	0	305	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	7	0	17	702	1	351	0	1219	590	68	1329	199
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00
PHF Volume:	7	0	18	739	1	369	0	1283	621	72	1399	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	7	0	18	739	1	369	0	1283	621	72	1399	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Final Vol.:	7	0	18	739	1	369	0	1283	621	72	1399	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.85	1.00	0.85	0.69	0.69	0.83	1.00	0.93	0.93	0.93	0.98	1.00
Lanes:	0.29	0.00	0.71	1.99	0.01	1.00	0.00	2.02	0.98	1.00	2.00	1.00
Final Sat.:	471	0	1145	2633	4	1583	0	3580	1733	1769	3724	1900

Capacity Analysis Module:

Vol/Sat:	0.02	0.00	0.02	0.28	0.28	0.23	0.00	0.36	0.36	0.04	0.38	0.00
Crit Moves:				****				****		****		
Green/Cycle:	0.36	0.00	0.36	0.36	0.36	0.36	0.00	0.46	0.46	0.05	0.52	0.00
Volume/Cap:	0.04	0.00	0.04	0.77	0.77	0.64	0.00	0.77	0.77	0.77	0.73	0.00
Uniform Del:	20.6	0.0	20.6	28.2	28.2	26.5	0.0	22.4	22.4	46.8	18.7	0.0
IncrcmntDel:	0.0	0.0	0.0	4.0	4.0	2.5	0.0	1.6	1.6	32.1	1.4	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	20.6	0.0	20.6	32.2	32.2	29.0	0.0	23.9	23.9	78.9	20.1	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	20.6	0.0	20.6	32.2	32.2	29.0	0.0	23.9	23.9	78.9	20.1	0.0
LOS by Move:	C	A	C	C	C	C	A	C	C	E	C	A
HCM2kAvgQ:	0	0	0	12	12	10	0	18	18	4	18	0

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #20 Rohnert Park Expwy/101 NB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.624

Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 22.8

Optimal Cycle: 35 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	1		1	0	0	0	1	

Volume Module:

Base Vol:	303	0	306	14	0	3	17	1631	273	0	985	350
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:	303	0	306	14	0	3	17	1631	273	0	985	350
Added Vol:	293	0	0	0	0	0	0	11	0	0	12	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	596	0	306	14	0	3	17	1642	273	0	997	350
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00	0.95	0.95	0.00
PHF Volume:	627	0	322	15	0	3	18	1728	0	0	1049	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	627	0	322	15	0	3	18	1728	0	0	1049	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Final Vol.:	627	0	322	15	0	3	18	1728	0	0	1049	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	1.00	0.83	0.93	1.00	0.83	0.18	0.98	1.00	1.00	0.98	1.00
Lanes:	1.00	0.00	2.00	1.00	0.00	1.00	1.00	4.00	1.00	0.00	3.00	1.00
Final Sat.:	1769	0	3165	1769	0	1583	346	7448	1900	0	5586	1900

Capacity Analysis Module:

Vol/Sat:	0.35	0.00	0.10	0.01	0.00	0.00	0.05	0.23	0.00	0.00	0.19	0.00
Crit Moves:	****				****			****				
Green/Cycle:	0.57	0.00	0.53	0.04	0.00	0.00	0.37	0.37	0.00	0.00	0.37	0.00
Volume/Cap:	0.62	0.00	0.19	0.19	0.00	xxxx	0.14	0.62	0.00	0.00	0.51	0.00
Uniform Del:	14.4	0.0	12.5	46.2	0.0	0.0	20.8	25.7	0.0	0.0	24.3	0.0
IncrcmntDel:	1.2	0.0	0.1	1.2	0.0	0.0	0.5	0.5	0.0	0.0	0.2	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00
Delay/Veh:	15.7	0.0	12.6	47.4	0.0	0.0	21.3	26.1	0.0	0.0	24.5	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	15.7	0.0	12.6	47.4	0.0	0.0	21.3	26.1	0.0	0.0	24.5	0.0
LOS by Move:	B	A	B	D	A	A	C	C	A	A	C	A
HCM2kAvgQ:	13	0	3	1	0	1	0	11	0	0	9	0

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

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

Intersection #21 Rohnert Park Expwy/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.815
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 33.9
Optimal Cycle: 81 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Split Phase, Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueueDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

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

 Intersection #22 Gravenstein Hwy (SR 116)/ Stoney Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.766
 Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 38.1
 Optimal Cycle: 70 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound							
Movement:	L	T	R	L	T	R	L	T	R	L	T	R					
Control:	Protected			Protected			Protected			Protected							
Rights:	Include			Include			Include			Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0					
Lanes:	1	0	1	0	1	0	1	1	0	1	1	0	1	0	2	0	1

Volume Module:

Base Vol:	321	494	108	96	342	219	133	484	202	128	589	103
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	321	494	108	96	342	219	133	484	202	128	589	103
Added Vol:	0	0	0	52	0	0	0	0	0	0	0	59
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	321	494	108	148	342	219	133	484	202	128	589	162
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	338	520	114	156	360	231	140	509	213	135	620	171
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	338	520	114	156	360	231	140	509	213	135	620	171
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	338	520	114	156	360	231	140	509	213	135	620	171

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.89	0.89	0.93	0.93	0.83
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.41	0.59	1.00	2.00	1.00
Final Sat.:	1769	1862	1583	1769	1862	1583	1769	2386	996	1769	3538	1583

Capacity Analysis Module:

Vol/Sat:	0.19	0.28	0.07	0.09	0.19	0.15	0.08	0.21	0.21	0.08	0.18	0.11
Crit Moves:	****			****			****			****		
Green/Cycle:	0.25	0.38	0.38	0.12	0.25	0.25	0.12	0.28	0.28	0.10	0.26	0.26
Volume/Cap:	0.77	0.73	0.19	0.73	0.77	0.58	0.67	0.77	0.77	0.77	0.67	0.41
Uniform Del:	34.8	26.5	20.6	42.4	34.6	32.7	42.3	33.1	33.1	43.9	33.2	30.6
IncrcmntDel:	7.9	3.9	0.2	12.3	7.4	2.1	8.3	3.8	3.8	18.1	2.0	0.7
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	42.7	30.5	20.8	54.7	42.0	34.8	50.6	36.9	36.9	62.0	35.1	31.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	42.7	30.5	20.8	54.7	42.0	34.8	50.6	36.9	36.9	62.0	35.1	31.3
LOS by Move:	D	C	C	D	D	C	D	D	D	E	D	C
HCM2kAvgQ:	11	15	2	6	12	7	5	12	12	6	10	5

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #23 Gravenstein Hwy (SR 116)/ Redwood Rd

Cycle (sec): 80 Critical Vol./Cap.(X): 0.755
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 28.5
Optimal Cycle: 64 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns for different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns for different traffic movements. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns for different traffic movements. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

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

Intersection #24 Gravenstein Hwy and SB 101 Ramps

Cycle (sec): 80 Critical Vol./Cap.(X): 0.562
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 17.6
Optimal Cycle: 37 Level Of Service: B

Street Name: SB 101 Ramps Gravenstein Hwy
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Permitted Protected
Rights: Include Include Ignore Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 0 0 0 2 0 0 1 0 0 0 2 0 1 1 0 2 0 0

Volume Module:
Base Vol: 0 0 0 639 0 212 0 819 361 99 900 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: 0 0 0 639 0 212 0 819 361 99 900 0
Added Vol: 0 0 0 0 0 0 0 0 0 52 0 59 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 639 0 212 0 819 413 99 959 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.00 0.95 0.95 0.95
PHF Volume: 0 0 0 673 0 223 0 862 0 104 1009 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 0 0 673 0 223 0 862 0 104 1009 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
Final Vol.: 0 0 0 673 0 223 0 862 0 104 1009 0

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 1.00 1.00 1.00 0.90 1.00 0.83 1.00 0.93 1.00 0.93 0.93 1.00
Lanes: 0.00 0.00 0.00 2.00 0.00 1.00 0.00 2.00 1.00 1.00 2.00 0.00
Final Sat.: 0 0 0 3432 0 1583 0 3538 1900 1769 3538 0

Capacity Analysis Module:
Vol/Sat: 0.00 0.00 0.00 0.20 0.00 0.14 0.00 0.24 0.00 0.06 0.29 0.00
Crit Moves: ****
Green/Cycle: 0.00 0.00 0.00 0.35 0.00 0.35 0.00 0.43 0.00 0.10 0.54 0.00
Volume/Cap: 0.00 0.00 0.00 0.56 0.00 0.40 0.00 0.56 0.00 0.56 0.53 0.00
Uniform Del: 0.0 0.0 0.0 21.1 0.0 19.7 0.0 17.0 0.0 34.1 11.9 0.0
IncrmntDel: 0.0 0.0 0.0 0.6 0.0 0.5 0.0 0.5 0.0 3.9 0.3 0.0
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 0.00 0.00 0.00 1.00 0.00 1.00 0.00 1.00 0.00 1.00 1.00 0.00
Delay/Veh: 0.0 0.0 0.0 21.7 0.0 20.2 0.0 17.4 0.0 37.9 12.2 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 0.0 0.0 21.7 0.0 20.2 0.0 17.4 0.0 37.9 12.2 0.0
LOS by Move: A A A C A C A B A D B A
HCM2kAvgQ: 0 0 0 7 0 4 0 9 0 3 9 0

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

Intersection #25 Gravenstein Hwy and NB 101 Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.746
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 19.2
Optimal Cycle: 58 Level Of Service: B

Street Name: NB 101 Ramps Gravenstein Hwy
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Permitted Permitted Permitted
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 0 0 1 0 0 0 0 0 0 2 0 0 0 0 0 0 0

Volume Module:
Base Vol: 351 0 236 0 0 0 0 0 1461 0 0 617 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: 351 0 236 0 0 0 0 0 1461 0 0 617 0
Added Vol: 59 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 410 0 236 0 0 0 0 0 1461 0 0 617 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 432 0 248 0 0 0 0 0 1538 0 0 649 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 432 0 248 0 0 0 0 0 1538 0 0 649 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 432 0 248 0 0 0 0 0 1538 0 0 649 0

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.93 1.00 0.83 1.00 1.00 1.00 1.00 0.93 1.00 1.00 0.93 1.00
Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 2.00 0.00 0.00 2.00 0.00
Final Sat.: 1769 0 1583 0 0 0 0 0 3538 0 0 3538 0

Capacity Analysis Module:
Vol/Sat: 0.24 0.00 0.16 0.00 0.00 0.00 0.00 0.43 0.00 0.00 0.18 0.00
Crit Moves: ****
Green/Cycle: 0.33 0.00 0.33 0.00 0.00 0.00 0.00 0.58 0.00 0.00 0.58 0.00
Volume/Cap: 0.75 0.00 0.48 0.00 0.00 0.00 0.00 0.75 0.00 0.00 0.31 0.00
Uniform Del: 29.9 0.0 26.9 0.0 0.0 0.0 0.0 15.4 0.0 0.0 10.7 0.0
IncrmntDel: 5.3 0.0 0.7 0.0 0.0 0.0 0.0 1.5 0.0 0.0 0.1 0.0
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 1.00 0.00 0.00 1.00 0.00
Delay/Veh: 35.2 0.0 27.6 0.0 0.0 0.0 0.0 16.9 0.0 0.0 10.7 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 35.2 0.0 27.6 0.0 0.0 0.0 0.0 16.9 0.0 0.0 10.7 0.0
LOS by Move: D A C A A A A B A A B A
HCM2kAvgQ: 13 0 6 0 0 0 0 19 0 0 5 0

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #26 Millbrae Ave/Stony Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.528
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 21.2
Optimal Cycle: 43 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module:

Table with 13 columns representing different volume metrics and 13 rows of data.

Saturation Flow Module:

Table with 13 columns representing saturation flow metrics and 4 rows of data.

Capacity Analysis Module:

Table with 13 columns representing capacity analysis metrics and 13 rows of data.

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #27 Millbrae Ave/Primrose Ave

Average Delay (sec/veh): 0.2 Worst Case Level Of Service: B[11.6]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 1 0 0 0 0 1! 0 0 0 0 1! 0 0

Volume Module:

Base Vol: 1 0 1 0 1 0 1 134 3 3 194 2
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: 1 0 1 0 1 0 1 134 3 3 194 2
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 1 0 1 0 1 0 1 134 3 3 226 2
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 1 0 1 0 1 0 1 141 3 3 238 2
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 1 0 1 0 1 0 1 141 3 3 238 2

Critical Gap Module:

Critical Gp: 7.1 6.5 6.2 xxxxx 6.5 xxxxx 4.1 xxxxx xxxxx 4.1 xxxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 xxxxx 4.0 xxxxx 2.2 xxxxx xxxxx 2.2 xxxxx xxxxx

Capacity Module:

Cnflict Vol: 391 391 143 xxxxx 392 xxxxx 240 xxxxx xxxxx 144 xxxxx xxxxx
Potent Cap.: 572 548 910 xxxxx 547 xxxxx 1339 xxxxx xxxxx 1451 xxxxx xxxxx
Move Cap.: 570 546 910 xxxxx 546 xxxxx 1339 xxxxx xxxxx 1451 xxxxx xxxxx
Volume/Cap: 0.00 0.00 0.00 xxxxx 0.00 xxxxx 0.00 xxxxx xxxxx 0.00 xxxxx xxxxx

Level Of Service Module:

2Way95thQ: xxxxx xxxxx xxxxx xxxxx 0.0 xxxxx 0.0 xxxxx xxxxx 0.0 xxxxx xxxxx
Control Del: xxxxx xxxxx xxxxx xxxxx 11.6 xxxxx 7.7 xxxxx xxxxx 7.5 xxxxx xxxxx
LOS by Move: * * * * B * A * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx 701 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue: xxxxx 0.0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd ConDel: xxxxx 10.2 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: * B * * * * * * * * * *
ApproachDel: 10.2 11.6 xxxxxxx xxxxxxx
ApproachLOS: B B * *

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #28 Millbrae Ave/Whistler Ave

Average Delay (sec/veh): 0.5 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:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	1	0	0	0	1	0	0	1	0	0	1

Volume Module:

Base Vol:	1	9	0	4	0	1	1	119	2	4	203	8
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	9	0	4	0	1	1	119	2	4	203	8
Added Vol:	0	0	0	0	0	0	0	0	0	0	32	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1	9	0	4	0	1	1	119	2	4	235	8
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	1	9	0	4	0	1	1	125	2	4	247	8
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	1	9	0	4	0	1	1	125	2	4	247	8

Critical Gap Module:

Critical Gp:	7.1	6.5	xxxxx	7.1	6.5	6.2	4.1	xxxxx	xxxxx	4.1	xxxxx	xxxxx
FollowUpTim:	3.5	4.0	xxxxx	3.5	4.0	3.3	2.2	xxxxx	xxxxx	2.2	xxxxx	xxxxx

Capacity Module:

Cnflict Vol:	389	393	xxxxx	393	389	252	256	xxxxx	xxxxx	127	xxxxx	xxxxx
Potent Cap.:	574	547	xxxxx	570	549	792	1321	xxxxx	xxxxx	1471	xxxxx	xxxxx
Move Cap.:	571	545	xxxxx	561	547	792	1321	xxxxx	xxxxx	1471	xxxxx	xxxxx
Volume/Cap:	0.00	0.02	xxxxx	0.01	0.00	0.00	0.00	xxxxx	xxxxx	0.00	xxxxx	xxxxx

Level Of Service Module:

2Way95thQ:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	0.0	xxxxx	xxxxx
Control Del:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	7.7	xxxxx	xxxxx	7.5	xxxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	547	xxxxx	xxxxx	xxxxx	596	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
SharedQueue:	0.1	xxxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shrd ConDel:	11.7	xxxxx	xxxxx	xxxxx	11.1	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shared LOS:	B	*	*	*	B	*	*	*	*	*	*	*
ApproachDel:	11.7			11.1			xxxxxxx			xxxxxxx		
ApproachLOS:	B			B			*			*		

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #29 Millbrae Ave/Langner Ave

Average Delay (sec/veh): 0.5 Worst Case Level Of Service: B[10.9]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 0 0 0 1 0 0 1 0 0 0 0

Volume Module:

Base Vol: 3 0 6 0 0 0 0 150 5 2 265 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: 3 0 6 0 0 0 0 150 5 2 265 0
Added Vol: 11 0 0 0 0 0 0 0 0 0 22 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 14 0 6 0 0 0 0 150 5 2 287 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 15 0 6 0 0 0 0 158 5 2 302 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 15 0 6 0 0 0 0 158 5 2 302 0

Critical Gap Module:

Critical Gp: 6.4 6.5 6.2 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 4.1 xxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 2.2 xxxx xxxxx

Capacity Module:

Cnflict Vol: 467 467 161 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 163 xxxx xxxxx
Potent Cap.: 558 497 890 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 1428 xxxx xxxxx
Move Cap.: 557 496 890 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 1428 xxxx xxxxx
Volume/Cap: 0.03 0.00 0.01 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 0.00 xxxx xxxxx

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx 0.0 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxxx xxxx xxxxx xxxxxx xxxx xxxxx 7.5 xxxx xxxxx
LOS by Move: * * * * * * * * * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx 628 xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
SharedQueue:xxxxx 0.1 xxxxx xxxxx xxxx xxxxx xxxxxx xxxx xxxxx 0.0 xxxx xxxxx
Shrd ConDel:xxxxx 10.9 xxxxx xxxxx xxxx xxxxx xxxxxx xxxx xxxxx 7.5 xxxx xxxxx
Shared LOS: * B * * * * * * * * * A * *
ApproachDel: 10.9 xxxxxxx xxxxxxx xxxxxxx
ApproachLOS: B * * *

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #30 Millbrae Ave/Labath Ave

Average Delay (sec/veh): 1.3 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:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	1!	0	0	0	0	0	0	1	0	0

Volume Module:

Base Vol:	16	0	11	0	0	0	0	155	4	10	252	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:	16	0	11	0	0	0	0	155	4	10	252	0
Added Vol:	22	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	38	0	11	0	0	0	0	155	4	10	252	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	40	0	12	0	0	0	0	163	4	11	265	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	40	0	12	0	0	0	0	163	4	11	265	0

Critical Gap Module:

Critical Gp:	6.4	6.5	6.2	7.1	6.5	6.2	xxxxx	xxxxx	xxxxx	4.1	xxxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	xxxxx	xxxxx	xxxxx	2.2	xxxxx	xxxxx

Capacity Module:

Cnflict Vol:	452	452	165	457	454	265	xxxxx	xxxxx	xxxxx	167	xxxxx	xxxxx
Potent Cap.:	569	506	884	517	505	778	xxxxx	xxxxx	xxxxx	1423	xxxxx	xxxxx
Move Cap.:	566	503	884	507	501	778	xxxxx	xxxxx	xxxxx	1423	xxxxx	xxxxx
Volume/Cap:	0.07	0.00	0.01	0.00	0.00	0.00	xxxxx	xxxxx	xxxxx	0.01	xxxxx	xxxxx

Level Of Service Module:

2Way95thQ:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx			
Control Del:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	7.5	xxxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxxx	616	xxxxx	xxxxx	0	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
SharedQueue:	xxxxx	0.3	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shrd ConDel:	xxxxx	11.4	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	7.5	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shared LOS:	*	B	*	*	*	*	*	*	*	A	*	*	*	*	*
ApproachDel:	11.4			xxxxxxx			xxxxxxx			xxxxxxx					
ApproachLOS:	B			*			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #31 Millbrae Ave/Dowdell Ave

Average Delay (sec/veh): 0.8 Worst Case Level Of Service: B[11.3]

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

Volume Module:

Base Vol:	32	0	0	0	0	0	0	143	20	0	235	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:	32	0	0	0	0	0	0	143	20	0	235	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	32	0	0	0	0	0	0	143	20	0	235	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	34	0	0	0	0	0	0	151	21	0	247	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	34	0	0	0	0	0	0	151	21	0	247	0

Critical Gap Module:

Critical Gp:	6.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	408	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Potent Cap.:	603	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Move Cap.:	603	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Volume/Cap:	0.06	xxxx	xxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx

Level Of Service Module:

2Way95thQ:	0.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Control Del:	11.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
LOS by Move:	B	*	*	*	*	*	*	*	*	*	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	11.3			xxxxxx			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	B			*			*			*			*		

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

**CUMULATIVE 2020 + ALTERNATIVE A
MITIGATED TRAFFIC CONDITIONS
(TRAFFIX)**

 Impact Analysis Report
 Level Of Service

Intersection	Base LOS	Base		Future LOS	Future		Change in	
		Del/ Veh	V/ C		Del/ Veh	V/ C		
# 1 Wilfred Ave/Stony Point Rd	B	16.6	0.719	C	31.0	0.887	+14.408	D/V
# 2 Wilfred Ave/Primrose Ave	B	12.0	0.000	C	16.1	0.000	+ 4.056	D/V
# 3 Wilfred Ave/Whistler Ave	B	11.8	0.000	C	15.7	0.000	+ 3.901	D/V
# 4 Langner Ave/Wilfred Ave	B	10.3	0.198	C	30.7	0.538	+20.326	D/V
# 5 Wilfred Ave/Labath Ave	C	22.6	0.238	C	33.1	0.836	+10.471	D/V
# 6 Dowell Ave/Wilfred Ave	C	33.9	0.781	D	46.4	0.980	+12.582	D/V
# 7 Wilfred Ave/Redwood Dr	D	41.6	0.749	D	47.2	0.934	+ 5.616	D/V
# 9 Wilfred Ave/101 SB Ramp	C	32.3	0.716	D	48.5	1.014	+16.227	D/V
# 10 Golf Course Dr/Commerce Blvd	C	30.0	0.856	D	36.5	0.954	+ 6.456	D/V
# 11 Roberts Lake Dr/Golf Course Dr	B	13.1	0.469	B	13.1	0.465	+ 0.007	D/V
# 12 101 NB Ramps/Commerce Blvd	C	28.4	0.690	C	29.7	0.738	+ 1.294	D/V
# 13 New Driveway/Stony Point Rd	A	0.0	0.000	A	0.0	0.000	+ 0.000	D/V
# 14 New Driveway/Labath Ave	A	0.0	0.000	B	10.2	0.000	+10.219	D/V
# 15 Redwood Dr/Business Park Dr	C	21.8	0.000	C	21.8	0.000	+ 0.000	D/V
# 16 Rohnert Park Expwy/Stony Point	C	26.7	0.726	C	27.1	0.762	+ 0.395	D/V
# 17 Rohnert Park Expwy/Labath Ave	C	29.1	0.498	C	29.7	0.699	+ 0.591	D/V
# 18 Rohnert Park Expwy/Redwood Dr	D	35.5	0.610	D	35.3	0.702	-0.207	D/V
# 19 Rohnert Park Expwy/101 SB Ramp	C	24.4	0.696	C	24.9	0.800	+ 0.421	D/V
# 20 Rohnert Park Expwy/101 NB Ramp	B	17.6	0.405	C	23.7	0.593	+ 6.049	D/V
# 21 Rohnert Park Expwy/Commerce Bl	D	35.1	0.988	D	35.1	0.988	-0.046	D/V
# 22 Gravenstein Hwy (SR 116)/ Ston	D	41.9	0.907	D	42.0	0.907	+ 0.172	D/V
# 23 Gravenstein Hwy (SR 116)/ Redw	C	31.7	0.830	C	32.3	0.851	+ 0.591	D/V
# 24 Gravenstein Hwy and SB 101 Ram	B	18.0	0.621	B	18.0	0.621	-0.046	D/V
# 25 Gravenstein Hwy and NB 101 Ram	B	18.8	0.772	C	20.9	0.810	+ 2.106	D/V
# 26 Millbrae Ave/Stony Point Road	C	20.8	0.494	C	21.3	0.544	+ 0.457	D/V

Intersection		Base		Future		Change in
		Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C	
# 27 Millbrae Ave/Primrose Ave	B	11.8	0.000	B 12.1	0.000	+ 0.331 D/V
# 28 Millbrae Ave/Whistler Ave	B	12.0	0.000	B 12.3	0.000	+ 0.326 D/V
# 29 Millbrae Ave/Langner Ave	B	10.3	0.000	B 11.3	0.000	+ 1.021 D/V
# 30 Millbrae Ave/Labath Ave	B	12.3	0.000	B 12.8	0.000	+ 0.518 D/V
# 31 Millbrae Ave/Dowdell Ave	B	11.3	0.000	B 11.3	0.000	+ 0.000 D/V

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

Intersection #1 Wilfred Ave/Stony Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.887
 Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 31.0
 Optimal Cycle: 96 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	0	0	0	0	1	0	0

Volume Module:

Base Vol:	14	740	144	93	522	6	0	12	17	93	23	78
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:	14	740	144	93	522	6	0	12	17	93	23	78
Added Vol:	0	0	59	121	0	0	0	0	0	52	0	75
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	14	740	203	214	522	6	0	12	17	145	23	153
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	15	779	214	225	549	6	0	13	18	153	24	161
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	15	779	214	225	549	6	0	13	18	153	24	161
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	15	779	214	225	549	6	0	13	18	153	24	161

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.95	0.95	0.93	0.98	0.98	1.00	0.90	0.90	0.72	0.72	0.83
Lanes:	1.00	0.78	0.22	1.00	0.99	0.01	0.00	0.41	0.59	0.86	0.14	1.00
Final Sat.:	1769	1414	388	1769	1837	21	0	710	1005	1183	188	1583

Capacity Analysis Module:

Vol/Sat:	0.01	0.55	0.55	0.13	0.30	0.30	0.00	0.02	0.02	0.13	0.13	0.10
Crit Moves:	****			****						****		
Green/Cycle:	0.02	0.62	0.62	0.14	0.74	0.74	0.00	0.15	0.15	0.15	0.15	0.15
Volume/Cap:	0.40	0.89	0.89	0.89	0.40	0.40	0.00	0.12	0.12	0.89	0.89	0.70
Uniform Del:	48.4	16.0	16.0	42.0	4.7	4.7	0.0	37.2	37.2	41.9	41.9	40.6
IncrcmntDel:	7.1	8.8	8.8	29.0	0.2	0.2	0.0	0.2	0.2	34.5	34.5	9.2
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	55.4	24.8	24.8	71.0	4.9	4.9	0.0	37.4	37.4	76.5	76.5	49.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	55.4	24.8	24.8	71.0	4.9	4.9	0.0	37.4	37.4	76.5	76.5	49.8
LOS by Move:	E	C	C	E	A	A	A	D	D	E	E	D
HCM2kAvgQ:	1	29	29	10	6	6	0	1	1	8	8	6

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Wilfred Ave/Primrose Ave

Average Delay (sec/veh): 1.5 Worst Case Level Of Service: C[16.1]

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

Volume Module:

Base Vol:	10	10	10	9	9	10	25	204	20	8	175	10
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:	10	10	10	9	9	10	25	204	20	8	175	10
Added Vol:	0	0	0	0	0	0	0	180	0	0	127	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	10	10	9	9	10	25	384	20	8	302	10
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	11	11	9	9	11	26	404	21	8	318	11
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	11	11	11	9	9	11	26	404	21	8	318	11

Critical Gap Module:

Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	817	813	415	818	818	323	328	xxxx	xxxxx	425	xxxx	xxxxx
Potent Cap.:	297	315	642	297	313	722	1242	xxxx	xxxxx	1145	xxxx	xxxxx
Move Cap.:	280	306	642	278	304	722	1242	xxxx	xxxxx	1145	xxxx	xxxxx
Volume/Cap:	0.04	0.03	0.02	0.03	0.03	0.01	0.02	xxxx	xxxx	0.01	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.0	xxxx	xxxxx	8.2	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	357	xxxxx	xxxx	369	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	0.3	xxxxx	xxxxx	0.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	16.1	xxxxx	xxxxx	15.6	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	C	*	*	C	*	*	*	*	*	*	*			
ApproachDel:	16.1			15.6			xxxxxx			xxxxxx					
ApproachLOS:	C			C			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 Wilfred Ave/Whistler Ave

Average Delay (sec/veh): 1.4 Worst Case Level Of Service: C[15.7]

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

Volume Module:

Base Vol:	10	10	10	10	10	10	11	201	11	11	175	25
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:	10	10	10	10	10	10	11	201	11	11	175	25
Added Vol:	0	0	0	0	0	0	0	180	0	0	127	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	10	10	10	10	10	11	381	11	11	302	25
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	11	11	11	11	11	12	401	12	12	318	26
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	11	11	11	11	11	11	12	401	12	12	318	26
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	795	797	407	795	790	331	344	xxxx	xxxxx	413	xxxx	xxxxx
Potent Cap.:	308	322	649	308	325	715	1226	xxxx	xxxxx	1157	xxxx	xxxxx
Move Cap.:	291	315	649	291	318	715	1226	xxxx	xxxxx	1157	xxxx	xxxxx
Volume/Cap:	0.04	0.03	0.02	0.04	0.03	0.01	0.01	xxxx	xxxx	0.01	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.0	xxxx	xxxxx	8.1	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	368	xxxxx	xxxx	376	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	0.3	xxxxx	xxxxx	0.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	15.7	xxxxx	xxxxx	15.4	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	C	*	*	C	*	*	*	*	*	*	*			
ApproachDel:		15.7			15.4		xxxxxxx		xxxxxxx		xxxxxxx				
ApproachLOS:		C			C		*		*		*				

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

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

Intersection #4 Langner Ave/Wilfred Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.538
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 30.7
Optimal Cycle: 36 Level Of Service: C

Table with columns: Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Protected, Permitted), Rights (Include), Min. Green, Lanes.

Volume Module: Table with columns: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module: Table with columns: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module: Table with columns: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

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

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

Intersection #5 Wilfred Ave/Labath Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.836
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 33.1
Optimal Cycle: 78 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Permitted, Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic movements and 13 rows of volume-related metrics such as Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 13 columns and 4 rows showing Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns and 13 rows showing Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, etc.

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

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

Intersection #6 Dowell Ave/Wilfred Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.980
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 46.4
Optimal Cycle: 165 Level Of Service: D

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Permitted, Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic movements and 13 rows of volume-related metrics such as Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns and 4 rows showing Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns and 13 rows showing Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

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

Intersection #7 Wilfred Ave/Redwood Dr

Cycle (sec): 115 Critical Vol./Cap.(X): 0.934
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 47.2
Optimal Cycle: 139 Level Of Service: D

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module:

Table with 13 columns representing different traffic volumes and adjustment factors. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module:

Table with 13 columns representing saturation flow and adjustment factors. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with 13 columns representing capacity analysis metrics. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

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

 Intersection #9 Wilfred Ave/101 SB Ramp

Cycle (sec): 145 Critical Vol./Cap.(X): 1.014
 Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 48.5
 Optimal Cycle: 180 Level Of Service: D

Street Name: US-101 SB Ramp Wilfred Avenue
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Permitted			Protected			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	1	0	1	0	0	2	0	2	0

Volume Module:

Base Vol:	0	0	0	424	339	551	0	1072	285	85	626	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:	0	0	0	424	339	551	0	1072	285	85	626	0
Added Vol:	0	0	0	0	0	218	0	204	378	0	497	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	424	339	769	0	1276	663	85	1123	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	446	357	809	0	1343	698	89	1182	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	446	357	809	0	1343	698	89	1182	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	446	357	809	0	1343	698	89	1182	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.83	0.88	0.88	1.00	0.98	0.83	0.93	0.98	1.00
Lanes:	0.00	0.00	0.00	1.00	1.00	1.00	0.00	2.00	1.00	2.00	2.00	0.00
Final Sat.:	0	0	0	1583	1668	1668	0	3724	1583	3538	3724	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.28	0.21	0.49	0.00	0.36	0.44	0.03	0.32	0.00
Crit Moves:						****			****	****		
Green/Cycle:	0.00	0.00	0.00	0.48	0.48	0.48	0.00	0.43	0.43	0.02	0.46	0.00
Volume/Cap:	0.00	0.00	0.00	0.59	0.45	1.01	0.00	0.83	1.01	1.02	0.69	0.00
Uniform Del:	0.0	0.0	0.0	27.5	25.1	37.8	0.0	36.2	41.0	70.7	31.0	0.0
IncrcmntDel:	0.0	0.0	0.0	1.2	0.1	30.2	0.0	3.8	37.9	100.2	1.2	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	0.0	0.0	0.0	28.7	25.2	68.0	0.0	40.0	78.9	170.9	32.2	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	28.7	25.2	68.0	0.0	40.0	78.9	170.9	32.2	0.0
LOS by Move:	A	A	A	C	C	E	A	D	E	F	C	A
HCM2kAvgQ:	0	0	0	14	10	43	0	28	38	4	21	0

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

Intersection #10 Golf Course Dr/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.954
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 36.5
Optimal Cycle: 142 Level Of Service: D

Table with columns for Approach (North, South, East, West Bound) and Movement (L, T, R). Rows include Control, Rights, Min. Green, and Lanes.

Volume Module: Table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module: Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

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

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

Intersection #11 Roberts Lake Dr/Golf Course Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.465
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 13.1
Optimal Cycle: 26 Level Of Service: B

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 12 columns for volume and growth factors. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 12 columns for saturation flow and adjustment factors. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns for capacity and delay metrics. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

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

Intersection #12 101 NB Ramps/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.738
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 29.7
Optimal Cycle: 65 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected, Split Phase), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic volumes and adjustment factors like Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #13 New Driveway/Stony Point Rd

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

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	1	0	0	1	0	0	0	0	0	0

Volume Module:

Base Vol:	0	902	0	0	632	0	0	0	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
Initial Bse:	0	902	0	0	632	0	0	0	0	0	0	0
Added Vol:	0	59	0	0	52	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	961	0	0	684	0	0	0	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
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	1012	0	0	720	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	1012	0	0	720	0	0	0	0	0	0	0

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3

Capacity Module:

Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	1012
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	293
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	293
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.00

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*			
ApproachDel:	xxxxxxx			xxxxxxx			xxxxxxx			xxxxxxx					
ApproachLOS:	*			*			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #14 New Driveway/Labath Ave

Average Delay (sec/veh): 7.6 Worst Case Level Of Service: B[10.2]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 0 1 0 0 0 0 0 1 0 1 0 0 0 0 0 1 0 0

Volume Module:

Base Vol: 0 0 0 0 0 0 0 0 73 0 0 45 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: 0 0 0 0 0 0 0 0 73 0 0 45 0
Added Vol: 0 0 0 0 0 0 322 305 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 0 0 0 322 305 73 0 0 45 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 0 0 0 0 0 0 339 321 77 0 0 47 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 0 0 0 0 0 0 339 321 77 0 0 47 0

Critical Gap Module:

Critical Gp:xxxxx 6.5 6.2 xxxxxx xxxxx 6.2 4.1 xxxxx xxxxxx xxxxxx xxxxx xxxxxx
FollowUpTim:xxxxx 4.0 3.3 xxxxxx xxxxx 3.3 2.2 xxxxx xxxxxx xxxxxx xxxxx xxxxxx

Capacity Module:

Cnflict Vol: xxxxx 766 77 xxxxx xxxxx 47 47 xxxxx xxxxxx xxxxx xxxxx xxxxxx
Potent Cap.: xxxxx 335 990 xxxxx xxxxx 1027 1573 xxxxx xxxxxx xxxxx xxxxx xxxxxx
Move Cap.: xxxxx 252 990 xxxxx xxxxx 1027 1573 xxxxx xxxxxx xxxxx xxxxx xxxxxx
Volume/Cap: xxxxx 0.00 0.00 xxxxx xxxxx 0.33 0.20 xxxxx xxxxx xxxxx xxxxx xxxxxx

Level Of Service Module:

2Way95thQ: xxxxx xxxxx xxxxxx xxxxx xxxxx 1.5 0.8 xxxxx xxxxxx xxxxx xxxxx xxxxxx
Control Del:xxxxxx xxxxx xxxxxx xxxxxx xxxxx 10.2 7.9 xxxxx xxxxxx xxxxxx xxxxx xxxxxx
LOS by Move: * * * * * B A * * * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx xxxxx 0 xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx
SharedQueue:xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx 0.8 xxxxx xxxxxx xxxxxx xxxxx xxxxxx
Shrd ConDel:xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx 7.9 xxxxx xxxxxx xxxxxx xxxxx xxxxxx
Shared LOS: * * * * * A * * * * *
ApproachDel: xxxxxxxx 10.2 xxxxxxxx xxxxxxxx
ApproachLOS: * B * *

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #15 Redwood Dr/Business Park Dr

Average Delay (sec/veh): 4.7 Worst Case Level Of Service: C[21.8]

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: 1 0 2 0 0 0 0 1 1 0 1 0 0 0 0 1 0 0 0 0 0

Volume Module:

Base Vol: 13 429 0 0 373 32 197 0 32 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: 13 429 0 0 373 32 197 0 32 0 0 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 13 429 0 0 373 32 197 0 32 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 14 452 0 0 393 34 207 0 34 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 14 452 0 0 393 34 207 0 34 0 0 0

Critical Gap Module:

Critical Gp: 4.1 xxxx xxxxx xxxxx xxxx xxxxx 6.8 xxxx 6.9 xxxxx xxxx xxxxx
FollowUpTim: 2.2 xxxx xxxxx xxxxx xxxx xxxxx 3.5 xxxx 3.3 xxxxx xxxx xxxxx

Capacity Module:

Cnflict Vol: 426 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 663 xxxx 213 xxxx xxxx xxxxx
Potent Cap.: 1144 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 399 xxxx 798 xxxx xxxx xxxxx
Move Cap.: 1144 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 395 xxxx 798 xxxx xxxx xxxxx
Volume/Cap: 0.01 xxxx xxxx xxxxx xxxx xxxxx 0.52 xxxx 0.04 xxxx xxxx xxxxx

Level Of Service Module:

2Way95thQ: 0.0 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 2.9 xxxx 0.1 xxxx xxxx xxxxx
Control Del: 8.2 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 23.7 xxxx 9.7 xxxxx xxxx xxxxx
LOS by Move: A * * * * * C * A * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxx xxxxx
SharedQueue:xxxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxx xxxxx
Shrd ConDel:xxxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxx xxxxx
Shared LOS: * * * * * * * * * * * * * * * *
ApproachDel: xxxxxx xxxxxx 21.8 xxxxxx
ApproachLOS: * * C *

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

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

Intersection #16 Rohnert Park Expwy/Stony Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.762
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 27.1
Optimal Cycle: 51 Level Of Service: C

Table with columns for Approach (North, South, East, West Bound) and Movement (L, T, R). Rows include Control, Rights, Min. Green, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #17 Rohnert Park Expwy/Labath Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.699
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 29.7
Optimal Cycle: 59 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module:

Table with 13 columns representing different traffic movements and 13 rows of volume-related metrics like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module:

Table with 13 columns and 4 rows showing saturation flow metrics like Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with 13 columns and 13 rows showing capacity analysis metrics like Vol/Sat, Crit Moves, Green/Cycle, etc.

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

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

Intersection #18 Rohnert Park Expwy/Redwood Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.702
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 35.3
Optimal Cycle: 60 Level Of Service: D

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

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

 Intersection #19 Rohnert Park Expwy/101 SB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.800
 Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 24.9
 Optimal Cycle: 77 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Protected		
Rights:	Include			Include			Include			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1	0	0	0	0	0	2	1	0	1

Volume Module:

Base Vol:	6	0	17	692	0	323	0	1158	327	78	988	234
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:	6	0	17	692	0	323	0	1158	327	78	988	234
Added Vol:	0	0	0	0	0	0	0	11	312	0	305	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	6	0	17	692	0	323	0	1169	639	78	1293	234
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00
PHF Volume:	6	0	18	728	0	340	0	1231	673	82	1361	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	6	0	18	728	0	340	0	1231	673	82	1361	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Final Vol.:	6	0	18	728	0	340	0	1231	673	82	1361	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.85	1.00	0.85	0.69	1.00	0.83	1.00	0.93	0.93	0.93	0.98	1.00
Lanes:	0.26	0.00	0.74	2.00	0.00	1.00	0.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	422	0	1197	2640	0	1583	0	3527	1763	1769	3724	1900

Capacity Analysis Module:

Vol/Sat:	0.01	0.00	0.01	0.28	0.00	0.21	0.00	0.35	0.38	0.05	0.37	0.00
Crit Moves:				****				****			****	
Green/Cycle:	0.34	0.00	0.34	0.34	0.00	0.34	0.00	0.48	0.48	0.06	0.54	0.00
Volume/Cap:	0.04	0.00	0.04	0.80	0.00	0.62	0.00	0.73	0.80	0.80	0.68	0.00
Uniform Del:	21.8	0.0	21.8	29.7	0.0	27.3	0.0	21.0	22.1	46.5	17.0	0.0
IncrcmntDel:	0.0	0.0	0.0	5.1	0.0	2.2	0.0	1.1	2.0	34.2	1.0	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	21.8	0.0	21.8	34.8	0.0	29.6	0.0	22.1	24.1	80.8	18.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	21.8	0.0	21.8	34.8	0.0	29.6	0.0	22.1	24.1	80.8	18.0	0.0
LOS by Move:	C	A	C	C	A	C	A	C	C	F	B	A
HCM2kAvgQ:	0	0	0	12	0	9	0	16	19	4	16	0

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #20 Rohnert Park Expwy/101 NB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.593

Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 23.7

Optimal Cycle: 33 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	0	1	0	4	0	3	0

Volume Module:

Base Vol:	321	0	376	14	0	3	19	1345	504	0	976	343
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:	321	0	376	14	0	3	19	1345	504	0	976	343
Added Vol:	293	0	0	0	0	0	0	11	0	0	12	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	614	0	376	14	0	3	19	1356	504	0	988	343
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00	0.95	0.95	0.00
PHF Volume:	646	0	396	15	0	3	20	1427	0	0	1040	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	646	0	396	15	0	3	20	1427	0	0	1040	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Final Vol.:	646	0	396	15	0	3	20	1427	0	0	1040	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	1.00	0.83	0.93	1.00	0.83	0.16	0.98	1.00	1.00	0.98	1.00
Lanes:	1.00	0.00	2.00	1.00	0.00	1.00	1.00	4.00	1.00	0.00	3.00	1.00
Final Sat.:	1769	0	3165	1769	0	1583	305	7448	1900	0	5586	1900

Capacity Analysis Module:

Vol/Sat:	0.37	0.00	0.13	0.01	0.00	0.00	0.07	0.19	0.00	0.00	0.19	0.00
Crit Moves:	****			****			****					
Green/Cycle:	0.62	0.00	0.58	0.04	0.00	0.00	0.32	0.32	0.00	0.00	0.32	0.00
Volume/Cap:	0.59	0.00	0.22	0.22	0.00	xxxx	0.20	0.59	0.00	0.00	0.58	0.00
Uniform Del:	11.6	0.0	10.2	46.6	0.0	0.0	24.5	28.3	0.0	0.0	28.1	0.0
IncrcmntDel:	0.9	0.0	0.1	1.6	0.0	0.0	1.0	0.4	0.0	0.0	0.5	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00
Delay/Veh:	12.5	0.0	10.2	48.2	0.0	0.0	25.5	28.7	0.0	0.0	28.6	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	12.5	0.0	10.2	48.2	0.0	0.0	25.5	28.7	0.0	0.0	28.6	0.0
LOS by Move:	B	A	B	D	A	A	C	C	A	A	C	A
HCM2kAvgQ:	12	0	3	1	0	1	1	10	0	0	9	0

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

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

Intersection #21 Rohnert Park Expwy/Commerce Blvd

Cycle (sec): 65 Critical Vol./Cap.(X): 0.988
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 35.1
Optimal Cycle: OPTIMIZED Level Of Service: D

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Split Phase, Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #22 Gravenstein Hwy (SR 116)/ Stoney Point Rd

Cycle (sec): 90 Critical Vol./Cap.(X): 0.907

Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 42.0

Optimal Cycle: 106 Level Of Service: D

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 1 0 1 2 0 1 0 1 1 0 2 0 1

Volume Module:

Base Vol: 316 511 102 240 529 230 150 774 324 115 510 93
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: 316 511 102 240 529 230 150 774 324 115 510 93
Added Vol: 0 0 0 52 0 0 0 0 0 0 0 0 59
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 316 511 102 292 529 230 150 774 324 115 510 152
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 333 538 107 307 557 242 158 815 341 121 537 160
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 333 538 107 307 557 242 158 815 341 121 537 160
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 333 538 107 307 557 242 158 815 341 121 537 160

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.93 0.98 0.83 0.90 0.98 0.83 0.93 0.93 0.83 0.93 0.93 0.83
Lanes: 1.00 1.00 1.00 2.00 1.00 1.00 1.00 2.00 1.00 1.00 2.00 1.00
Final Sat.: 1769 1862 1583 3432 1862 1583 1769 3538 1583 1769 3538 1583

Capacity Analysis Module:

Vol/Sat: 0.19 0.29 0.07 0.09 0.30 0.15 0.09 0.23 0.22 0.07 0.15 0.10
Crit Moves: **** **** ****
Green/Cycle: 0.21 0.41 0.41 0.13 0.33 0.33 0.12 0.25 0.25 0.08 0.21 0.21
Volume/Cap: 0.91 0.70 0.17 0.70 0.91 0.46 0.73 0.91 0.85 0.91 0.73 0.49
Uniform Del: 34.8 22.0 16.8 37.7 28.8 23.9 38.1 32.5 31.9 41.3 33.3 31.4
IncrcmntDel: 25.3 3.0 0.1 5.2 17.2 0.7 12.1 12.7 15.5 50.6 3.8 1.1
InitQueueDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Delay/Veh: 60.1 25.0 16.9 42.8 46.0 24.5 50.2 45.3 47.4 91.9 37.1 32.6
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 60.1 25.0 16.9 42.8 46.0 24.5 50.2 45.3 47.4 91.9 37.1 32.6
LOS by Move: E C B D D C D D D F D C
HCM2kAvgQ: 13 13 2 6 19 6 6 15 12 6 9 4

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #23 Gravenstein Hwy (SR 116)/ Redwood Rd

Cycle (sec): 80 Critical Vol./Cap.(X): 0.851

Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 32.3

Optimal Cycle: 82 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	0	1	0	1	1	0	2

Volume Module:

Base Vol:	48	23	63	562	35	105	107	684	33	62	850	320
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	23	63	562	35	105	107	684	33	62	850	320
Added Vol:	0	0	0	0	0	0	0	52	0	0	59	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	48	23	63	562	35	105	107	736	33	62	909	320
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	51	24	66	592	37	111	113	775	35	65	957	337
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	51	24	66	592	37	111	113	775	35	65	957	337
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	51	24	66	592	37	111	113	775	35	65	957	337

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.87	0.87	0.93	0.87	0.87	0.93	0.93	0.93	0.93	0.93	0.83
Lanes:	1.00	0.27	0.73	1.00	0.25	0.75	1.00	1.91	0.09	1.00	2.00	1.00
Final Sat.:	1769	443	1214	1769	413	1240	1769	3366	151	1769	3538	1583

Capacity Analysis Module:

Vol/Sat:	0.03	0.05	0.05	0.33	0.09	0.09	0.06	0.23	0.23	0.04	0.27	0.21
Crit Moves:	****			****			****			****		
Green/Cycle:	0.11	0.06	0.06	0.39	0.35	0.35	0.07	0.34	0.34	0.05	0.32	0.32
Volume/Cap:	0.26	0.85	0.85	0.85	0.26	0.26	0.85	0.68	0.68	0.68	0.85	0.67
Uniform Del:	32.5	37.1	37.1	22.1	18.8	18.8	36.6	22.7	22.7	37.1	25.5	23.6
IncrcmntDel:	0.7	44.3	44.3	9.8	0.2	0.2	37.8	1.6	1.6	18.0	6.3	3.5
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	33.2	81.3	81.3	31.9	19.0	19.0	74.3	24.4	24.4	55.2	31.9	27.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	33.2	81.3	81.3	31.9	19.0	19.0	74.3	24.4	24.4	55.2	31.9	27.1
LOS by Move:	C	F	F	C	B	B	E	C	C	E	C	C
HCM2kAvgQ:	1	5	5	16	3	3	5	10	10	3	15	8

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #24 Gravenstein Hwy and SB 101 Ramps

Cycle (sec): 80 Critical Vol./Cap.(X): 0.621
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 18.0
Optimal Cycle: 41 Level Of Service: B

Street Name: SB 101 Ramps Gravenstein Hwy
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Permitted Protected
Rights: Include Include Ignore Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 0 0 0 2 0 0 1 0 0 0 2 0 1 1 0 2 0 0

Volume Module:
Base Vol: 0 0 0 626 0 268 0 969 340 119 964 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: 0 0 0 626 0 268 0 969 340 119 964 0
Added Vol: 0 0 0 0 0 0 0 0 0 52 0 59 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 626 0 268 0 969 392 119 1023 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.00 0.95 0.95 0.95
PHF Volume: 0 0 0 659 0 282 0 1020 0 125 1077 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 0 0 659 0 282 0 1020 0 125 1077 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
Final Vol.: 0 0 0 659 0 282 0 1020 0 125 1077 0

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 1.00 1.00 1.00 0.90 1.00 0.83 1.00 0.93 1.00 0.93 0.93 1.00
Lanes: 0.00 0.00 0.00 2.00 0.00 1.00 0.00 2.00 1.00 1.00 2.00 0.00
Final Sat.: 0 0 0 3432 0 1583 0 3538 1900 1769 3538 0

Capacity Analysis Module:
Vol/Sat: 0.00 0.00 0.00 0.19 0.00 0.18 0.00 0.29 0.00 0.07 0.30 0.00
Crit Moves: **** *
Green/Cycle: 0.00 0.00 0.00 0.31 0.00 0.31 0.00 0.46 0.00 0.11 0.58 0.00
Volume/Cap: 0.00 0.00 0.00 0.62 0.00 0.58 0.00 0.62 0.00 0.62 0.53 0.00
Uniform Del: 0.0 0.0 0.0 23.6 0.0 23.2 0.0 16.1 0.0 33.8 10.2 0.0
IncrmntDel: 0.0 0.0 0.0 1.1 0.0 1.7 0.0 0.7 0.0 5.9 0.3 0.0
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 0.00 0.00 0.00 1.00 0.00 1.00 0.00 1.00 0.00 1.00 1.00 0.00
Delay/Veh: 0.0 0.0 0.0 24.8 0.0 24.9 0.0 16.9 0.0 39.6 10.5 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 0.0 0.0 24.8 0.0 24.9 0.0 16.9 0.0 39.6 10.5 0.0
LOS by Move: A A A C A C A B A D B A
HCM2kAvgQ: 0 0 0 8 0 7 0 11 0 4 9 0

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

Intersection #25 Gravenstein Hwy and NB 101 Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.810
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 20.9
Optimal Cycle: 71 Level Of Service: C

Table with columns for Street Name (NB 101 Ramps, Gravenstein Hwy), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Protected, Permitted), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol., and values for each approach.

Saturation Flow Module: Table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat., and values for each approach.

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ, and values for each approach.

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #26 Millbrae Ave/Stony Point Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.544
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 21.3
Optimal Cycle: 44 Level Of Service: C

Table with columns: Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Protected, Split Phase), Rights (Include), Min. Green, Lanes.

Volume Module:

Table with columns: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module:

Table with columns: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with columns: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #27 Millbrae Ave/Primrose Ave

Average Delay (sec/veh): 0.3 Worst Case Level Of Service: B[12.1]

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

Volume Module:

Base Vol:	2	0	2	1	1	0	1	142	4	7	239	2
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:	2	0	2	1	1	0	1	142	4	7	239	2
Added Vol:	0	0	0	0	0	0	0	0	0	0	32	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	2	0	2	1	1	0	1	142	4	7	271	2
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	2	0	2	1	1	0	1	149	4	7	285	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	2	0	2	1	1	0	1	149	4	7	285	2
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	xxxxx	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	xxxxx	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	455	456	152	456	457	xxxxxx	287	xxxx	xxxxxx	154	xxxx	xxxxxx
Potent Cap.:	519	504	900	518	503	xxxxxx	1286	xxxx	xxxxxx	1439	xxxx	xxxxxx
Move Cap.:	515	501	900	515	500	xxxxxx	1286	xxxx	xxxxxx	1439	xxxx	xxxxxx
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	xxxx	0.00	xxxx	xxxx	0.01	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	0.0	xxxx	xxxxxx	0.0	xxxx	xxxxxx			
Control Del:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	7.8	xxxx	xxxxxx	7.5	xxxx	xxxxxx			
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	655	xxxxxx	507	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx			
SharedQueue:	xxxxxx	0.0	xxxxxx	0.0	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx			
Shrd ConDel:	xxxxxx	10.5	xxxxxx	12.1	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx			
Shared LOS:	*	B	*	B	*	*	*	*	*	*	*	*			
ApproachDel:	10.5			12.1			xxxxxxx			xxxxxxx					
ApproachLOS:	B			B			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #28 Millbrae Ave/Whistler Ave

Average Delay (sec/veh): 0.5 Worst Case Level Of Service: B[12.3]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 1 0 0 0 0 0 1! 0 0 0 0 1! 0 0 0 0 1! 0 0

Volume Module:

Base Vol: 1 10 0 3 1 1 2 129 2 4 253 8
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 1 10 0 3 1 1 2 129 2 4 253 8
Added Vol: 0 0 0 0 0 0 0 0 0 0 32 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 1 10 0 3 1 1 2 129 2 4 285 8
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 1 11 0 3 1 1 2 136 2 4 300 8
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 1 11 0 3 1 1 2 136 2 4 300 8

Critical Gap Module:

Critical Gp: 7.1 6.5 xxxxx 7.1 6.5 6.2 4.1 xxxxx xxxxx 4.1 xxxxx xxxxx
FollowUpTim: 3.5 4.0 xxxxx 3.5 4.0 3.3 2.2 xxxxx xxxxx 2.2 xxxxx xxxxx

Capacity Module:

Cnflict Vol: 455 458 xxxxx 459 455 304 308 xxxxx xxxxx 138 xxxxx xxxxx
Potent Cap.: 519 502 xxxxx 516 504 740 1264 xxxxx xxxxx 1458 xxxxx xxxxx
Move Cap.: 516 500 xxxxx 506 502 740 1264 xxxxx xxxxx 1458 xxxxx xxxxx
Volume/Cap: 0.00 0.02 xxxxx 0.01 0.00 0.00 0.00 xxxxx xxxxx 0.00 xxxxx xxxxx

Level Of Service Module:

2Way95thQ: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx 0.0 xxxxx xxxxx
Control Del: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 7.9 xxxxx xxxxx 7.5 xxxxx xxxxx
LOS by Move: * * * * * A * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: 501 xxxxx xxxxx xxxxx 539 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue: 0.1 xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd ConDel: 12.3 xxxxx xxxxx xxxxx 11.7 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: B * * * B * * * * *
ApproachDel: 12.3 11.7 xxxxxxx xxxxxxx
ApproachLOS: B B * *

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #29 Millbrae Ave/Langner Ave

Average Delay (sec/veh): 0.6 Worst Case Level Of Service: B[11.3]

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

Volume Module:

Base Vol:	6	0	9	0	0	0	0	153	10	4	321	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:	6	0	9	0	0	0	0	153	10	4	321	0
Added Vol:	11	0	0	0	0	0	0	0	0	0	22	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	17	0	9	0	0	0	0	153	10	4	343	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	18	0	9	0	0	0	0	161	11	4	361	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	18	0	9	0	0	0	0	161	11	4	361	0

Critical Gap Module:

Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	536	536	166	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	172	xxxx	xxxxx
Potent Cap.:	509	454	883	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1418	xxxx	xxxxx
Move Cap.:	508	453	883	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1418	xxxx	xxxxx
Volume/Cap:	0.04	0.00	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	596	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	0.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx			
Shrd ConDel:	xxxxx	11.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx			
Shared LOS:	*	B	*	*	*	*	*	*	*	A	*	*			
ApproachDel:	11.3			xxxxxxx			xxxxxxx			xxxxxxx					
ApproachLOS:	B			*			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #30 Millbrae Ave/Labath Ave

Average Delay (sec/veh): 3.3 Worst Case Level Of Service: B[12.8]

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

Volume Module:

Base Vol:	85	0	29	0	0	0	0	150	16	17	244	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:	85	0	29	0	0	0	0	150	16	17	244	0
Added Vol:	22	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	107	0	29	0	0	0	0	150	16	17	244	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	113	0	31	0	0	0	0	158	17	18	257	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	113	0	31	0	0	0	0	158	17	18	257	0

Critical Gap Module:

Critical Gp:	6.4	6.5	6.2	7.1	6.5	6.2	xxxxx	xxxxx	xxxxx	4.1	xxxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	xxxxx	xxxxx	xxxxx	2.2	xxxxx	xxxxx

Capacity Module:

Cnflict Vol:	459	459	166	474	467	257	xxxxx	xxxxx	xxxxx	175	xxxxx	xxxxx
Potent Cap.:	564	502	883	504	496	787	xxxxx	xxxxx	xxxxx	1414	xxxxx	xxxxx
Move Cap.:	558	495	883	482	490	787	xxxxx	xxxxx	xxxxx	1414	xxxxx	xxxxx
Volume/Cap:	0.20	0.00	0.03	0.00	0.00	0.00	xxxxx	xxxxx	xxxxx	0.01	xxxxx	xxxxx

Level Of Service Module:

2Way95thQ:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx			
Control Del:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	7.6	xxxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxxx	606	xxxxx	xxxxx	0	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
SharedQueue:	xxxxx	0.9	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shrd ConDel:	xxxxx	12.8	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	7.6	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shared LOS:	*	B	*	*	*	*	*	*	*	A	*	*	*	*	*
ApproachDel:	12.8			xxxxxxx			xxxxxxx			xxxxxxx					
ApproachLOS:	B			*			*			*					*

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #31 Millbrae Ave/Dowdell Ave

Average Delay (sec/veh): 0.8 Worst Case Level Of Service: B[11.3]

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

Volume Module:

Base Vol:	32	0	0	0	0	0	0	137	32	0	235	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:	32	0	0	0	0	0	0	137	32	0	235	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	32	0	0	0	0	0	0	137	32	0	235	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	34	0	0	0	0	0	0	144	34	0	247	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	34	0	0	0	0	0	0	144	34	0	247	0

Critical Gap Module:

Critical Gp:	6.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	408	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	603	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	603	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.06	xxxx	xxxx	xxxxx	xxxx	xxxxx	xxxx	xxxx	xxxx	xxxxx	xxxx	xxxxx

Level Of Service Module:

2Way95thQ:	0.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
Control Del:	11.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
LOS by Move:	B	*	*	*	*	*	*	*	*	*	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	11.3			xxxxxx			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	B			*			*			*			*		

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

**NEAR-TERM 2008 + ALTERNATIVE B
MITIGATED TRAFFIC CONDITIONS
(TRAFFIX)**

 Impact Analysis Report
 Level Of Service

Intersection	Base LOS	Base		Future LOS	Future		Change in
		Del/ Veh	V/ C		Del/ Veh	V/ C	
# 1 Wilfred Ave/Stony Point Rd	B	17.2	0.659	C	25.1	0.793	+ 7.912 D/V
# 2 Wilfred Ave/Primrose Ave	B	11.2	0.161	C	34.9	0.801	+23.650 D/V
# 3 Wilfred Ave/Whistler Ave	B	11.3	0.000	F	51.0	0.000	+39.644 D/V
# 4 Langner Ave/Wilfred Ave	B	11.3	0.000	F	50.2	0.000	+38.942 D/V
# 5 Wilfred Ave/Labath Ave	C	25.2	0.441	C	30.9	0.809	+ 5.696 D/V
# 6 Dowell Ave/Wilfred Ave	C	27.4	0.599	D	51.1	1.019	+23.662 D/V
# 7 Wilfred Ave/Redwood Dr	C	34.6	0.602	D	38.2	0.851	+ 3.590 D/V
# 8 Redwood Dr/Commerce Blvd	C	26.5	0.284	C	26.5	0.288	-0.053 D/V
# 9 Wilfred Ave/101 SB Ramp	C	30.3	0.617	D	49.0	0.988	+18.624 D/V
# 12 101 NB Ramps/Commerce Blvd	C	26.1	0.652	C	26.9	0.700	+ 0.796 D/V
# 13 New Driveway/Stony Point Rd	A	0.9	0.507	B	14.2	0.685	+13.254 D/V
# 15 Redwood Dr/Business Park Dr	D	26.5	0.000	D	26.5	0.000	+ 0.000 D/V
# 16 Rohnert Park Expwy/Stony Point	C	22.3	0.613	C	27.6	0.828	+ 5.356 D/V
# 17 Rohnert Park Expwy/Labath Ave	C	29.6	0.564	C	33.9	0.568	+ 4.345 D/V
# 18 Rohnert Park Expwy/Redwood Dr	C	23.5	0.806	C	26.7	0.871	+ 3.162 D/V
# 19 Rohnert Park Expwy/101 SB Ramp	C	24.2	0.679	C	24.1	0.749	-0.022 D/V
# 20 Rohnert Park Expwy/101 NB Ramp	F	OVRFL	0.428	F	OVRFL	0.648	-1393308246
# 21 Rohnert Park Expwy/Commerce Bl	C	33.2	0.799	C	33.2	0.799	-0.005 D/V
# 22 Gravenstein Hwy (SR 116)/ Ston	D	36.5	0.751	D	46.1	0.896	+ 9.677 D/V
# 23 Gravenstein Hwy (SR 116)/ Redw	C	32.5	0.695	C	32.4	0.776	-0.105 D/V
# 24 Gravenstein Hwy and SB 101 Ram	B	16.6	0.555	C	23.4	0.597	+ 6.821 D/V
# 25 Gravenstein Hwy and NB 101 Ram	B	17.0	0.693	C	25.2	0.849	+ 8.108 D/V
# 26 Millbrae Ave/Stony Point Rd	B	18.8	0.442	B	18.6	0.486	-0.222 D/V
# 27 Millbrae Ave/Primrose Ave	B	11.4	0.000	B	11.4	0.000	+ 0.000 D/V
# 28 Millbrae Ave/Whistler Ave	B	11.5	0.000	B	11.5	0.000	+ 0.000 D/V

Intersection		Base		Future		Change in
		Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C	
# 29 Millbrae Ave/Langner Ave	A	9.9	0.000	A 9.9	0.000	+ 0.000 D/V
# 30 Millbrae Ave/Labath Ave	B	11.2	0.000	B 11.2	0.000	+ 0.000 D/V
# 31 Millbrae Ave/Dowdell Ave	B	11.3	0.000	B 11.3	0.000	+ 0.000 D/V
# 55 Golf Course Dr/Commerce Blvd &	D	37.2	0.713	D 38.0	0.762	+ 0.800 D/V

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

Intersection #1 Wilfred Ave/Stony Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.793
Loss Time (sec): 12 (Y+R=0.0 sec) Average Delay (sec/veh): 25.1
Optimal Cycle: 75 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected, Split Phase), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic components and 13 rows of volume data including Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns and 4 rows showing Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns and 14 rows showing Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

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

Intersection #2 Wilfred Ave/Primrose Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.801
Loss Time (sec): 12 (Y+R=0.0 sec) Average Delay (sec/veh): 34.9
Optimal Cycle: 77 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Permitted, Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns for different volume metrics (Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.) and 4 rows of data.

Saturation Flow Module: Table with 13 columns for saturation flow metrics (Sat/Lane, Adjustment, Lanes, Final Sat.) and 4 rows of data.

Capacity Analysis Module: Table with 13 columns for capacity analysis metrics (Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ) and 13 rows of data.

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 Wilfred Ave/Whistler Ave

Average Delay (sec/veh): 2.0 Worst Case Level Of Service: F[51.0]

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

Volume Module:

Base Vol:	10	10	10	10	10	10	10	131	10	10	200	20
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:	10	10	10	10	10	10	10	131	10	10	200	20
Added Vol:	0	0	0	0	0	0	0	690	0	0	485	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	10	10	10	10	10	10	821	10	10	685	20
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	11	11	11	11	11	11	864	11	11	721	21
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	11	11	11	11	11	11	11	864	11	11	721	21

Critical Gap Module:

Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	1654	1654	869	1654	1648	732	742	xxxx	xxxxx	875	xxxx	xxxxx
Potent Cap.:	79	99	354	79	100	425	874	xxxx	xxxxx	780	xxxx	xxxxx
Move Cap.:	70	97	354	69	98	425	874	xxxx	xxxxx	780	xxxx	xxxxx
Volume/Cap:	0.15	0.11	0.03	0.15	0.11	0.02	0.01	xxxx	xxxx	0.01	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.2	xxxx	xxxxx	9.7	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	109	xxxxx	xxxx	111	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	1.1	xxxxx	xxxxx	1.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	51.0	xxxxx	xxxxx	49.9	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	F	*	*	E	*	*	*	*	*	*	*			
ApproachDel:	51.0			49.9			xxxxxxx			xxxxxxx					
ApproachLOS:	F			E			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Langner Ave/Wilfred Ave

Average Delay (sec/veh): 2.0 Worst Case Level Of Service: F[50.2]

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

Volume Module:

Base Vol:	10	10	10	10	10	10	10	130	10	10	200	10
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:	10	10	10	10	10	10	10	130	10	10	200	10
Added Vol:	0	0	0	0	0	0	0	690	0	0	485	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	10	10	10	10	10	10	820	10	10	685	10
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	11	11	11	11	11	11	863	11	11	721	11
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	11	11	11	11	11	11	11	863	11	11	721	11

Critical Gap Module:

Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	1647	1642	868	1647	1642	726	732	xxxx	xxxxx	874	xxxx	xxxxx
Potent Cap.:	80	101	355	80	101	428	882	xxxx	xxxxx	781	xxxx	xxxxx
Move Cap.:	70	98	355	70	98	428	882	xxxx	xxxxx	781	xxxx	xxxxx
Volume/Cap:	0.15	0.11	0.03	0.15	0.11	0.02	0.01	xxxx	xxxx	0.01	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.1	xxxx	xxxxx	9.7	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	110	xxxxx	xxxx	112	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	1.1	xxxxx	xxxxx	1.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	50.2	xxxxx	xxxxx	49.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	F	*	*	E	*	*	*	*	*	*	*			
ApproachDel:	50.2			49.3			xxxxxxx			xxxxxxx					
ApproachLOS:	F			E			*			*					

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

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

Intersection #5 Wilfred Ave/Labath Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.809
Loss Time (sec): 12 (Y+R=0.0 sec) Average Delay (sec/veh): 30.9
Optimal Cycle: 79 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Permitted, Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns for different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

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

Intersection #6 Dowell Ave/Wilfred Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 1.019
Loss Time (sec): 9 (Y+R=0.0 sec) Average Delay (sec/veh): 51.1
Optimal Cycle: 180 Level Of Service: D

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Permitted, Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns for different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

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

Intersection #7 Wilfred Ave/Redwood Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.851
 Loss Time (sec): 12 (Y+R=0.0 sec) Average Delay (sec/veh): 38.2
 Optimal Cycle: 91 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	2	0	1	0	2	0	0	1	0	0
	1	0	2	0	1	0	1	0	1	1	0	0

Volume Module:

Base Vol:	204	155	265	451	131	100	94	240	166	181	219	540
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:	204	155	265	451	131	100	94	240	166	181	219	540
Added Vol:	0	0	0	0	0	12	11	679	0	0	473	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	204	155	265	451	131	112	105	919	166	181	692	540
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	215	163	279	475	138	118	111	967	175	191	728	568
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	215	163	279	475	138	118	111	967	175	191	728	568
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	215	163	279	475	138	118	111	967	175	191	728	568

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	0.95	0.93	0.93	0.95	0.98	0.98	0.95	1.00	0.85
Lanes:	1.00	2.00	1.00	2.00	0.54	0.46	1.00	1.69	0.31	1.00	1.00	2.00
Final Sat.:	1805	3800	1615	3610	954	815	1805	3145	568	1805	1900	3230

Capacity Analysis Module:

Vol/Sat:	0.12	0.04	0.17	0.13	0.14	0.14	0.06	0.31	0.31	0.11	0.38	0.18
Crit Moves:			****	****			****			****		
Green/Cycle:	0.16	0.20	0.20	0.15	0.20	0.20	0.07	0.39	0.39	0.13	0.45	0.45
Volume/Cap:	0.74	0.21	0.85	0.85	0.74	0.74	0.85	0.79	0.79	0.79	0.85	0.39
Uniform Del:	39.9	33.2	38.4	41.2	37.8	37.8	45.9	27.0	27.0	42.0	24.5	18.3
IncrcmntDel:	9.5	0.1	18.7	11.9	8.1	8.1	38.3	3.0	3.0	16.1	8.2	0.2
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	49.4	33.3	57.1	53.1	45.8	45.8	84.2	30.0	30.0	58.1	32.6	18.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	49.4	33.3	57.1	53.1	45.8	45.8	84.2	30.0	30.0	58.1	32.6	18.5
LOS by Move:	D	C	E	D	D	D	F	C	C	E	C	B
HCM2kAvgQ:	8	2	11	10	9	9	6	17	17	8	22	6

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

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

 Intersection #8 Redwood Dr/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.288
 Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 26.5
 Optimal Cycle: 31 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	2	0	1	1	0	1	0	1	1	0

Volume Module:

Base Vol:	164	150	5	30	200	5	5	30	140	5	95	95
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:	164	150	5	30	200	5	5	30	140	5	95	95
Added Vol:	0	11	0	0	12	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	164	161	5	30	212	5	5	30	140	5	95	95
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	173	169	5	32	223	5	5	32	147	5	100	100
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	173	169	5	32	223	5	5	32	147	5	100	100
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	173	169	5	32	223	5	5	32	147	5	100	100

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.95	0.95	1.00	0.85	0.95	0.88	0.88
Lanes:	1.00	2.00	1.00	1.00	1.95	0.05	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	3610	1615	1805	3516	83	1805	1900	1615	1805	1670	1670

Capacity Analysis Module:

Vol/Sat:	0.10	0.05	0.00	0.02	0.06	0.06	0.00	0.02	0.09	0.00	0.06	0.06
Crit Moves:	****				****				****	****		
Green/Cycle:	0.33	0.40	0.40	0.15	0.22	0.22	0.02	0.32	0.32	0.01	0.31	0.31
Volume/Cap:	0.29	0.12	0.01	0.12	0.29	0.29	0.19	0.05	0.29	0.29	0.19	0.19
Uniform Del:	24.6	18.7	17.9	36.8	32.4	32.4	48.6	23.7	25.7	49.1	25.2	25.2
IncrcmntDel:	0.3	0.0	0.0	0.2	0.2	0.2	3.4	0.0	0.3	8.5	0.1	0.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	24.9	18.8	17.9	37.0	32.6	32.6	52.0	23.8	26.0	57.7	25.3	25.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	24.9	18.8	17.9	37.0	32.6	32.6	52.0	23.8	26.0	57.7	25.3	25.3
LOS by Move:	C	B	B	D	C	C	D	C	C	E	C	C
HCM2kAvgQ:	4	2	0	1	3	3	0	1	3	0	2	2

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

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

Intersection #9 Wilfred Ave/101 SB Ramp

Cycle (sec): 145 Critical Vol./Cap.(X): 0.988

Loss Time (sec): 9 (Y+R=0.0 sec) Average Delay (sec/veh): 49.0

Optimal Cycle: 180 Level Of Service: D

Street Name: US-101 SB Ramp Wilfred Avenue

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

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Control: Permitted Protected Permitted Protected

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 0 0 0 0 0 1 0 1 1 0 0 0 1 1 0 2 0 2 0 0

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Volume Module:

Base Vol: 0 0 0 328 324 459 0 737 219 89 476 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: 0 0 0 328 324 459 0 737 219 89 476 0

Added Vol: 0 0 0 0 0 218 0 204 475 0 255 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 0 0 0 328 324 677 0 941 694 89 731 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95

PHF Volume: 0 0 0 345 341 713 0 991 731 94 769 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 0 0 0 345 341 713 0 991 731 94 769 0

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Vol.: 0 0 0 345 341 713 0 991 731 94 769 0

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Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900

Adjustment: 1.00 1.00 1.00 0.85 0.90 0.90 1.00 0.94 0.94 0.95 1.00 1.00

Lanes: 0.00 0.00 0.00 1.00 1.00 1.00 0.00 1.15 0.85 2.00 2.00 0.00

Final Sat.: 0 0 0 1615 1708 1708 0 2047 1510 3610 3800 0

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Capacity Analysis Module:

Vol/Sat: 0.00 0.00 0.00 0.21 0.20 0.42 0.00 0.48 0.48 0.03 0.20 0.00

Crit Moves: **** **** ****

Green/Cycle: 0.00 0.00 0.00 0.42 0.42 0.42 0.00 0.49 0.49 0.03 0.52 0.00

Volume/Cap: 0.00 0.00 0.00 0.51 0.47 0.99 0.00 0.99 0.99 0.99 0.39 0.00

Uniform Del: 0.0 0.0 0.0 30.8 30.3 41.5 0.0 36.6 36.6 70.6 21.3 0.0

IncremntDel: 0.0 0.0 0.0 0.6 0.2 24.7 0.0 18.8 18.8 87.8 0.1 0.0

InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

Delay Adj: 0.00 0.00 0.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 0.00

Delay/Veh: 0.0 0.0 0.0 31.4 30.4 66.2 0.0 55.4 55.4 158.4 21.4 0.0

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 0.0 0.0 0.0 31.4 30.4 66.2 0.0 55.4 55.4 158.4 21.4 0.0

LOS by Move: A A A C C E A E E F C A

HCM2kAvgQ: 0 0 0 11 11 37 0 44 44 4 10 0

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #12 101 NB Ramps/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.700
Loss Time (sec): 12 (Y+R=0.0 sec) Average Delay (sec/veh): 26.9
Optimal Cycle: 59 Level Of Service: C

Table with columns for Approach (North, South, East, West Bound) and Movement (L, T, R). Rows include Control, Rights, Min. Green, and Lanes.

Volume Module:

Table with 13 columns representing different traffic movements and 13 rows of volume-related metrics like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module:

Table with 13 columns and 4 rows showing Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with 13 columns and 13 rows showing various capacity and delay metrics like Vol/Sat, Crit Moves, Green/Cycle, etc.

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #13 New Driveway/Stony Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.685

Loss Time (sec): 9 (Y+R=0.0 sec) Average Delay (sec/veh): 14.2

Optimal Cycle: 49 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Control:	Permitted			Permitted			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1	0	0	1	0	0	0	1	0	0

Volume Module:

Base Vol:	0	832	0	0	634	0	0	0	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
Initial Bse:	0	832	0	0	634	0	0	0	0	0	0	0
Added Vol:	0	0	606	0	0	0	0	0	0	278	0	86
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	832	606	0	634	0	0	0	0	278	0	86
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	876	638	0	667	0	0	0	0	293	0	91
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	876	638	0	667	0	0	0	0	293	0	91
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	876	638	0	667	0	0	0	0	293	0	91

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	0.85	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.85
Lanes:	0.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	1900	1615	0	1900	0	0	0	0	1805	0	1615

Capacity Analysis Module:

Vol/Sat:	0.00	0.46	0.39	0.00	0.35	0.00	0.00	0.00	0.00	0.16	0.00	0.06
Crit Moves:	****			****								
Green/Cycle:	0.00	0.67	0.67	0.00	0.67	0.00	0.00	0.00	0.00	0.24	0.00	0.24
Volume/Cap:	0.00	0.68	0.59	0.00	0.52	0.00	0.00	0.00	0.00	0.68	0.00	0.24
Uniform Del:	0.0	9.9	8.8	0.0	8.2	0.0	0.0	0.0	0.0	34.8	0.0	30.9
IncrcmntDel:	0.0	1.6	0.8	0.0	0.4	0.0	0.0	0.0	0.0	4.6	0.0	0.3
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Delay/Veh:	0.0	11.5	9.7	0.0	8.6	0.0	0.0	0.0	0.0	39.3	0.0	31.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	11.5	9.7	0.0	8.6	0.0	0.0	0.0	0.0	39.3	0.0	31.2
LOS by Move:	A	B	A	A	A	A	A	A	A	D	A	C
HCM2kAvgQ:	0	17	11	0	10	0	0	0	0	9	0	2

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #15 Redwood Dr/Business Park Dr

Average Delay (sec/veh): 5.6 Worst Case Level Of Service: D[26.5]

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:	1	0	2	0	0	1	1	0	0	1	0	0

Volume Module:

Base Vol:	33	464	0	0	489	41	172	0	89	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:	33	464	0	0	489	41	172	0	89	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	33	464	0	0	489	41	172	0	89	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	35	488	0	0	515	43	181	0	94	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	35	488	0	0	515	43	181	0	94	0	0	0

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.8	6.5	6.9	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	558	xxxx	xxxxx	xxxx	xxxx	xxxxx	850	1094	279	xxxx	xxxx	xxxxx
Potent Cap.:	1023	xxxx	xxxxx	xxxx	xxxx	xxxxx	303	216	724	xxxx	xxxx	xxxxx
Move Cap.:	1023	xxxx	xxxxx	xxxx	xxxx	xxxxx	296	208	724	xxxx	xxxx	xxxxx
Volume/Cap:	0.03	xxxx	xxxx	xxxx	xxxx	xxxx	0.61	0.00	0.13	xxxx	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	3.8	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	8.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	34.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	*	*	*	D	*	*	*	*	*
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	724	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	0.4	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	10.7	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	B	*	*	*
ApproachDel:	xxxxxx			xxxxxx			26.5			xxxxxx		
ApproachLOS:	*			*			D			*		

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

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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)
*****
Intersection #16 Rohnert Park Expwy/Stony Point Rd
*****
Cycle (sec):          100          Critical Vol./Cap.(X):          0.828
Loss Time (sec):      6 (Y+R=0.0 sec) Average Delay (sec/veh):          27.6
Optimal Cycle:        65          Level Of Service:          C
*****
Approach:      North Bound      South Bound      East Bound      West Bound
Movement:      L - T - R      L - T - R      L - T - R      L - T - R
-----|-----|-----|-----|
Control:        Permitted      Protected      Permitted      Protected
Rights:         Include      Include      Include      Include
Min. Green:     0 0 0 0      0 0 0 0      0 0 0 0      0 0 0 0
Lanes:          0 0 1 0 1      1 0 1 0 0      0 0 0 0 0      1 0 0 0 2
-----|-----|-----|-----|
Volume Module:
Base Vol:       0 546 251 212 421 0 0 0 0 257 0 286
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:   0 546 251 212 421 0 0 0 0 257 0 286
Added Vol:     0 243 0 11 267 0 0 0 0 0 0 0 363
PasserByVol:  0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut:   0 789 251 223 688 0 0 0 0 257 0 649
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:       0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume:    0 831 264 235 724 0 0 0 0 271 0 683
Reduct Vol:    0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol:   0 831 264 235 724 0 0 0 0 271 0 683
PCE Adj:       1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj:       1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.:    0 831 264 235 724 0 0 0 0 271 0 683
-----|-----|-----|-----|
Saturation Flow Module:
Sat/Lane:      1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment:    1.00 1.00 0.85 0.95 1.00 1.00 1.00 1.00 1.00 0.95 1.00 0.85
Lanes:         0.00 1.00 1.00 1.00 1.00 0.00 0.00 0.00 0.00 1.00 0.00 2.00
Final Sat.:    0 1900 1615 1805 1900 0 0 0 0 1805 0 3230
-----|-----|-----|-----|
Capacity Analysis Module:
Vol/Sat:       0.00 0.44 0.16 0.13 0.38 0.00 0.00 0.00 0.00 0.15 0.00 0.21
Crit Moves:    ****          ****          ****
Green/Cycle:   0.00 0.53 0.53 0.16 0.68 0.00 0.00 0.00 0.00 0.26 0.00 0.26
Volume/Cap:    0.00 0.83 0.31 0.83 0.56 0.00 0.00 0.00 0.00 0.59 0.00 0.83
Uniform Del:   0.0 19.8 13.3 40.8 8.0 0.0 0.0 0.0 0.0 32.6 0.0 35.2
IncrcmntDel:   0.0 5.8 0.2 18.0 0.5 0.0 0.0 0.0 0.0 2.0 0.0 7.0
InitQueuDel:   0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj:     0.00 1.00 1.00 1.00 1.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00
Delay/Veh:     0.0 25.7 13.5 58.9 8.6 0.0 0.0 0.0 0.0 34.6 0.0 42.2
User DelAdj:   1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh:    0.0 25.7 13.5 58.9 8.6 0.0 0.0 0.0 0.0 34.6 0.0 42.2
LOS by Move:   A C B E A A A A A C A D
HCM2kAvgQ:     0 23 5 9 11 0 0 0 0 8 0 12
*****

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

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

 Intersection #17 Rohnert Park Expwy/Labath Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.568
 Loss Time (sec): 12 (Y+R=0.0 sec) Average Delay (sec/veh): 33.9
 Optimal Cycle: 46 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	0	1	1	1	1	0	0	1	0	1

Volume Module:

Base Vol:	64	19	154	270	43	99	50	600	36	202	575	154
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:	64	19	154	270	43	99	50	600	36	202	575	154
Added Vol:	0	0	0	0	0	0	0	11	0	0	363	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	64	19	154	270	43	99	50	611	36	202	938	154
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	67	20	162	284	45	104	53	643	38	213	987	162
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	67	20	162	284	45	104	53	643	38	213	987	162
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	67	20	162	284	45	104	53	643	38	213	987	162

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.87	0.87	0.95	0.90	0.90	0.95	1.00	0.85	0.95	1.00	0.85
Lanes:	2.00	0.22	1.78	1.00	0.30	0.70	1.00	2.00	1.00	1.00	3.00	1.00
Final Sat.:	3610	362	2933	1805	515	1186	1805	3800	1615	1805	5700	1615

Capacity Analysis Module:

Vol/Sat:	0.02	0.06	0.06	0.16	0.09	0.09	0.03	0.17	0.02	0.12	0.17	0.10
Crit Moves:	****			****			****			****		
Green/Cycle:	0.07	0.12	0.12	0.25	0.29	0.29	0.26	0.28	0.28	0.24	0.26	0.26
Volume/Cap:	0.27	0.46	0.46	0.63	0.30	0.30	0.11	0.60	0.08	0.49	0.67	0.39
Uniform Del:	44.1	41.0	41.0	33.4	27.6	27.6	28.2	31.2	26.5	32.7	33.1	30.4
IncrcmntDel:	0.6	0.9	0.9	2.9	0.3	0.3	0.1	1.0	0.1	0.9	1.2	0.6
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	44.6	41.8	41.8	36.2	28.0	28.0	28.3	32.2	26.6	33.6	34.3	31.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	44.6	41.8	41.8	36.2	28.0	28.0	28.3	32.2	26.6	33.6	34.3	31.0
LOS by Move:	D	D	D	D	C	C	C	C	C	C	C	C
HCM2kAvgQ:	1	3	3	9	4	4	1	9	1	6	10	4

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #18 Rohnert Park Expwy/Redwood Dr

Cycle (sec): 50 Critical Vol./Cap.(X): 0.871
Loss Time (sec): 12 (Y+R=0.0 sec) Average Delay (sec/veh): 26.7
Optimal Cycle: 67 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module:

Table with 13 columns representing different traffic volumes and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module:

Table with 13 columns for saturation flow metrics: Sat/Lane, Adjustment, Lanes, Final Sat., etc.

Capacity Analysis Module:

Table with 13 columns for capacity analysis metrics: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, etc.

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #19 Rohnert Park Expwy/101 SB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.749
 Loss Time (sec): 12 (Y+R=0.0 sec) Average Delay (sec/veh): 24.1
 Optimal Cycle: 67 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1	0	0	1	0	0	2	1	0	1

Volume Module:

Base Vol:	7	0	17	702	1	351	0	1208	278	68	1024	199
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:	7	0	17	702	1	351	0	1208	278	68	1024	199
Added Vol:	0	0	0	0	0	0	0	11	0	0	363	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	7	0	17	702	1	351	0	1219	278	68	1387	199
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00
PHF Volume:	7	0	18	739	1	369	0	1283	293	72	1460	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	7	0	18	739	1	369	0	1283	293	72	1460	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Final Vol.:	7	0	18	739	1	369	0	1283	293	72	1460	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.88	1.00	0.88	0.71	0.71	0.85	1.00	0.97	0.97	0.95	1.00	1.00
Lanes:	0.29	0.00	0.71	1.99	0.01	1.00	0.00	2.44	0.56	1.00	2.00	1.00
Final Sat.:	485	0	1179	2687	4	1615	0	4512	1029	1805	3800	1900

Capacity Analysis Module:

Vol/Sat:	0.02	0.00	0.02	0.28	0.28	0.23	0.00	0.28	0.28	0.04	0.38	0.00
Crit Moves:				****			****			****		
Green/Cycle:	0.37	0.00	0.37	0.37	0.37	0.37	0.00	0.45	0.45	0.06	0.51	0.00
Volume/Cap:	0.04	0.00	0.04	0.75	0.75	0.62	0.00	0.63	0.63	0.63	0.75	0.00
Uniform Del:	20.3	0.0	20.3	27.6	27.6	26.0	0.0	21.1	21.1	45.7	19.3	0.0
IncrcmntDel:	0.0	0.0	0.0	3.2	3.2	2.1	0.0	0.5	0.5	11.0	1.7	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	20.4	0.0	20.4	30.8	30.8	28.0	0.0	21.7	21.7	56.8	20.9	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	20.4	0.0	20.4	30.8	30.8	28.0	0.0	21.7	21.7	56.8	20.9	0.0
LOS by Move:	C	A	C	C	C	C	A	C	C	E	C	A
HCM2kAvgQ:	0	0	0	12	12	10	0	13	13	3	19	0

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

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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)
*****
Intersection #20 Rohnert Park Expwy/101 NB Ramps
*****
Cycle (sec):          100          Critical Vol./Cap.(X):          0.648
Loss Time (sec):      6 (Y+R=0.0 sec) Average Delay (sec/veh):      OVERFLOW
Optimal Cycle:        37          Level Of Service:          F
*****
Approach:      North Bound      South Bound      East Bound      West Bound
Movement:      L - T - R      L - T - R      L - T - R      L - T - R
-----|-----|-----|-----|
Control:        Protected      Protected      Permitted      Permitted
Rights:         Include      Include      Ignore      Ignore
Min. Green:     0 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes:          1 0 0 1 1 1 0 0 0 1 1 0 4 0 1 0 0 3 0 1
-----|-----|-----|-----|
Volume Module:
Base Vol:       303 0 306 14 0 3 17 1631 273 0 985 350
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:    303 0 306 14 0 3 17 1631 273 0 985 350
Added Vol:     351 0 0 0 0 0 0 11 0 0 12 0
PasserByVol:   0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut:   654 0 306 14 0 3 17 1642 273 0 997 350
User Adj:      1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00
PHF Adj:       0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.00 0.95 0.95 0.00
PHF Volume:    688 0 322 15 0 3 18 1728 0 0 1049 0
Reduct Vol:    0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol:   688 0 322 15 0 3 18 1728 0 0 1049 0
PCE Adj:       1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00
MLF Adj:       1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00
Final Vol.:    688 0 322 15 0 3 18 1728 0 0 1049 0
-----|-----|-----|-----|
Saturation Flow Module:
Sat/Lane:      1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment:    0.95 1.00 0.85 0.95 1.00 0.85 0.18 1.00 1.00 1.00 1.00 1.00
Lanes:         1.00 0.00 2.00 1.00 0.00 1.00 1.00 4.00 1.00 0.00 3.00 1.00
Final Sat.:   1805 0 3230 1805 0 1615 334 7600 1900 0 5700 1900
-----|-----|-----|-----|
Capacity Analysis Module:
Vol/Sat:       0.38 0.00 0.10 0.01 0.00 0.00 0.05 0.23 0.00 0.00 0.18 0.00
Crit Moves:    ****          ****          ****
Green/Cycle:   0.59 0.00 0.54 0.04 0.00 0.00 0.35 0.35 0.00 0.00 0.35 0.00
Volume/Cap:    0.65 0.00 0.18 0.18 0.00 xxxx 0.15 0.65 0.00 0.00 0.52 0.00
Uniform Del:   13.7 0.0 11.5 46.0 0.0 50.0 22.2 27.2 0.0 0.0 25.8 0.0
IncrcmntDel:   1.4 0.0 0.1 1.1 0.0 xxxxxx 0.6 0.6 0.0 0.0 0.3 0.0
InitQueuDel:   0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj:     1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00 0.00 0.00 1.00 0.00
Delay/Veh:     15.1 0.0 11.6 47.1 0.0 xxxxxx 22.8 27.8 0.0 0.0 26.1 0.0
User DelAdj:   1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh:    15.1 0.0 11.6 47.1 0.0 xxxxxx 22.8 27.8 0.0 0.0 26.1 0.0
LOS by Move:   B A B D A F C C A A C A
HCM2kAvgQ:     14 0 2 1 0 1 1 12 0 0 9 0
*****

```

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #21 Rohnert Park Expwy/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.799
Loss Time (sec): 12 (Y+R=0.0 sec) Average Delay (sec/veh): 33.2
Optimal Cycle: 77 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module:

Table with 13 columns representing different traffic movements and 13 rows of volume-related metrics like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module:

Table with 13 columns and 4 rows showing saturation flow metrics like Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with 13 columns and 13 rows showing capacity analysis metrics like Vol/Sat, Crit Moves, Green/Cycle, etc.

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

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

 Intersection #22 Gravenstein Hwy (SR 116)/ Stony Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.896
 Loss Time (sec): 12 (Y+R=0.0 sec) Average Delay (sec/veh): 46.1
 Optimal Cycle: 108 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound							
Movement:	L	T	R	L	T	R	L	T	R	L	T	R					
Control:	Protected			Protected			Protected			Protected							
Rights:	Include			Include			Include			Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0					
Lanes:	1	0	1	0	1	0	1	1	0	1	1	0	1	0	2	0	1

Volume Module:

Base Vol:	321	494	108	96	342	219	133	484	202	128	589	103
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	321	494	108	96	342	219	133	484	202	128	589	103
Added Vol:	0	0	0	267	0	0	0	0	0	0	0	243
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	321	494	108	363	342	219	133	484	202	128	589	346
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	338	520	114	382	360	231	140	509	213	135	620	364
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	338	520	114	382	360	231	140	509	213	135	620	364
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	338	520	114	382	360	231	140	509	213	135	620	364

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.91	0.91	0.95	0.95	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.41	0.59	1.00	2.00	1.00
Final Sat.:	1805	1900	1615	1805	1900	1615	1805	2435	1016	1805	3610	1615

Capacity Analysis Module:

Vol/Sat:	0.19	0.27	0.07	0.21	0.19	0.14	0.08	0.21	0.21	0.07	0.17	0.23
Crit Moves:	****			****			****			****		
Green/Cycle:	0.27	0.31	0.31	0.24	0.27	0.27	0.09	0.25	0.25	0.09	0.25	0.25
Volume/Cap:	0.70	0.90	0.23	0.90	0.70	0.52	0.90	0.84	0.84	0.84	0.68	0.90
Uniform Del:	32.9	33.2	25.9	37.0	32.6	30.9	45.2	35.6	35.6	44.8	33.8	36.2
IncrcmntDel:	4.4	16.5	0.2	20.9	4.1	1.2	43.1	7.4	7.4	30.6	2.1	21.7
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	37.2	49.7	26.2	57.9	36.8	32.0	88.3	43.0	43.0	75.4	35.9	57.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	37.2	49.7	26.2	57.9	36.8	32.0	88.3	43.0	43.0	75.4	35.9	57.9
LOS by Move:	D	D	C	E	D	C	F	D	D	E	D	E
HCM2kAvgQ:	10	19	3	15	11	6	7	14	14	6	10	14

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #23 Gravenstein Hwy (SR 116)/ Redwood Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.776

Loss Time (sec): 12 (Y+R=0.0 sec) Average Delay (sec/veh): 32.4

Optimal Cycle: 72 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	0	1	0	1	1	0	2

Volume Module:

Base Vol:	48	24	63	485	29	96	102	625	32	53	738	333
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	24	63	485	29	96	102	625	32	53	738	333
Added Vol:	0	0	0	0	0	0	0	267	0	0	243	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	48	24	63	485	29	96	102	892	32	53	981	333
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	51	25	66	511	31	101	107	939	34	56	1033	351
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	51	25	66	511	31	101	107	939	34	56	1033	351
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	51	25	66	511	31	101	107	939	34	56	1033	351

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.89	0.89	0.95	0.89	0.89	0.95	0.95	0.95	0.95	0.95	0.85
Lanes:	1.00	0.28	0.72	1.00	0.23	0.77	1.00	1.93	0.07	1.00	2.00	1.00
Final Sat.:	1805	467	1226	1805	390	1291	1805	3468	124	1805	3610	1615

Capacity Analysis Module:

Vol/Sat:	0.03	0.05	0.05	0.28	0.08	0.08	0.06	0.27	0.27	0.03	0.29	0.22
Crit Moves:	****			****			****			****		
Green/Cycle:	0.11	0.07	0.07	0.36	0.32	0.32	0.08	0.40	0.40	0.05	0.37	0.37
Volume/Cap:	0.24	0.78	0.78	0.78	0.24	0.24	0.78	0.68	0.68	0.68	0.78	0.59
Uniform Del:	40.3	45.7	45.7	28.1	25.1	25.1	45.3	24.7	24.7	47.0	27.9	25.4
IncrcmntDel:	0.6	26.9	26.9	5.8	0.2	0.2	23.5	1.3	1.3	20.2	2.9	1.5
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	41.0	72.6	72.6	33.9	25.3	25.3	68.8	26.0	26.0	67.2	30.8	27.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	41.0	72.6	72.6	33.9	25.3	25.3	68.8	26.0	26.0	67.2	30.8	27.0
LOS by Move:	D	E	E	C	C	C	E	C	C	E	C	C
HCM2kAvgQ:	2	5	5	16	3	3	5	14	14	3	16	9

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #24 Gravenstein Hwy and SB 101 Ramps

Cycle (sec): 75 Critical Vol./Cap.(X): 0.597
Loss Time (sec): 9 (Y+R=0.0 sec) Average Delay (sec/veh): 23.4
Optimal Cycle: 79 Level Of Service: C

Street Name: SB 101 Ramps Gravenstein Hwy
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Permitted Protected
Rights: Include Include Ignore Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 0 0 0 2 0 0 1 0 0 0 2 0 1 1 0 2 0 0

Volume Module:
Base Vol: 0 0 0 639 0 212 0 819 361 99 900 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: 0 0 0 639 0 212 0 819 361 99 900 0
Added Vol: 0 0 0 0 0 0 0 0 0 267 0 243 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 639 0 212 0 819 628 99 1143 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.00 0.95 0.95 0.95
PHF Volume: 0 0 0 673 0 223 0 862 0 104 1203 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 0 0 673 0 223 0 862 0 104 1203 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
Final Vol.: 0 0 0 673 0 223 0 862 0 104 1203 0

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 1.00 1.00 1.00 0.92 1.00 0.85 1.00 0.95 1.00 0.95 0.95 1.00
Lanes: 0.00 0.00 0.00 2.00 0.00 1.00 0.00 2.00 1.00 1.00 2.00 0.00
Final Sat.: 0 0 0 3502 0 1615 0 3610 1900 1805 3610 0

Capacity Analysis Module:
Vol/Sat: 0.00 0.00 0.00 0.19 0.00 0.14 0.00 0.24 0.00 0.06 0.33 0.00
Crit Moves: ****
Green/Cycle: 0.00 0.00 0.00 0.22 0.00 0.22 0.00 0.28 0.00 0.38 0.66 0.00
Volume/Cap: 0.00 0.00 0.00 0.87 0.00 0.62 0.00 0.87 0.00 0.15 0.51 0.00
Uniform Del: 0.0 0.0 0.0 28.2 0.0 26.4 0.0 25.9 0.0 15.1 6.5 0.0
IncrmntDel: 0.0 0.0 0.0 10.3 0.0 3.4 0.0 8.3 0.0 0.1 0.2 0.0
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 0.00 0.00 0.00 1.00 0.00 1.00 0.00 1.00 0.00 1.00 1.00 0.00
Delay/Veh: 0.0 0.0 0.0 38.5 0.0 29.8 0.0 34.2 0.0 15.2 6.7 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 0.0 0.0 38.5 0.0 29.8 0.0 34.2 0.0 15.2 6.7 0.0
LOS by Move: A A A D A C A C A B A A
HCM2kAvgQ: 0 0 0 11 0 6 0 13 0 2 8 0

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

Intersection #25 Gravenstein Hwy and NB 101 Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.849
Loss Time (sec): 9 (Y+R=0.0 sec) Average Delay (sec/veh): 25.2
Optimal Cycle: 82 Level Of Service: C

Street Name: NB 101 Ramps Gravenstein Hwy
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Permitted Permitted Permitted
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 0 0 1 0 0 0 0 0 0 2 0 0 0 0 0 0 0

Volume Module:
Base Vol: 351 0 236 0 0 0 0 0 1461 0 0 617 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: 351 0 236 0 0 0 0 0 1461 0 0 617 0
Added Vol: 243 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 594 0 236 0 0 0 0 0 1461 0 0 617 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 625 0 248 0 0 0 0 0 1538 0 0 649 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 625 0 248 0 0 0 0 0 1538 0 0 649 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 625 0 248 0 0 0 0 0 1538 0 0 649 0

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 1.00 0.85 1.00 1.00 1.00 1.00 0.95 1.00 1.00 0.95 1.00
Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 2.00 0.00 0.00 2.00 0.00
Final Sat.: 1805 0 1615 0 0 0 0 0 3610 0 0 3610 0

Capacity Analysis Module:
Vol/Sat: 0.35 0.00 0.15 0.00 0.00 0.00 0.00 0.43 0.00 0.00 0.18 0.00
Crit Moves: ****
Green/Cycle: 0.41 0.00 0.41 0.00 0.00 0.00 0.00 0.50 0.00 0.00 0.50 0.00
Volume/Cap: 0.85 0.00 0.38 0.00 0.00 0.00 0.00 0.85 0.00 0.00 0.36 0.00
Uniform Del: 26.8 0.0 20.7 0.0 0.0 0.0 0.0 21.6 0.0 0.0 15.1 0.0
IncrmntDel: 9.2 0.0 0.4 0.0 0.0 0.0 0.0 4.0 0.0 0.0 0.1 0.0
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 1.00 0.00 0.00 1.00 0.00
Delay/Veh: 36.0 0.0 21.1 0.0 0.0 0.0 0.0 25.6 0.0 0.0 15.2 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 36.0 0.0 21.1 0.0 0.0 0.0 0.0 25.6 0.0 0.0 15.2 0.0
LOS by Move: D A C A A A A C A A B A
HCM2kAvgQ: 20 0 5 0 0 0 0 24 0 0 6 0

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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)
*****
Intersection #26 Millbrae Ave/Stony Point Rd
*****
Cycle (sec):          100          Critical Vol./Cap.(X):          0.486
Loss Time (sec):      9 (Y+R=0.0 sec) Average Delay (sec/veh):          18.6
Optimal Cycle:        33          Level Of Service:          B
*****
Approach:      North Bound      South Bound      East Bound      West Bound
Movement:      L - T - R      L - T - R      L - T - R      L - T - R
-----|-----|-----|-----|
Control:      Protected      Protected      Permitted      Permitted
Rights:      Include      Include      Include      Include
Min. Green:    0 0 0 0      0 0 0 0      0 0 0 0      0 0 0 0
Lanes:        1 0 2 0 1      1 0 1 1 0      0 0 1! 0 0      0 1 0 0 1
-----|-----|-----|-----|
Volume Module:
Base Vol:      19 715 20 116 546 4 7 6 11 2 7 194
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:    19 715 20 116 546 4 7 6 11 2 7 194
Added Vol:     0 86 0 0 121 0 0 0 0 0 0 22
PasserByVol:   0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut:    19 801 20 116 667 4 7 6 11 2 7 216
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:       0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume:    20 843 21 122 702 4 7 6 12 2 7 227
Reduct Vol:    0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol:   20 843 21 122 702 4 7 6 12 2 7 227
PCE Adj:       1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj:       1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.:    20 843 21 122 702 4 7 6 12 2 7 227
-----|-----|-----|-----|
Saturation Flow Module:
Sat/Lane:      1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment:    0.95 0.95 0.85 0.95 0.95 0.95 0.91 0.91 0.91 0.99 0.99 0.85
Lanes:         1.00 2.00 1.00 1.00 1.99 0.01 0.29 0.25 0.46 0.22 0.78 1.00
Final Sat.:    1805 3610 1615 1805 3585 21 503 431 791 418 1462 1615
-----|-----|-----|-----|
Capacity Analysis Module:
Vol/Sat:       0.01 0.23 0.01 0.07 0.20 0.20 0.01 0.01 0.01 0.01 0.01 0.14
Crit Moves:    ****          ****          ****
Green/Cycle:   0.03 0.48 0.48 0.14 0.59 0.59 0.29 0.29 0.29 0.29 0.29 0.29
Volume/Cap:    0.33 0.49 0.03 0.49 0.33 0.33 0.05 0.05 0.05 0.02 0.02 0.49
Uniform Del:   47.3 17.6 13.7 39.7 10.6 10.6 25.6 25.6 25.6 25.3 25.3 29.3
IncrcmntDel:   3.3 0.2 0.0 1.5 0.1 0.1 0.0 0.0 0.0 0.0 0.0 0.8
InitQueuDel:   0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj:     1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Delay/Veh:     50.5 17.8 13.7 41.2 10.7 10.7 25.6 25.6 25.6 25.4 25.4 30.1
User DelAdj:   1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh:    50.5 17.8 13.7 41.2 10.7 10.7 25.6 25.6 25.6 25.4 25.4 30.1
LOS by Move:   D B B D B B C C C C C C
HCM2kAvgQ:     1 9 0 4 6 6 1 1 1 0 0 6
*****

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #27 Millbrae Ave/Primrose Ave

Average Delay (sec/veh): 0.8 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:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	1! 0 0	0	0	1 0 0	0	0	1! 0 0	0	0	1! 0 0

Volume Module:

Base Vol:	0	0	1	0	1	0	1	139	3	4	199	2
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	1	0	1	0	1	139	3	4	199	2
Added Vol:	22	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	22	0	1	0	1	0	1	139	3	4	199	2
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	23	0	1	0	1	0	1	146	3	4	209	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	23	0	1	0	1	0	1	146	3	4	209	2

Critical Gap Module:

Critical Gp:	7.1	6.5	6.2	xxxxx	6.5	xxxxx	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	4.0	xxxxx	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	369	370	148	xxxx	371	xxxxx	212	xxxx	xxxxx	149	xxxx	xxxxx
Potent Cap.:	591	563	904	xxxx	562	xxxxx	1371	xxxx	xxxxx	1444	xxxx	xxxxx
Move Cap.:	588	561	904	xxxx	560	xxxxx	1371	xxxx	xxxxx	1444	xxxx	xxxxx
Volume/Cap:	0.04	0.00	0.00	xxxx	0.00	xxxx	0.00	xxxx	xxxx	0.00	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	0.0	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	11.4	xxxxx	7.6	xxxx	xxxxx	7.5	xxxx	xxxxx			
LOS by Move:	*	*	*	*	B	*	A	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	597	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	0.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	11.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	B	*	*	*	*	*	*	*	*	*	*			
ApproachDel:	11.3			11.4			xxxxxxx			xxxxxxx					
ApproachLOS:	B			B			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #28 Millbrae Ave/Whistler Ave

Average Delay (sec/veh): 0.6 Worst Case Level Of Service: B[11.5]

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

Volume Module:

Base Vol:	1	9	0	4	0	1	1	123	2	4	208	8
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	9	0	4	0	1	1	123	2	4	208	8
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1	9	0	4	0	1	1	123	2	4	208	8
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	1	9	0	4	0	1	1	129	2	4	219	8
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	1	9	0	4	0	1	1	129	2	4	219	8

Critical Gap Module:

Critical Gp:	7.1	6.5	xxxxx	7.1	6.5	6.2	4.1	xxxxx	xxxxx	4.1	xxxxx	xxxxx
FollowUpTim:	3.5	4.0	xxxxx	3.5	4.0	3.3	2.2	xxxxx	xxxxx	2.2	xxxxx	xxxxx

Capacity Module:

Cnflict Vol:	365	368	xxxxx	369	365	223	227	xxxxx	xxxxx	132	xxxxx	xxxxx
Potent Cap.:	595	564	xxxxx	591	566	821	1353	xxxxx	xxxxx	1466	xxxxx	xxxxx
Move Cap.:	593	562	xxxxx	582	564	821	1353	xxxxx	xxxxx	1466	xxxxx	xxxxx
Volume/Cap:	0.00	0.02	xxxxx	0.01	0.00	0.00	0.00	xxxxx	xxxxx	0.00	xxxxx	xxxxx

Level Of Service Module:

2Way95thQ:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	0.0	xxxxx	xxxxx
Control Del:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	7.7	xxxxx	xxxxx	7.5	xxxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	565	xxxxx	xxxxx	xxxxx	618	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
SharedQueue:	0.1	xxxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shrd ConDel:	11.5	xxxxx	xxxxx	xxxxx	10.9	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shared LOS:	B	*	*	*	B	*	*	*	*	*	*	*
ApproachDel:	11.5			10.9			xxxxxxx			xxxxxxx		
ApproachLOS:	B			B			*			*		

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #29 Millbrae Ave/Langner Ave

Average Delay (sec/veh): 0.4 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:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	1!	0	0	0	0	0	0	1	0	0

Volume Module:

Base Vol:	5	0	11	0	0	0	0	149	9	4	270	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:	5	0	11	0	0	0	0	149	9	4	270	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	5	0	11	0	0	0	0	149	9	4	270	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	5	0	12	0	0	0	0	157	9	4	284	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	5	0	12	0	0	0	0	157	9	4	284	0

Critical Gap Module:

Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	454	454	162	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	166	xxxx	xxxxx
Potent Cap.:	567	505	889	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1424	xxxx	xxxxx
Move Cap.:	566	503	889	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1424	xxxx	xxxxx
Volume/Cap:	0.01	0.00	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	754	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	0.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx			
Shrd ConDel:	xxxxx	9.9	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx			
Shared LOS:	*	A	*	*	*	*	*	*	*	A	*	*			
ApproachDel:	9.9			xxxxxx			xxxxxx			xxxxxx					
ApproachLOS:	A			*			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #30 Millbrae Ave/Labath Ave

Average Delay (sec/veh): 1.0 Worst Case Level Of Service: B[11.2]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 1! 0 0 0 0 0 1 0 0 1 0 0 0 0

Volume Module:

Base Vol: 25 0 8 0 0 0 0 155 9 11 250 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: 25 0 8 0 0 0 0 155 9 11 250 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 25 0 8 0 0 0 0 155 9 11 250 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 26 0 8 0 0 0 0 163 9 12 263 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 26 0 8 0 0 0 0 163 9 12 263 0

Critical Gap Module:

Critical Gp: 6.4 6.5 6.2 7.1 6.5 6.2 xxxxx xxxxx xxxxx 4.1 xxxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 3.5 4.0 3.3 xxxxx xxxxx xxxxx 2.2 xxxxx xxxxx

Capacity Module:

Cnflict Vol: 454 454 168 458 459 263 xxxxx xxxxx xxxxx 173 xxxxx xxxxx
Potent Cap.: 567 505 881 516 502 780 xxxxx xxxxx xxxxx 1416 xxxxx xxxxx
Move Cap.: 564 501 881 508 498 780 xxxxx xxxxx xxxxx 1416 xxxxx xxxxx
Volume/Cap: 0.05 0.00 0.01 0.00 0.00 0.00 xxxxx xxxxx xxxxx 0.01 xxxxx xxxxx

Level Of Service Module:

2Way95thQ: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx
Control Del: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 7.6 xxxxx xxxxx
LOS by Move: * * * * * * * * * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx 618 xxxxx xxxxx 0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue: xxxxx 0.2 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx
Shrd ConDel: xxxxx 11.2 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 7.6 xxxxx xxxxx
Shared LOS: * B * * * * * * * * * A * *
ApproachDel: 11.2 xxxxxxx xxxxxxx xxxxxxx
ApproachLOS: B * * *

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #31 Millbrae Ave/Dowdell Ave

Average Delay (sec/veh): 1.0 Worst Case Level Of Service: B[11.3]

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

Volume Module:

Base Vol:	37	0	0	0	0	0	0	135	22	0	235	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:	37	0	0	0	0	0	0	135	22	0	235	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	37	0	0	0	0	0	0	135	22	0	235	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	39	0	0	0	0	0	0	142	23	0	247	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	39	0	0	0	0	0	0	142	23	0	247	0

Critical Gap Module:

Critical Gp:	6.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	401	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Potent Cap.:	609	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Move Cap.:	609	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Volume/Cap:	0.06	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx

Level Of Service Module:

2Way95thQ:	0.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Control Del:	11.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
LOS by Move:	B	*	*	*	*	*	*	*	*	*	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	11.3			xxxxxx			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	B			*			*			*			*		

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #55 Golf Course Dr/Commerce Blvd & Roberts Lake Dr

Cycle (sec): 105 Critical Vol./Cap.(X): 0.762

Loss Time (sec): 12 (Y+R=12.0 sec) Average Delay (sec/veh): 38.0

Optimal Cycle: 70 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	0	1	1	0	1	1	0	2

Volume Module:

Base Vol:	312	95	474	92	112	124	100	491	539	301	336	33
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:	312	95	474	92	112	124	100	491	539	301	336	33
Added Vol:	0	0	0	0	0	0	0	11	194	0	12	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	312	95	474	92	112	124	100	502	733	301	348	33
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	328	100	499	97	118	131	105	528	772	317	366	35
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	328	100	499	97	118	131	105	528	772	317	366	35
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	328	100	499	97	118	131	105	528	772	317	366	35

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.88	0.88	0.95	0.92	0.92	0.95	0.91	0.91	0.95	1.00	0.85
Lanes:	1.00	1.00	2.00	1.00	1.00	1.00	1.00	1.22	1.78	1.00	2.00	1.00
Final Sat.:	1805	1663	3325	1805	1750	1750	1805	2111	3082	1805	3800	1615

Capacity Analysis Module:

Vol/Sat:	0.18	0.06	0.15	0.05	0.07	0.07	0.06	0.25	0.25	0.18	0.10	0.02
Crit Moves:	****				****			****		****		
Green/Cycle:	0.24	0.24	0.24	0.09	0.09	0.09	0.21	0.33	0.33	0.23	0.35	0.35
Volume/Cap:	0.76	0.25	0.62	0.62	0.76	0.84	0.28	0.76	0.76	0.76	0.28	0.06
Uniform Del:	37.2	32.2	35.6	46.3	46.8	47.1	34.7	31.6	31.6	37.7	24.7	22.8
IncrcmntDel:	7.8	0.1	1.3	7.6	10.2	19.4	0.4	2.1	2.1	8.1	0.1	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	45.0	32.2	36.9	54.0	56.9	66.6	35.1	33.7	33.7	45.8	24.8	22.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	45.0	32.2	36.9	54.0	56.9	66.6	35.1	33.7	33.7	45.8	24.8	22.8
LOS by Move:	D	C	D	D	E	E	D	C	C	D	C	C
HCM2kAvgQ:	12	3	8	4	6	7	3	14	14	11	4	1

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

**CUMULATIVE 2020 + ALTERNATIVE B
MITIGATED TRAFFIC CONDITIONS
(TRAFFIX)**

 Impact Analysis Report
 Level Of Service

Intersection		Base		Future		Change	
		Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C	in	
# 1 Wilfred Ave/Stony Point Rd	C	21.5	0.680	C	29.6	0.817	+ 8.159 D/V
# 2 Wilfred Ave/Primrose Ave	B	15.4	0.209	D	36.8	0.841	+21.364 D/V
# 3 Wilfred Ave/Whistler Ave	B	12.4	0.000	F	63.8	0.000	+51.351 D/V
# 4 Langner Ave/Wilfred Ave	B	12.4	0.000	F	63.8	0.000	+51.361 D/V
# 5 Wilfred Ave/Labath Ave	C	34.9	0.601	D	38.9	0.834	+ 4.020 D/V
# 6 Dowell Ave/Wilfred Ave	D	36.9	0.775	D	43.0	0.923	+ 6.091 D/V
# 7 Wilfred Ave/Redwood Dr	D	38.4	0.851	D	47.2	0.999	+ 8.744 D/V
# 9 Wilfred Ave/101 SB Ramp	C	30.7	0.724	D	49.0	1.034	+18.301 D/V
# 12 101 NB Ramps/Commerce Blvd	D	37.7	0.778	D	39.2	0.826	+ 1.488 D/V
# 13 New Driveway/Stony Point Rd	A	0.9	0.475	B	14.6	0.657	+13.716 D/V
# 15 Redwood Dr/Business Park Dr	C	16.5	0.000	C	16.5	0.000	+ 0.000 D/V
# 16 Rohnert Park Expwy/Stony Point	C	21.5	0.619	C	29.2	0.850	+ 7.714 D/V
# 17 Rohnert Park Expwy/Labath Ave	C	30.7	0.522	C	29.3	0.543	-1.440 D/V
# 18 Rohnert Park Expwy/Redwood Dr	C	33.1	0.707	C	34.3	0.778	+ 1.155 D/V
# 19 Rohnert Park Expwy/101 SB Ramp	C	24.5	0.710	C	25.3	0.716	+ 0.829 D/V
# 20 Rohnert Park Expwy/101 NB Ramp	B	17.1	0.449	C	24.1	0.672	+ 7.059 D/V
# 21 Rohnert Park Expwy/Commerce Bl	C	34.9	0.802	C	34.9	0.806	+ 0.024 D/V
# 22 Gravenstein Hwy (SR 116)/ Ston	D	39.9	0.829	D	48.7	0.909	+ 8.757 D/V
# 23 Gravenstein Hwy (SR 116)/ Redw	D	37.8	0.852	D	40.4	0.897	+ 2.599 D/V
# 24 Gravenstein Hwy and SB 101 Ram	B	17.8	0.581	C	32.1	0.633	+14.389 D/V
# 25 Gravenstein Hwy and NB 101 Ram	B	18.7	0.767	C	30.1	0.926	+11.369 D/V
# 26 Millbrae Ave/Stony Point Rd	B	19.5	0.484	B	19.4	0.529	-0.088 D/V
# 27 Millbrae Ave/Primrose Ave	B	12.4	0.000	B	12.4	0.000	+ 0.000 D/V
# 28 Millbrae Ave/Whistler Ave	B	12.4	0.000	B	12.4	0.000	+ 0.000 D/V
# 29 Millbrae Ave/Langner Ave	B	11.2	0.000	B	11.2	0.000	+ 0.000 D/V

Intersection		Base		Future		Change in	
		Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C		
# 30 Millbrae Ave/Labath Ave	B	13.5	0.000	B 13.5	0.000	+ 0.000	D/V
# 31 Millbrae Ave/Dowdell Ave	B	11.6	0.000	B 11.6	0.000	+ 0.000	D/V
# 55 Golf Course Dr/Commerce Blvd &	D	46.5	0.919	D 53.2	0.970	+ 6.678	D/V

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

Intersection #1 Wilfred Ave/Stony Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.817
Loss Time (sec): 12 (Y+R=0.0 sec) Average Delay (sec/veh): 29.6
Optimal Cycle: 81 Level Of Service: C

Table with columns for Approach (North, South, East, West Bound) and Movement (L, T, R). Rows include Control, Rights, Min. Green, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueueDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

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

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

Intersection #2 Wilfred Ave/Primrose Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.841
 Loss Time (sec): 12 (Y+R=0.0 sec) Average Delay (sec/veh): 36.8
 Optimal Cycle: 88 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	1	0	0	2	0	0	1	0	0	1	0

Volume Module:

Base Vol:	10	10	10	10	10	10	10	170	10	9	280	9
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:	10	10	10	10	10	10	10	170	10	9	280	9
Added Vol:	0	22	690	0	0	0	0	0	121	485	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	32	700	10	10	10	10	170	131	494	280	9
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	34	737	11	11	11	11	179	138	520	295	9
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	11	34	737	11	11	11	11	179	138	520	295	9
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	11	34	737	11	11	11	11	179	138	520	295	9

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.73	0.89	0.89	0.89	0.83	0.92	0.92	0.93	0.98	0.98
Lanes:	0.24	0.76	2.00	0.34	0.33	0.33	1.00	0.56	0.44	1.00	0.97	0.03
Final Sat.:	428	1370	2786	564	564	564	1583	983	758	1769	1795	58

Capacity Analysis Module:

Vol/Sat:	0.02	0.02	0.26	0.02	0.02	0.02	0.01	0.18	0.18	0.29	0.16	0.16
Crit Moves:			****					****		****		
Green/Cycle:	0.31	0.31	0.31	0.31	0.31	0.31	0.22	0.22	0.22	0.35	0.57	0.57
Volume/Cap:	0.08	0.08	0.84	0.06	0.06	0.06	0.03	0.84	0.84	0.84	0.29	0.29
Uniform Del:	24.1	24.1	32.0	23.9	23.9	23.9	30.9	37.5	37.5	30.0	11.3	11.3
IncrcmntDel:	0.1	0.1	7.4	0.0	0.0	0.0	0.0	15.5	15.5	10.1	0.2	0.2
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	24.2	24.2	39.3	24.0	24.0	24.0	31.0	53.1	53.1	40.1	11.4	11.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	24.2	24.2	39.3	24.0	24.0	24.0	31.0	53.1	53.1	40.1	11.4	11.4
LOS by Move:	C	C	D	C	C	C	C	D	D	D	B	B
HCM2kAvgQ:	1	1	15	1	1	1	0	12	12	17	5	1

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 Wilfred Ave/Whistler Ave

Average Delay (sec/veh): 2.3 Worst Case Level Of Service: F[63.8]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 1! 0 0 1 0 0 1 0 0 1 0

Volume Module:

Base Vol: 10 10 10 10 10 10 10 170 10 9 280 9
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: 10 10 10 10 10 10 10 170 10 9 280 9
Added Vol: 0 0 0 0 0 0 0 0 690 0 0 485 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 10 10 10 10 10 10 10 860 10 9 765 9
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 11 11 11 11 11 11 11 905 11 9 805 9
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 11 11 11 11 11 11 11 905 11 9 805 9

Critical Gap Module:

Critical Gp: 7.1 6.5 6.2 7.1 6.5 6.2 4.1 xxxx xxxxx 4.1 xxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 3.5 4.0 3.3 2.2 xxxx xxxxx 2.2 xxxx xxxxx

Capacity Module:

Cnflict Vol: 1771 1765 911 1771 1766 810 815 xxxx xxxxx 916 xxxx xxxxx
Potent Cap.: 66 85 335 66 85 383 821 xxxx xxxxx 753 xxxx xxxxx
Move Cap.: 56 83 335 56 83 383 821 xxxx xxxxx 753 xxxx xxxxx
Volume/Cap: 0.19 0.13 0.03 0.19 0.13 0.03 0.01 xxxx xxxx 0.01 xxxx xxxx

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx 0.0 xxxx xxxxx 0.0 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx 9.4 xxxx xxxxx 9.8 xxxx xxxxx
LOS by Move: * * * * * A * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx 91 xxxxx xxxx 92 xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
SharedQueue:xxxxx 1.3 xxxxx xxxxx 1.3 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 63.8 xxxxx xxxxx 63.0 xxxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
Shared LOS: * F * * F * * * * *
ApproachDel: 63.8 63.0 xxxxxxx xxxxxxx
ApproachLOS: F F * *

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Langner Ave/Wilfred Ave

Average Delay (sec/veh): 2.3 Worst Case Level Of Service: F[63.8]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 1! 0 0 1 0 0 1 0 1 0 1

Volume Module:

Base Vol: 10 10 10 10 10 10 10 170 10 9 280 9
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: 10 10 10 10 10 10 10 170 10 9 280 9
Added Vol: 0 0 0 0 0 0 0 0 690 0 0 485 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 10 10 10 10 10 10 10 860 10 9 765 9
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 11 11 11 11 11 11 11 905 11 9 805 9
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 11 11 11 11 11 11 11 905 11 9 805 9

Critical Gap Module:

Critical Gp: 7.1 6.5 6.2 7.1 6.5 6.2 4.1 xxxx xxxxx 4.1 xxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 3.5 4.0 3.3 2.2 xxxx xxxxx 2.2 xxxx xxxxx

Capacity Module:

Cnflict Vol: 1771 1765 911 1766 1761 805 815 xxxx xxxxx 916 xxxx xxxxx
Potent Cap.: 66 85 335 66 85 385 821 xxxx xxxxx 753 xxxx xxxxx
Move Cap.: 57 83 335 57 83 385 821 xxxx xxxxx 753 xxxx xxxxx
Volume/Cap: 0.19 0.13 0.03 0.19 0.13 0.03 0.01 xxxx xxxx 0.01 xxxx xxxx

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx 0.0 xxxx xxxxx 0.0 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx 9.4 xxxx xxxxx 9.8 xxxx xxxxx
LOS by Move: * * * * * A * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx 92 xxxxx xxxx 93 xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
SharedQueue:xxxxx 1.3 xxxxx xxxxx 1.3 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 63.8 xxxxx xxxxx 62.4 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS: * F * * F * * * * *
ApproachDel: 63.8 62.4 xxxxxxx xxxxxxx
ApproachLOS: F F * *

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

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

Intersection #5 Wilfred Ave/Labath Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.834
Loss Time (sec): 12 (Y+R=0.0 sec) Average Delay (sec/veh): 38.9
Optimal Cycle: 86 Level Of Service: D

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns for different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns for different traffic movements. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns for different traffic movements. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

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

 Intersection #6 Dowell Ave/Wilfred Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.923
 Loss Time (sec): 12 (Y+R=0.0 sec) Average Delay (sec/veh): 43.0
 Optimal Cycle: 121 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	0	1	0	2	2	0	1

Volume Module:

Base Vol:	143	105	559	217	41	119	53	359	273	509	360	273
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:	143	105	559	217	41	119	53	359	273	509	360	273
Added Vol:	0	0	0	0	0	0	0	690	0	0	485	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	143	105	559	217	41	119	53	1049	273	509	845	273
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	151	111	588	228	43	125	56	1104	287	536	889	287
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	151	111	588	228	43	125	56	1104	287	536	889	287
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	151	111	588	228	43	125	56	1104	287	536	889	287

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.86	0.86	0.93	0.98	0.83	0.93	0.93	0.83	0.90	0.90	0.90
Lanes:	1.00	0.32	1.68	1.00	1.00	1.00	1.00	2.00	1.00	2.00	1.51	0.49
Final Sat.:	1769	515	2740	1769	1862	1583	1769	3538	1583	3432	2575	832

Capacity Analysis Module:

Vol/Sat:	0.09	0.21	0.21	0.13	0.02	0.08	0.03	0.31	0.18	0.16	0.35	0.35
Crit Moves:	****			****			****			****		
Green/Cycle:	0.19	0.23	0.23	0.14	0.18	0.18	0.04	0.34	0.34	0.17	0.46	0.46
Volume/Cap:	0.44	0.92	0.92	0.92	0.13	0.44	0.74	0.92	0.54	0.92	0.74	0.74
Uniform Del:	35.6	37.5	37.5	42.5	34.5	36.5	47.3	31.8	26.8	40.9	21.9	21.9
IncrcmntDel:	0.9	16.8	16.8	36.9	0.2	1.1	32.5	11.8	1.1	20.5	1.9	1.9
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	36.5	54.3	54.3	79.4	34.6	37.6	79.8	43.6	27.8	61.4	23.8	23.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	36.5	54.3	54.3	79.4	34.6	37.6	79.8	43.6	27.8	61.4	23.8	23.8
LOS by Move:	D	D	D	E	C	D	E	D	C	E	C	C
HCM2kAvgQ:	4	15	15	11	1	4	3	22	8	12	17	17

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

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

Intersection #7 Wilfred Ave/Redwood Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.999
Loss Time (sec): 12 (Y+R=0.0 sec) Average Delay (sec/veh): 47.2
Optimal Cycle: 180 Level Of Service: D

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module:

Table with 13 columns representing different traffic movements and 13 rows of volume-related metrics like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module:

Table with 13 columns and 4 rows showing saturation flow metrics like Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with 13 columns and 13 rows showing capacity analysis metrics like Vol/Sat, Crit Moves, Green/Cycle, etc.

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #9 Wilfred Ave/101 SB Ramp

Cycle (sec): 145 Critical Vol./Cap.(X): 1.034

Loss Time (sec): 9 (Y+R=0.0 sec) Average Delay (sec/veh): 49.0

Optimal Cycle: 180 Level Of Service: D

Street Name: US-101 SB Ramp Wilfred Avenue

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Permitted Protected

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 0 0 0 0 0 1 0 1 1 0 0 0 2 0 1 2 0 2 0 0

Volume Module:

Base Vol: 0 0 0 355 288 482 0 1257 283 77 682 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: 0 0 0 355 288 482 0 1257 283 77 682 0

Added Vol: 0 0 0 0 0 218 0 204 475 0 255 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 0 0 0 355 288 700 0 1461 758 77 937 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95

PHF Volume: 0 0 0 374 303 737 0 1538 798 81 986 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 0 0 0 374 303 737 0 1538 798 81 986 0

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Vol.: 0 0 0 374 303 737 0 1538 798 81 986 0

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900

Adjustment: 1.00 1.00 1.00 0.83 0.88 0.88 1.00 0.98 0.83 0.93 0.98 1.00

Lanes: 0.00 0.00 0.00 1.00 1.00 1.00 0.00 2.00 1.00 2.00 2.00 0.00

Final Sat.: 0 0 0 1583 1665 1665 0 3724 1583 3538 3724 0

Capacity Analysis Module:

Vol/Sat: 0.00 0.00 0.00 0.24 0.18 0.44 0.00 0.41 0.50 0.02 0.26 0.00

Crit Moves: **** **** ****

Green/Cycle: 0.00 0.00 0.00 0.43 0.43 0.43 0.00 0.49 0.49 0.02 0.51 0.00

Volume/Cap: 0.00 0.00 0.00 0.55 0.43 1.03 0.00 0.85 1.03 1.03 0.52 0.00

Uniform Del: 0.0 0.0 0.0 31.0 29.0 41.5 0.0 32.4 37.1 70.9 23.7 0.0

IncrcmntDel: 0.0 0.0 0.0 1.0 0.1 37.5 0.0 3.9 41.4 110.6 0.3 0.0

InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

Delay Adj: 0.00 0.00 0.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 0.00

Delay/Veh: 0.0 0.0 0.0 32.0 29.1 79.0 0.0 36.3 78.6 181.5 24.0 0.0

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 0.0 0.0 0.0 32.0 29.1 79.0 0.0 36.3 78.6 181.5 24.0 0.0

LOS by Move: A A A C C E A D E F C A

HCM2kAvgQ: 0 0 0 12 9 41 0 31 44 4 14 0

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #12 101 NB Ramps/Commerce Blvd

Cycle (sec): 130 Critical Vol./Cap.(X): 0.826

Loss Time (sec): 12 (Y+R=0.0 sec) Average Delay (sec/veh): 39.2

Optimal Cycle: 91 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	0	1	1	1	0	0	1	0

Volume Module:

Base Vol:	552	413	2	7	616	732	307	3	47	8	3	5
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:	552	413	2	7	616	732	307	3	47	8	3	5
Added Vol:	0	0	0	0	0	194	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	552	413	2	7	616	926	307	3	47	8	3	5
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	581	435	2	7	648	975	323	3	49	8	3	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	581	435	2	7	648	975	323	3	49	8	3	5
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	581	435	2	7	648	975	323	3	49	8	3	5

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.98	0.98	0.93	0.89	0.89	0.93	0.93	0.83	0.92	0.92	0.92
Lanes:	1.00	1.99	0.01	1.00	1.20	1.80	1.98	0.02	1.00	0.50	0.19	0.31
Final Sat.:	1769	3702	18	1769	2031	3053	3515	34	1583	870	326	544

Capacity Analysis Module:

Vol/Sat:	0.33	0.12	0.12	0.00	0.32	0.32	0.09	0.09	0.03	0.01	0.01	0.01
Crit Moves:	****			****			****			****		
Green/Cycle:	0.40	0.76	0.76	0.03	0.39	0.39	0.11	0.11	0.11	0.01	0.01	0.01
Volume/Cap:	0.83	0.15	0.15	0.15	0.83	0.83	0.83	0.83	0.28	0.83	0.83	0.83
Uniform Del:	35.1	4.3	4.3	61.8	35.9	35.9	56.5	56.5	53.0	64.1	64.1	64.1
IncrcmntDel:	7.9	0.0	0.0	1.5	3.0	3.0	13.3	13.3	0.9	119.4	119	119.4
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	43.0	4.3	4.3	63.3	38.9	38.9	69.8	69.8	53.9	183.5	184	183.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	43.0	4.3	4.3	63.3	38.9	38.9	69.8	69.8	53.9	183.5	184	183.5
LOS by Move:	D	A	A	E	D	D	E	E	D	F	F	F
HCM2kAvgQ:	23	2	2	0	21	21	9	9	2	2	2	2

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

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

Intersection #13 New Driveway/Stony Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.657
 Loss Time (sec): 9 (Y+R=0.0 sec) Average Delay (sec/veh): 14.6
 Optimal Cycle: 46 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1	0	0	1	0	0	0	1	0	0

Volume Module:

Base Vol:	0	765	0	0	664	0	0	0	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
Initial Bse:	0	765	0	0	664	0	0	0	0	0	0	0
Added Vol:	0	0	606	0	0	0	0	0	0	278	0	86
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	765	606	0	664	0	0	0	0	278	0	86
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	805	638	0	699	0	0	0	0	293	0	91
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	805	638	0	699	0	0	0	0	293	0	91
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	805	638	0	699	0	0	0	0	293	0	91

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.98	0.83	1.00	0.98	1.00	1.00	1.00	1.00	0.93	1.00	0.83
Lanes:	0.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	1862	1583	0	1862	0	0	0	0	1769	0	1583

Capacity Analysis Module:

Vol/Sat:	0.00	0.43	0.40	0.00	0.38	0.00	0.00	0.00	0.00	0.17	0.00	0.06
Crit Moves:	****									****		
Green/Cycle:	0.00	0.66	0.66	0.00	0.66	0.00	0.00	0.00	0.00	0.25	0.00	0.25
Volume/Cap:	0.00	0.66	0.61	0.00	0.57	0.00	0.00	0.00	0.00	0.66	0.00	0.23
Uniform Del:	0.0	10.3	9.8	0.0	9.4	0.0	0.0	0.0	0.0	33.5	0.0	29.7
IncrcmntDel:	0.0	1.3	1.1	0.0	0.6	0.0	0.0	0.0	0.0	3.6	0.0	0.3
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Delay/Veh:	0.0	11.6	10.9	0.0	10.0	0.0	0.0	0.0	0.0	37.1	0.0	30.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	11.6	10.9	0.0	10.0	0.0	0.0	0.0	0.0	37.1	0.0	30.0
LOS by Move:	A	B	B	A	A	A	A	A	A	D	A	C
HCM2kAvgQ:	0	15	12	0	12	0	0	0	0	9	0	2

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #15 Redwood Dr/Business Park Dr

Average Delay (sec/veh): 3.2 Worst Case Level Of Service: C[16.5]

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: 1 0 2 0 0 0 0 1 1 0 1 0 0 0 0 0 0

Volume Module:

Base Vol: 12 359 0 0 363 25 144 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: 12 359 0 0 363 25 144 0 31 0 0 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 12 359 0 0 363 25 144 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 13 378 0 0 382 26 152 0 33 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 13 378 0 0 382 26 152 0 33 0 0 0

Critical Gap Module:

Critical Gp: 4.1 xxxx xxxxx xxxxx xxxx xxxxx 6.8 6.5 6.9 xxxxx xxxx xxxxx
FollowUpTim: 2.2 xxxx xxxxx xxxxx xxxx xxxxx 3.5 4.0 3.3 xxxxx xxxx xxxxx

Capacity Module:

Cnflct Vol: 408 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 609 798 204 xxxx xxxx xxxxx
Potent Cap.: 1161 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 431 321 809 xxxx xxxx xxxxx
Move Cap.: 1161 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 428 318 809 xxxx xxxx xxxxx
Volume/Cap: 0.01 xxxx xxxx xxxxx xxxx xxxxx 0.35 0.00 0.04 xxxx xxxx xxxxx

Level Of Service Module:

2Way95thQ: 0.0 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 1.6 xxxx xxxxx xxxx xxxx xxxxx
Control Del: 8.1 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 18.0 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move: A * * * * * C * * * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx 809 xxxx xxxx xxxxx
SharedQueue:xxxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx 0.1 xxxxx xxxx xxxxx
Shrd ConDel:xxxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx 9.6 xxxxx xxxx xxxxx
Shared LOS: * * * * * * * * * * A * * * *
ApproachDel: xxxxxx xxxxxx 16.5 xxxxxx
ApproachLOS: * * C *

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #16 Rohnert Park Expwy/Stony Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.850

Loss Time (sec): 6 (Y+R=0.0 sec) Average Delay (sec/veh): 29.2

Optimal Cycle: 72 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Control:	Permitted			Protected			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1	0	1	0	0	0	0	1	0	0

Volume Module:

Base Vol:	0	547	253	205	460	0	0	0	0	253	0	217
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	547	253	205	460	0	0	0	0	253	0	217
Added Vol:	0	243	0	63	215	0	0	0	0	0	0	363
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	790	253	268	675	0	0	0	0	253	0	580
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	832	266	282	711	0	0	0	0	266	0	611
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	832	266	282	711	0	0	0	0	266	0	611
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	832	266	282	711	0	0	0	0	266	0	611

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.98	0.83	0.93	0.98	1.00	1.00	1.00	1.00	0.93	1.00	0.83
Lanes:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	2.00
Final Sat.:	0	1862	1583	1769	1862	0	0	0	0	1769	0	3165

Capacity Analysis Module:

Vol/Sat:	0.00	0.45	0.17	0.16	0.38	0.00	0.00	0.00	0.00	0.15	0.00	0.19
Crit Moves:	****			****						****		
Green/Cycle:	0.00	0.53	0.53	0.19	0.71	0.00	0.00	0.00	0.00	0.23	0.00	0.23
Volume/Cap:	0.00	0.85	0.32	0.85	0.54	0.00	0.00	0.00	0.00	0.66	0.00	0.85
Uniform Del:	0.0	20.4	13.5	39.3	6.7	0.0	0.0	0.0	0.0	35.2	0.0	37.0
IncrcmntDel:	0.0	7.2	0.2	18.4	0.4	0.0	0.0	0.0	0.0	4.1	0.0	9.5
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Delay/Veh:	0.0	27.5	13.8	57.6	7.1	0.0	0.0	0.0	0.0	39.3	0.0	46.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	27.5	13.8	57.6	7.1	0.0	0.0	0.0	0.0	39.3	0.0	46.5
LOS by Move:	A	C	B	E	A	A	A	A	A	D	A	D
HCM2kAvgQ:	0	24	5	11	10	0	0	0	0	9	0	12

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

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

Intersection #17 Rohnert Park Expwy/Labath Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.543
Loss Time (sec): 12 (Y+R=0.0 sec) Average Delay (sec/veh): 29.3
Optimal Cycle: 44 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic movements and 13 rows of volume-related metrics like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 13 columns and 4 rows showing Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns and 13 rows showing Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, etc.

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #18 Rohnert Park Expwy/Redwood Dr

Cycle (sec): 90 Critical Vol./Cap.(X): 0.778
 Loss Time (sec): 12 (Y+R=0.0 sec) Average Delay (sec/veh): 34.3
 Optimal Cycle: 70 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	1	1	2	0	1	0	1	1

Volume Module:

Base Vol:	173	326	510	339	301	236	216	700	163	377	603	318
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:	173	326	510	339	301	236	216	700	163	377	603	318
Added Vol:	0	0	0	0	0	0	0	63	0	0	363	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	173	326	510	339	301	236	216	763	163	377	966	318
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	182	343	537	357	317	248	227	803	172	397	1017	335
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	182	343	537	357	317	248	227	803	172	397	1017	335
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	182	343	537	357	317	248	227	803	172	397	1017	335

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.89	0.89	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.83
Lanes:	1.00	1.17	1.83	2.00	1.00	1.00	1.00	3.00	1.00	2.00	2.00	1.00
Final Sat.:	1769	1980	3098	3538	1862	1583	1769	5586	1583	3538	3724	1583

Capacity Analysis Module:

Vol/Sat:	0.10	0.17	0.17	0.10	0.17	0.16	0.13	0.14	0.11	0.11	0.27	0.21
Crit Moves:	****			****			****			****		
Green/Cycle:	0.13	0.22	0.22	0.13	0.22	0.22	0.17	0.29	0.29	0.23	0.35	0.35
Volume/Cap:	0.78	0.78	0.78	0.78	0.78	0.72	0.78	0.50	0.37	0.50	0.78	0.60
Uniform Del:	37.8	33.0	33.0	38.0	33.1	32.6	36.0	26.5	25.5	30.4	26.1	24.1
IncrcmntDel:	15.2	3.6	3.6	8.5	9.2	7.1	12.5	0.2	0.5	0.5	3.1	1.9
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	53.0	36.6	36.6	46.5	42.4	39.7	48.5	26.8	26.0	30.8	29.1	25.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	53.0	36.6	36.6	46.5	42.4	39.7	48.5	26.8	26.0	30.8	29.1	25.9
LOS by Move:	D	D	D	D	D	D	D	C	C	C	C	C
HCM2kAvgQ:	7	10	10	7	10	8	8	7	4	5	14	8

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #19 Rohnert Park Expwy/101 SB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.716
Loss Time (sec): 12 (Y+R=0.0 sec) Average Delay (sec/veh): 25.3
Optimal Cycle: 62 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Permitted, Protected), Rights (Include, Ignore), Min. Green, and Lanes.

Volume Module: Table with 13 columns for different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #20 Rohnert Park Expwy/101 NB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.672
Loss Time (sec): 6 (Y+R=0.0 sec) Average Delay (sec/veh): 24.1
Optimal Cycle: 39 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected, Permitted), Rights (Include, Ignore), Min. Green, and Lanes.

Volume Module: Table with 13 columns for different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns for different traffic movements. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns for different traffic movements. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #21 Rohnert Park Expwy/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.806
Loss Time (sec): 12 (Y+R=0.0 sec) Average Delay (sec/veh): 34.9
Optimal Cycle: 78 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Split Phase, Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic movements and 13 rows of volume-related metrics such as Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 13 columns and 4 rows showing Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns and 13 rows showing Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, etc.

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #22 Gravenstein Hwy (SR 116)/ Stony Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.909
Loss Time (sec): 12 (Y+R=0.0 sec) Average Delay (sec/veh): 48.7
Optimal Cycle: 114 Level Of Service: D

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module:

Table with 13 columns representing different volume and adjustment factors. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module:

Table with 13 columns representing saturation flow and adjustment factors. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with 13 columns representing capacity analysis metrics. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

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

 Intersection #23 Gravenstein Hwy (SR 116)/ Redwood Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.897
 Loss Time (sec): 12 (Y+R=0.0 sec) Average Delay (sec/veh): 40.4
 Optimal Cycle: 108 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	0	1	0	1	1	0	1

Volume Module:

Base Vol:	48	28	59	592	28	110	122	708	32	53	797	406
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	28	59	592	28	110	122	708	32	53	797	406
Added Vol:	0	0	0	0	0	0	0	215	0	0	243	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	48	28	59	592	28	110	122	923	32	53	1040	406
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	51	29	62	623	29	116	128	972	34	56	1095	427
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	51	29	62	623	29	116	128	972	34	56	1095	427
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	51	29	62	623	29	116	128	972	34	56	1095	427

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.88	0.88	0.93	0.86	0.86	0.93	0.93	0.93	0.93	0.93	0.83
Lanes:	1.00	0.32	0.68	1.00	0.20	0.80	1.00	1.93	0.07	1.00	2.00	1.00
Final Sat.:	1769	538	1134	1769	332	1306	1769	3402	118	1769	3538	1583

Capacity Analysis Module:

Vol/Sat:	0.03	0.05	0.05	0.35	0.09	0.09	0.07	0.29	0.29	0.03	0.31	0.27
Crit Moves:	****			****			****			****		
Green/Cycle:	0.11	0.06	0.06	0.39	0.34	0.34	0.08	0.38	0.38	0.04	0.35	0.35
Volume/Cap:	0.26	0.90	0.90	0.90	0.26	0.26	0.90	0.74	0.74	0.74	0.90	0.78
Uniform Del:	40.7	46.6	46.6	28.5	23.7	23.7	45.5	26.6	26.6	47.3	31.1	29.4
IncrcmntDel:	0.7	57.2	57.2	14.3	0.2	0.2	45.8	2.3	2.3	32.8	9.0	7.2
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	41.4	104	103.9	42.8	23.9	23.9	91.4	28.9	28.9	80.1	40.0	36.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	41.4	104	103.9	42.8	23.9	23.9	91.4	28.9	28.9	80.1	40.0	36.6
LOS by Move:	D	F	F	D	C	C	F	C	C	F	D	D
HCM2kAvgQ:	2	5	5	22	3	3	7	15	15	3	20	14

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

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

 Intersection #24 Gravenstein Hwy and SB 101 Ramps

Cycle (sec): 85 Critical Vol./Cap.(X): 0.633
 Loss Time (sec): 9 (Y+R=0.0 sec) Average Delay (sec/veh): 32.1
 Optimal Cycle: 123 Level Of Service: C

Street Name: SB 101 Ramps Gravenstein Hwy
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Permitted			Protected			Permitted			Protected		
Rights:	Include			Include			Ignore			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	2	0	1	0	0	1	1	0	0

Volume Module:

Base Vol:	0	0	0	640	0	258	0	953	412	66	998	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:	0	0	0	640	0	258	0	953	412	66	998	0
Added Vol:	0	0	0	0	0	0	0	0	215	0	243	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	640	0	258	0	953	627	66	1241	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00	0.95	0.95	0.95
PHF Volume:	0	0	0	674	0	272	0	1003	0	69	1306	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	674	0	272	0	1003	0	69	1306	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Final Vol.:	0	0	0	674	0	272	0	1003	0	69	1306	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.90	1.00	0.83	1.00	0.93	1.00	0.93	0.93	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	0.00	2.00	1.00	1.00	2.00	0.00
Final Sat.:	0	0	0	3432	0	1583	0	3538	1900	1769	3538	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.20	0.00	0.17	0.00	0.28	0.00	0.04	0.37	0.00
Crit Moves:				****							****	
Green/Cycle:	0.00	0.00	0.00	0.21	0.00	0.21	0.00	0.30	0.00	0.39	0.69	0.00
Volume/Cap:	0.00	0.00	0.00	0.95	0.00	0.83	0.00	0.95	0.00	0.10	0.54	0.00
Uniform Del:	0.0	0.0	0.0	33.3	0.0	32.3	0.0	29.2	0.0	16.5	6.6	0.0
IncrcmntDel:	0.0	0.0	0.0	22.2	0.0	16.2	0.0	16.9	0.0	0.1	0.2	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
Delay/Veh:	0.0	0.0	0.0	55.5	0.0	48.5	0.0	46.1	0.0	16.6	6.8	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	55.5	0.0	48.5	0.0	46.1	0.0	16.6	6.8	0.0
LOS by Move:	A	A	A	E	A	D	A	D	A	B	A	A
HCM2kAvgQ:	0	0	0	14	0	9	0	19	0	1	9	0

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

Intersection #25 Gravenstein Hwy and NB 101 Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.926
Loss Time (sec): 9 (Y+R=0.0 sec) Average Delay (sec/veh): 30.1
Optimal Cycle: 118 Level Of Service: C

Street Name: NB 101 Ramps Gravenstein Hwy
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Permitted Permitted Permitted
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 0 0 1 0 0 0 0 0 0 2 0 0 0 0 0 2 0 0

Volume Module:
Base Vol: 375 0 273 0 0 0 0 0 1596 0 0 683 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: 375 0 273 0 0 0 0 0 1596 0 0 683 0
Added Vol: 243 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 618 0 273 0 0 0 0 0 1596 0 0 683 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 651 0 287 0 0 0 0 0 1680 0 0 719 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 651 0 287 0 0 0 0 0 1680 0 0 719 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 651 0 287 0 0 0 0 0 1680 0 0 719 0

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.93 1.00 0.83 1.00 1.00 1.00 1.00 0.93 1.00 1.00 0.93 1.00
Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 2.00 0.00 0.00 2.00 0.00
Final Sat.: 1769 0 1583 0 0 0 0 0 3538 0 0 3538 0

Capacity Analysis Module:
Vol/Sat: 0.37 0.00 0.18 0.00 0.00 0.00 0.00 0.47 0.00 0.00 0.20 0.00
Crit Moves: ****
Green/Cycle: 0.40 0.00 0.40 0.00 0.00 0.00 0.00 0.51 0.00 0.00 0.51 0.00
Volume/Cap: 0.93 0.00 0.46 0.00 0.00 0.00 0.00 0.93 0.00 0.00 0.40 0.00
Uniform Del: 28.7 0.0 22.2 0.0 0.0 0.0 0.0 22.6 0.0 0.0 14.9 0.0
IncrmntDel: 18.2 0.0 0.5 0.0 0.0 0.0 0.0 8.7 0.0 0.0 0.1 0.0
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 1.00 0.00 0.00 1.00 0.00
Delay/Veh: 47.0 0.0 22.7 0.0 0.0 0.0 0.0 31.3 0.0 0.0 15.0 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 47.0 0.0 22.7 0.0 0.0 0.0 0.0 31.3 0.0 0.0 15.0 0.0
LOS by Move: D A C A A A A C A A B A
HCM2kAvgQ: 24 0 7 0 0 0 0 30 0 0 7 0

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #26 Millbrae Ave/Stony Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.529

Loss Time (sec): 9 (Y+R=0.0 sec) Average Delay (sec/veh): 19.4

Optimal Cycle: 36 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T	R		L	T	R		L	T	R		L	T	R	
Control:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0	2	0	1	0	1	1	0	0	1	0	0	1	0	0

Volume Module:

Base Vol:	7	728	26	132	585	7	11	5	8	23	25	219
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:	7	728	26	132	585	7	11	5	8	23	25	219
Added Vol:	0	86	0	0	121	0	0	0	0	0	0	22
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	7	814	26	132	706	7	11	5	8	23	25	241
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	7	857	27	139	743	7	12	5	8	24	26	254
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	7	857	27	139	743	7	12	5	8	24	26	254
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	7	857	27	139	743	7	12	5	8	24	26	254

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.83	0.93	0.93	0.93	0.87	0.87	0.87	0.89	0.89	0.83
Lanes:	1.00	2.00	1.00	1.00	1.98	0.02	0.46	0.21	0.33	0.48	0.52	1.00
Final Sat.:	1769	3538	1583	1769	3500	35	760	345	552	809	880	1583

Capacity Analysis Module:

Vol/Sat:	0.00	0.24	0.02	0.08	0.21	0.21	0.02	0.02	0.02	0.03	0.03	0.16
Crit Moves:	****			****						****		
Green/Cycle:	0.01	0.46	0.46	0.15	0.60	0.60	0.30	0.30	0.30	0.30	0.30	0.30
Volume/Cap:	0.36	0.53	0.04	0.53	0.36	0.36	0.05	0.05	0.05	0.10	0.10	0.53
Uniform Del:	49.0	19.4	14.9	39.3	10.4	10.4	24.7	24.7	24.7	25.0	25.0	28.9
IncrcmntDel:	10.3	0.3	0.0	2.0	0.1	0.1	0.0	0.0	0.0	0.1	0.1	1.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	59.3	19.7	15.0	41.4	10.5	10.5	24.7	24.7	24.7	25.1	25.1	30.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	59.3	19.7	15.0	41.4	10.5	10.5	24.7	24.7	24.7	25.1	25.1	30.0
LOS by Move:	E	B	B	D	B	B	C	C	C	C	C	C
HCM2kAvgQ:	1	10	0	5	6	6	1	1	1	1	1	7

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #27 Millbrae Ave/Primrose Ave

Average Delay (sec/veh): 0.8 Worst Case Level Of Service: B[12.4]

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

Volume Module:

Base Vol:	1	0	2	0	1	0	1	161	5	7	265	2
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:	1	0	2	0	1	0	1	161	5	7	265	2
Added Vol:	22	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	23	0	2	0	1	0	1	161	5	7	265	2
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	24	0	2	0	1	0	1	169	5	7	279	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	24	0	2	0	1	0	1	169	5	7	279	2

Critical Gap Module:

Critical Gp:	7.1	6.5	6.2	xxxxx	6.5	xxxxx	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	4.0	xxxxx	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	469	470	172	xxxx	472	xxxxx	281	xxxx	xxxxx	175	xxxx	xxxxx
Potent Cap.:	508	495	877	xxxx	493	xxxxx	1293	xxxx	xxxxx	1414	xxxx	xxxxx
Move Cap.:	504	492	877	xxxx	491	xxxxx	1293	xxxx	xxxxx	1414	xxxx	xxxxx
Volume/Cap:	0.05	0.00	0.00	xxxx	0.00	xxxx	0.00	xxxx	xxxx	0.01	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	0.0	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	12.4	xxxxx	7.8	xxxx	xxxxx	7.6	xxxx	xxxxx			
LOS by Move:	*	*	*	*	B	*	A	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	522	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	0.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	12.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	B	*	*	*	*	*	*	*	*	*	*			
ApproachDel:	12.3			12.4			xxxxxxx			xxxxxxx					
ApproachLOS:	B			B			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #28 Millbrae Ave/Whistler Ave

Average Delay (sec/veh): 0.5 Worst Case Level Of Service: B[12.4]

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

Volume Module:

Base Vol:	1	9	0	4	0	1	1	146	2	4	279	8
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	9	0	4	0	1	1	146	2	4	279	8
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1	9	0	4	0	1	1	146	2	4	279	8
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	1	9	0	4	0	1	1	154	2	4	294	8
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	1	9	0	4	0	1	1	154	2	4	294	8

Critical Gap Module:

Critical Gp:	7.1	6.5	xxxxx	7.1	6.5	6.2	4.1	xxxxx	xxxxx	4.1	xxxxx	xxxxx
FollowUpTim:	3.5	4.0	xxxxx	3.5	4.0	3.3	2.2	xxxxx	xxxxx	2.2	xxxxx	xxxxx

Capacity Module:

Cnflct Vol:	464	467	xxxxx	468	464	298	302	xxxxx	xxxxx	156	xxxxx	xxxxx
Potent Cap.:	512	496	xxxxx	509	498	746	1270	xxxxx	xxxxx	1437	xxxxx	xxxxx
Move Cap.:	510	494	xxxxx	500	496	746	1270	xxxxx	xxxxx	1437	xxxxx	xxxxx
Volume/Cap:	0.00	0.02	xxxxx	0.01	0.00	0.00	0.00	xxxxx	xxxxx	0.00	xxxxx	xxxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.8	xxxx	xxxxx	7.5	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	496	xxxx	xxxxx	xxxx	535	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.1	xxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	12.4	xxxx	xxxxx	xxxxx	11.8	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	B	*	*	*	B	*	*	*	*	*	*	*
ApproachDel:	12.4			11.8			xxxxxxx			xxxxxxx		
ApproachLOS:	B			B			*			*		

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #29 Millbrae Ave/Langner Ave

Average Delay (sec/veh): 1.1 Worst Case Level Of Service: B[11.2]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 0 0 0 0 1 0 0 1 0 0 0 0

Volume Module:

Base Vol: 27 0 25 0 0 0 0 154 27 7 331 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: 27 0 25 0 0 0 0 154 27 7 331 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 27 0 25 0 0 0 0 154 27 7 331 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 28 0 26 0 0 0 0 162 28 7 348 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 28 0 26 0 0 0 0 162 28 7 348 0

Critical Gap Module:

Critical Gp: 6.4 6.5 6.2 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 4.1 xxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 2.2 xxxx xxxxx

Capacity Module:

Cnflict Vol: 539 539 176 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 191 xxxx xxxxx
Potent Cap.: 507 452 872 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 1395 xxxx xxxxx
Move Cap.: 505 449 872 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 1395 xxxx xxxxx
Volume/Cap: 0.06 0.00 0.03 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 0.01 xxxx xxxxx

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx 0.0 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxxx xxxx xxxxx xxxxxx xxxx xxxx xxxxx 7.6 xxxx xxxxx
LOS by Move: * * * * * * * * * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx 633 xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
SharedQueue:xxxxx 0.3 xxxxx xxxxx xxxx xxxxx xxxxxx xxxx xxxxx 0.0 xxxx xxxxx
Shrd ConDel:xxxxx 11.2 xxxxx xxxxx xxxx xxxxx xxxxxx xxxx xxxxx 7.6 xxxx xxxxx
Shared LOS: * B * * * * * * * * * A * *
ApproachDel: 11.2 xxxxxxx xxxxxxx xxxxxxx
ApproachLOS: B * * *

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #30 Millbrae Ave/Labath Ave

Average Delay (sec/veh): 3.7 Worst Case Level Of Service: B[13.5]

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

Volume Module:

Base Vol:	114	0	26	0	0	0	0	160	23	36	225	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:	114	0	26	0	0	0	0	160	23	36	225	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	114	0	26	0	0	0	0	160	23	36	225	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	120	0	27	0	0	0	0	168	24	38	237	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	120	0	27	0	0	0	0	168	24	38	237	0

Critical Gap Module:

Critical Gp:	6.4	6.5	6.2	7.1	6.5	6.2	xxxxx	xxxxx	xxxxx	4.1	xxxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	xxxxx	xxxxx	xxxxx	2.2	xxxxx	xxxxx

Capacity Module:

Cnflict Vol:	493	493	181	507	505	237	xxxxx	xxxxx	xxxxx	193	xxxxx	xxxxx
Potent Cap.:	539	480	867	479	472	807	xxxxx	xxxxx	xxxxx	1393	xxxxx	xxxxx
Move Cap.:	527	467	867	454	459	807	xxxxx	xxxxx	xxxxx	1393	xxxxx	xxxxx
Volume/Cap:	0.23	0.00	0.03	0.00	0.00	0.00	xxxxx	xxxxx	xxxxx	0.03	xxxxx	xxxxx

Level Of Service Module:

2Way95thQ:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.1	xxxxx	xxxxx			
Control Del:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	7.7	xxxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxxx	569	xxxxx	xxxxx	0	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx		
SharedQueue:	xxxxx	1.0	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.1	xxxxx	xxxxx			
Shrd ConDel:	xxxxx	13.5	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	7.7	xxxxx	xxxxx			
Shared LOS:	*	B	*	*	*	*	*	*	*	A	*	*			
ApproachDel:	13.5			xxxxxxx			xxxxxxx			xxxxxxx					
ApproachLOS:	B			*			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #31 Millbrae Ave/Dowdell Ave

Average Delay (sec/veh): 1.4 Worst Case Level Of Service: B[11.6]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 1 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 1 0 0

Volume Module:

Base Vol: 55 0 0 0 0 0 0 0 131 51 0 235 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: 55 0 0 0 0 0 0 0 131 51 0 235 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 55 0 0 0 0 0 0 0 131 51 0 235 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 58 0 0 0 0 0 0 0 138 54 0 247 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 58 0 0 0 0 0 0 0 138 54 0 247 0

Critical Gap Module:

Critical Gp: 6.4 xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
FollowUpTim: 3.5 xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Capacity Module:

Cnflict Vol: 412 xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Potent Cap.: 600 xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Move Cap.: 600 xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Volume/Cap: 0.10 xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Level Of Service Module:

2Way95thQ: 0.3 xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Control Del: 11.6 xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
LOS by Move: B * * * * * * * * * * * * * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue:xxxxxx xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd ConDel:xxxxxx xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: * * * * * * * * * * * * * * *
ApproachDel: 11.6 xxxxxxx xxxxxxx xxxxxxx
ApproachLOS: B * * *

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #55 Golf Course Dr/Commerce Blvd & Roberts Lake Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.970

Loss Time (sec): 12 (Y+R=12.0 sec) Average Delay (sec/veh): 53.2

Optimal Cycle: 155 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	1	1	1	0	1	1	1	1

Volume Module:

Base Vol:	319	57	514	102	54	49	80	679	854	445	410	64
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:	319	57	514	102	54	49	80	679	854	445	410	64
Added Vol:	0	0	0	0	0	0	0	11	194	0	12	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	319	57	514	102	54	49	80	690	1048	445	422	64
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	336	60	541	107	57	52	84	726	1103	468	444	67
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	336	60	541	107	57	52	84	726	1103	468	444	67
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	336	60	541	107	57	52	84	726	1103	468	444	67

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.85	0.85	0.93	0.91	0.91	0.93	0.89	0.89	0.93	0.98	0.83
Lanes:	1.00	1.00	2.00	1.00	1.05	0.95	1.00	1.19	1.81	1.00	2.00	1.00
Final Sat.:	1769	1611	3221	1769	1814	1646	1769	2018	3065	1769	3724	1583

Capacity Analysis Module:

Vol/Sat:	0.19	0.04	0.17	0.06	0.03	0.03	0.05	0.36	0.36	0.26	0.12	0.04
Crit Moves:			****	****			****			****		
Green/Cycle:	0.20	0.17	0.17	0.06	0.03	0.03	0.18	0.37	0.37	0.27	0.46	0.46
Volume/Cap:	0.94	0.22	0.97	0.97	0.94	0.94	0.26	0.97	0.97	0.97	0.26	0.09
Uniform Del:	39.3	35.5	41.1	46.8	48.2	48.2	35.0	30.9	30.9	35.9	16.5	15.2
IncrcmntDel:	31.9	0.0	28.6	75.6	64.2	64.2	0.4	14.2	14.2	33.1	0.1	0.1
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	71.2	35.5	69.7	122.4	112	112.5	35.4	45.1	45.1	69.1	16.6	15.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	71.2	35.5	69.7	122.4	112	112.5	35.4	45.1	45.1	69.1	16.6	15.3
LOS by Move:	E	D	E	F	F	F	D	D	D	E	B	B
HCM2kAvgQ:	14	2	13	6	4	4	2	24	24	20	4	1

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

**NEAR-TERM 2008 + ALTERNATIVE C
MITIGATED TRAFFIC CONDITIONS
(TRAFFIX)**

 Impact Analysis Report
 Level Of Service

Intersection	Base LOS	Base		Future LOS	Future		Change in
		Del/ Veh	V/ C		Del/ Veh	V/ C	
# 1 Wilfred Ave/Stony Point Rd	B	14.8	0.604	C	29.3	0.831	+14.459 D/V
# 2 Wilfred Ave/Primrose Ave	B	11.3	0.000	C	24.4	0.000	+13.137 D/V
# 3 Wilfred Ave/Whistler Ave	B	16.7	0.171	D	42.3	0.899	+25.653 D/V
# 4 Langner Ave/Wilfred Ave	B	11.2	0.000	F	130.3	0.000	+119.065 D/V
# 5 Wilfred Ave/Labath Ave	C	30.1	0.350	C	33.3	0.907	+ 3.208 D/V
# 6 Dowell Ave/Wilfred Ave	C	25.7	0.510	D	37.2	0.977	+11.522 D/V
# 7 Wilfred Ave/Redwood Dr	C	34.4	0.620	C	34.8	0.794	+ 0.369 D/V
# 8 Redwood Dr/Commerce Blvd	C	26.6	0.290	C	26.5	0.294	-0.052 D/V
# 9 Wilfred Ave/101 SB Ramp	C	30.6	0.630	D	53.7	1.026	+23.045 D/V
# 12 101 NB Ramps/Commerce Blvd	D	41.1	0.665	D	39.5	0.714	-1.580 D/V
# 13 New Driveway/Stony Point Rd	A	0.0	0.000	A	0.0	0.000	+ 0.000 D/V
# 15 Redwood Dr/Business Park Dr	D	26.5	0.000	D	26.5	0.000	+ 0.000 D/V
# 16 Rohnert Park Expwy/Stony Point	C	24.0	0.665	D	36.8	0.910	+12.792 D/V
# 17 Rohnert Park Expwy/Labath Ave	C	29.8	0.576	C	34.1	0.615	+ 4.348 D/V
# 18 Rohnert Park Expwy/Redwood Dr	C	32.8	0.721	C	32.8	0.721	-0.050 D/V
# 19 Rohnert Park Expwy/101 SB Ramp	C	24.5	0.693	C	24.8	0.722	+ 0.285 D/V
# 20 Rohnert Park Expwy/101 NB Ramp	B	15.8	0.437	B	19.2	0.518	+ 3.414 D/V
# 21 Rohnert Park Expwy/Commerce Bl	C	30.7	0.835	C	30.7	0.835	+ 0.003 D/V
# 22 Gravenstein Hwy (SR 116)/ Ston	D	37.1	0.766	D	39.3	0.782	+ 2.179 D/V
# 23 Gravenstein Hwy (SR 116)/ Redw	C	27.6	0.743	C	27.7	0.784	+ 0.138 D/V
# 24 Gravenstein Hwy and SB 101 Ram	B	15.9	0.572	B	15.9	0.572	+ 0.056 D/V
# 25 Gravenstein Hwy and NB 101 Ram	B	17.3	0.707	C	21.1	0.784	+ 3.760 D/V
# 26 Millbrae Ave/Stony Point Rd	C	21.2	0.483	C	21.6	0.533	+ 0.349 D/V
# 27 Millbrae Ave/Primrose Ave	B	11.4	0.000	B	11.6	0.000	+ 0.196 D/V
# 28 Millbrae Ave/Whistler Ave	B	11.5	0.000	B	11.5	0.000	+ 0.050 D/V

Intersection		Base		Future		Change in
		Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C	
# 29 Millbrae Ave/Langner Ave	A	9.9	0.000	A 9.9	0.000	+ 0.000 D/V
# 30 Millbrae Ave/Labath Ave	B	11.2	0.000	B 11.2	0.000	+ 0.000 D/V
# 31 Millbrae Ave/Dowdell Ave	B	11.3	0.000	B 11.3	0.000	+ 0.000 D/V
# 55 Golf Course Dr/Commerce Blvd &	D	36.0	0.740	D 37.0	0.791	+ 0.958 D/V

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

Intersection #1 Wilfred Ave/Stony Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.831
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 29.3
Optimal Cycle: 76 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected, Permitted), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic movements and 13 rows of volume-related metrics like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 13 columns and 4 rows showing Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns and 13 rows showing Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, etc.

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Wilfred Ave/Primrose Ave

Average Delay (sec/veh): 1.7 Worst Case Level Of Service: C[24.4]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 1! 0 0 1 0 0 1 0 0 1 0

Volume Module:

Base Vol: 10 10 10 10 10 10 10 131 10 10 201 10
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: 10 10 10 10 10 10 10 131 10 10 201 10
Added Vol: 0 11 0 0 0 0 0 376 0 0 301 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 10 21 10 10 10 10 10 507 10 10 502 10
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 11 22 11 11 11 11 11 534 11 11 528 11
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 11 22 11 11 11 11 11 534 11 11 528 11

Critical Gap Module:

Critical Gp: 7.1 6.5 6.2 7.1 6.5 6.2 4.1 xxxx xxxxx 4.1 xxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 3.5 4.0 3.3 2.2 xxxx xxxxx 2.2 xxxx xxxxx

Capacity Module:

Cnflict Vol: 1125 1120 539 1131 1120 534 539 xxxx xxxxx 544 xxxx xxxxx
Potent Cap.: 184 208 546 182 208 550 1040 xxxx xxxxx 1035 xxxx xxxxx
Move Cap.: 171 204 546 161 204 550 1040 xxxx xxxxx 1035 xxxx xxxxx
Volume/Cap: 0.06 0.11 0.02 0.07 0.05 0.02 0.01 xxxx xxxx 0.01 xxxx xxxx

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx 0.0 xxxx xxxxx 0.0 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx 8.5 xxxx xxxxx 8.5 xxxx xxxxx
LOS by Move: * * * * * A * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx 228 xxxxx xxxx 232 xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
SharedQueue:xxxxx 0.7 xxxxx xxxxx 0.5 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 24.4 xxxxx xxxxx 22.9 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS: * C * * C * * * * * * * *
ApproachDel: 24.4 22.9 xxxxxxx xxxxxxx
ApproachLOS: C C * *

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #3 Wilfred Ave/Whistler Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.899

Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 42.3

Optimal Cycle: 102 Level Of Service: D

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Permitted Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 1 0 0 2 0 0 1 0 0 1 2 0 0 1 0

Volume Module:

Base Vol: 10 10 10 10 10 10 10 131 10 10 200 20
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: 10 10 10 10 10 10 10 131 10 10 200 20
Added Vol: 301 22 742 0 0 0 0 0 376 836 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 311 32 752 10 10 10 10 131 386 846 200 20
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 327 34 792 11 11 11 11 138 406 891 211 21
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 327 34 792 11 11 11 11 138 406 891 211 21
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 327 34 792 11 11 11 11 138 406 891 211 21

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.94 0.94 0.73 0.92 0.92 0.92 0.98 0.98 0.83 0.90 0.97 0.97
Lanes: 0.91 0.09 2.00 0.34 0.33 0.33 0.07 0.93 1.00 2.00 0.91 0.09
Final Sat.: 1616 166 2786 583 583 583 132 1725 1583 3432 1669 167

Capacity Analysis Module:

Vol/Sat: 0.20 0.20 0.28 0.02 0.02 0.02 0.08 0.08 0.26 0.26 0.13 0.13
Crit Moves: **** **** ****
Green/Cycle: 0.32 0.32 0.32 0.02 0.02 0.02 0.29 0.29 0.29 0.29 0.57 0.57
Volume/Cap: 0.64 0.64 0.90 0.90 0.90 0.90 0.28 0.28 0.90 0.90 0.22 0.22
Uniform Del: 29.3 29.3 32.7 48.9 48.9 48.9 27.8 27.8 34.4 34.2 10.4 10.4
IncrcmntDel: 2.5 2.5 12.1 110.5 111 110.5 0.3 0.3 20.6 11.0 0.1 0.1
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Delay/Veh: 31.8 31.8 44.8 159.4 159 159.4 28.0 28.0 54.9 45.2 10.5 10.5
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 31.8 31.8 44.8 159.4 159 159.4 28.0 28.0 54.9 45.2 10.5 10.5
LOS by Move: C C D F F F C C D D B B
HCM2kAvgQ: 10 10 17 3 3 3 4 4 16 17 3 1

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Langner Ave/Wilfred Ave

Average Delay (sec/veh): 4.0 Worst Case Level Of Service: F[130.3]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 1! 0 0 1 0 0 1 0 1 0 1

Volume Module:

Base Vol: 10 10 10 10 10 10 10 130 10 10 200 10
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: 10 10 10 10 10 10 10 130 10 10 200 10
Added Vol: 0 0 0 0 0 0 0 0 742 0 0 836 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 10 10 10 10 10 10 10 872 10 10 1036 10
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 11 11 11 11 11 11 11 918 11 11 1091 11
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 11 11 11 11 11 11 11 918 11 11 1091 11

Critical Gap Module:

Critical Gp: 7.1 6.5 6.2 7.1 6.5 6.2 4.1 xxxx xxxxx 4.1 xxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 3.5 4.0 3.3 2.2 xxxx xxxxx 2.2 xxxx xxxxx

Capacity Module:

Cnflct Vol: 2072 2066 923 2066 2061 1091 1101 xxxx xxxxx 928 xxxx xxxxx
Potent Cap.: 40 55 330 41 56 264 642 xxxx xxxxx 745 xxxx xxxxx
Move Cap.: 32 53 330 33 54 264 642 xxxx xxxxx 745 xxxx xxxxx
Volume/Cap: 0.33 0.20 0.03 0.32 0.20 0.04 0.02 xxxx xxxx 0.01 xxxx xxxx

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx 0.1 xxxx xxxxx 0.0 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx 10.7 xxxx xxxxx 9.9 xxxx xxxxx
LOS by Move: * * * * * B * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx 57 xxxxx xxxx 57 xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
SharedQueue:xxxxx 2.2 xxxxx xxxxx 2.2 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 130 xxxxx xxxxx 130 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS: * F * * F * * * * * * * *
ApproachDel: 129.8 130.3 xxxxxxx xxxxxxx
ApproachLOS: F F * *

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

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

Intersection #5 Wilfred Ave/Labath Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.907
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 33.3
Optimal Cycle: 113 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Protected/Permitted), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns for volume metrics. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns for saturation flow metrics. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns for capacity analysis metrics. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

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

Intersection #6 Dowell Ave/Wilfred Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.977
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 37.2
Optimal Cycle: 167 Level Of Service: D

Table with columns: Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Permitted, Protected), Rights (Include), Min. Green, Lanes.

Volume Module: Table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module: Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

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

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

Intersection #7 Wilfred Ave/Redwood Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.794
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 34.8
Optimal Cycle: 76 Level Of Service: C

Table with columns for Approach (North, South, East, West Bound) and Movement (L, T, R). Rows include Control, Rights, Min. Green, and Lanes.

Volume Module:

Table with 13 columns representing different traffic movements and 13 rows of volume-related metrics like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module:

Table with 13 columns and 4 rows showing saturation flow metrics like Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with 13 columns and 13 rows showing capacity analysis metrics like Vol/Sat, Crit Moves, Green/Cycle, etc.

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

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

Intersection #8 Redwood Dr/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.294
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 26.5
Optimal Cycle: 31 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module:

Table with 13 columns representing different traffic volumes and adjustment factors. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module:

Table with 13 columns representing saturation flow and adjustment factors. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with 13 columns representing capacity analysis metrics. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

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

Intersection #9 Wilfred Ave/101 SB Ramp

Cycle (sec): 145 Critical Vol./Cap.(X): 1.026
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 53.7
Optimal Cycle: 180 Level Of Service: D

Street Name: US-101 SB Ramp Wilfred Avenue
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Permitted Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 0 0 0 1 0 1 1 0 0 0 1 1 0 2 0 2 0 0

Volume Module:
Base Vol: 0 0 0 328 324 459 0 737 219 89 476 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: 0 0 0 328 324 459 0 737 219 89 476 0
Added Vol: 0 0 0 0 0 218 0 204 527 0 606 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 328 324 677 0 941 746 89 1082 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 0 0 0 345 341 713 0 991 785 94 1139 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 0 0 345 341 713 0 991 785 94 1139 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 0 0 0 345 341 713 0 991 785 94 1139 0

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 1.00 1.00 1.00 0.83 0.88 0.88 1.00 0.92 0.92 0.93 0.98 1.00
Lanes: 0.00 0.00 0.00 1.00 1.00 1.00 0.00 1.12 0.88 2.00 2.00 0.00
Final Sat.: 0 0 0 1583 1674 1674 0 1940 1538 3538 3724 0

Capacity Analysis Module:
Vol/Sat: 0.00 0.00 0.00 0.22 0.20 0.43 0.00 0.51 0.51 0.03 0.31 0.00
Crit Moves: ****
Green/Cycle: 0.00 0.00 0.00 0.41 0.41 0.41 0.00 0.50 0.50 0.03 0.52 0.00
Volume/Cap: 0.00 0.00 0.00 0.53 0.49 1.03 0.00 1.03 1.03 1.03 0.58 0.00
Uniform Del: 0.0 0.0 0.0 31.8 31.2 42.4 0.0 36.4 36.4 70.6 23.7 0.0
IncrcmntDel: 0.0 0.0 0.0 0.8 0.2 35.1 0.0 28.7 28.7 101.6 0.5 0.0
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 0.00 0.00 0.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 0.00
Delay/Veh: 0.0 0.0 0.0 32.6 31.4 77.5 0.0 65.1 65.1 172.2 24.2 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 0.0 0.0 32.6 31.4 77.5 0.0 65.1 65.1 172.2 24.2 0.0
LOS by Move: A A A C C E A E E F C A
HCM2kAvgQ: 0 0 0 11 11 39 0 48 48 4 17 0

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #12 101 NB Ramps/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.714

Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 39.5

Optimal Cycle: 62 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Control:	Protected			Protected			Split Phase			Split Phase								
Rights:	Include			Include			Include			Include								
Min. Green:	0	0	0	0	50	50	0	0	0	0	0	0						
Lanes:	1	0	1	1	0	1	1	1	1	1	0	0	1	0	0	1	0	0

Volume Module:

Base Vol:	514	489	2	7	435	512	252	3	40	8	3	5
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:	514	489	2	7	435	512	252	3	40	8	3	5
Added Vol:	0	0	0	0	0	194	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	514	489	2	7	435	706	252	3	40	8	3	5
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	541	515	2	7	458	743	265	3	42	8	3	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	541	515	2	7	458	743	265	3	42	8	3	5
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	541	515	2	7	458	743	265	3	42	8	3	5

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.98	0.98	0.93	0.89	0.89	0.93	0.93	0.83	0.92	0.92	0.92
Lanes:	1.00	1.99	0.01	1.00	1.14	1.86	1.98	0.02	1.00	0.50	0.19	0.31
Final Sat.:	1769	3705	15	1769	1932	3135	3507	42	1583	870	326	544

Capacity Analysis Module:

Vol/Sat:	0.31	0.14	0.14	0.00	0.24	0.24	0.08	0.08	0.03	0.01	0.01	0.01
Crit Moves:	****			****			****			****		
Green/Cycle:	0.30	0.77	0.77	0.02	0.50	0.50	0.07	0.07	0.07	0.01	0.01	0.01
Volume/Cap:	1.03	0.18	0.18	0.18	0.47	0.47	1.03	1.03	0.36	1.03	1.03	1.03
Uniform Del:	35.1	3.0	3.0	47.9	16.4	16.4	46.3	46.3	44.1	49.5	49.5	49.5
IncrcmntDel:	47.0	0.0	0.0	2.1	0.1	0.1	63.6	63.6	1.9	232.5	232	232.5
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	82.1	3.0	3.0	50.0	16.5	16.5	109.9	110	46.0	282.0	282	282.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	82.1	3.0	3.0	50.0	16.5	16.5	109.9	110	46.0	282.0	282	282.0
LOS by Move:	F	A	A	D	B	B	F	F	D	F	F	F
HCM2kAvgQ:	24	2	2	0	8	8	8	8	2	2	2	2

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #13 New Driveway/Stony Point Rd

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

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 1 0 0 0 0 1 0 0 0 0 0 0 0 0 1

Volume Module:

Base Vol: 0 832 0 0 634 0 0 0 0 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
Initial Bse: 0 832 0 0 634 0 0 0 0 0 0 0 0
Added Vol: 0 255 0 0 226 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 1087 0 0 860 0 0 0 0 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
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 0 1144 0 0 905 0 0 0 0 0 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 0 1144 0 0 905 0 0 0 0 0 0 0 0

Critical Gap Module:

Critical Gp:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 6.2
FollowUpTim:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 3.3

Capacity Module:

Cnflict Vol: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 1144
Potent Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 245
Move Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 245
Volume/Cap: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.00

Level Of Service Module:

2Way95thQ: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Control Del:xxxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
LOS by Move: * * * * * * * * * * * * * * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue:xxxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd ConDel:xxxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: * * * * * * * * * * * * * * * *
ApproachDel: xxxxxxx xxxxxxx xxxxxxx xxxxxxx
ApproachLOS: * * * *

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #15 Redwood Dr/Business Park Dr

Average Delay (sec/veh): 5.6 Worst Case Level Of Service: D[26.5]

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: 1 0 2 0 0 0 0 1 1 0 1 0 0 0 0 1 0 0 0 0 0

Volume Module:

Base Vol: 33 464 0 0 489 41 172 0 89 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: 33 464 0 0 489 41 172 0 89 0 0 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 33 464 0 0 489 41 172 0 89 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 35 488 0 0 515 43 181 0 94 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 35 488 0 0 515 43 181 0 94 0 0 0

Critical Gap Module:

Critical Gp: 4.1 xxxx xxxxx xxxxx xxxx xxxxx 6.8 xxxx 6.9 xxxxx xxxx xxxxx
FollowUpTim: 2.2 xxxx xxxxx xxxxx xxxx xxxxx 3.5 xxxx 3.3 xxxxx xxxx xxxxx

Capacity Module:

Cnflict Vol: 558 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 850 xxxx 279 xxxx xxxx xxxxx
Potent Cap.: 1023 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 303 xxxx 724 xxxx xxxx xxxxx
Move Cap.: 1023 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 296 xxxx 724 xxxx xxxx xxxxx
Volume/Cap: 0.03 xxxx xxxx xxxxx xxxx xxxxx 0.61 xxxx 0.13 xxxx xxxx xxxxx

Level Of Service Module:

2Way95thQ: 0.1 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 3.8 xxxx 0.4 xxxx xxxx xxxxx
Control Del: 8.6 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 34.7 xxxx 10.7 xxxxx xxxx xxxxx
LOS by Move: A * * * * * D * B * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxx xxxxx
SharedQueue:xxxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxx xxxxx
Shrd ConDel:xxxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxx xxxxx
Shared LOS: *
ApproachDel: xxxxxx xxxxxx 26.5 xxxxxx
ApproachLOS: * * D *

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

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

Intersection #16 Rohnert Park Expwy/Stony Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.910
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 36.8
Optimal Cycle: 100 Level Of Service: D

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Permitted, Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic flows. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

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

Intersection #17 Rohnert Park Expwy/Labath Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.615
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 34.1
Optimal Cycle: 50 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #18 Rohnert Park Expwy/Redwood Dr

Cycle (sec): 90 Critical Vol./Cap.(X): 0.721

Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 32.8

Optimal Cycle: 61 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Control:	Protected			Protected			Protected			Protected											
Rights:	Include			Include			Include			Include											
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0									
Lanes:	1	0	1	1	1	1	2	0	1	0	1	1	0	3	0	1	2	0	2	0	1

Volume Module:

Base Vol:	137	252	422	364	264	243	233	701	146	371	656	358
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:	137	252	422	364	264	243	233	701	146	371	656	358
Added Vol:	0	0	0	0	0	0	0	122	0	0	138	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	137	252	422	364	264	243	233	823	146	371	794	358
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	144	265	444	383	278	256	245	866	154	391	836	377
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	144	265	444	383	278	256	245	866	154	391	836	377
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	144	265	444	383	278	256	245	866	154	391	836	377

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.89	0.89	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.83
Lanes:	1.00	1.12	1.88	2.00	1.00	1.00	1.00	3.00	1.00	2.00	2.00	1.00
Final Sat.:	1769	1892	3169	3538	1862	1583	1769	5586	1583	3538	3724	1583

Capacity Analysis Module:

Vol/Sat:	0.08	0.14	0.14	0.11	0.15	0.16	0.14	0.16	0.10	0.11	0.22	0.24
Crit Moves:	****			****			****			****		
Green/Cycle:	0.12	0.19	0.19	0.15	0.23	0.23	0.19	0.31	0.31	0.22	0.33	0.33
Volume/Cap:	0.71	0.72	0.72	0.72	0.65	0.71	0.72	0.51	0.32	0.51	0.68	0.72
Uniform Del:	38.3	34.0	34.0	36.5	31.4	31.9	34.1	25.7	24.1	31.0	26.0	26.5
IncrcmntDel:	10.7	2.6	2.6	4.8	3.6	6.2	7.4	0.3	0.4	0.6	1.6	4.9
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	49.1	36.6	36.6	41.3	35.0	38.2	41.5	26.0	24.5	31.6	27.6	31.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	49.1	36.6	36.6	41.3	35.0	38.2	41.5	26.0	24.5	31.6	27.6	31.4
LOS by Move:	D	D	D	D	D	D	D	C	C	C	C	C
HCM2kAvgQ:	5	8	8	7	8	8	8	7	3	5	11	11

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

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #19 Rohnert Park Expwy/101 SB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.722
 Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 24.8
 Optimal Cycle: 63 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1	0	0	1	0	0	2	1	0	1

Volume Module:

Base Vol:	7	0	17	702	1	351	0	1208	278	68	1024	199
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:	7	0	17	702	1	351	0	1208	278	68	1024	199
Added Vol:	0	0	0	0	0	0	0	11	111	0	138	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	7	0	17	702	1	351	0	1219	389	68	1162	199
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00
PHF Volume:	7	0	18	739	1	369	0	1283	409	72	1223	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	7	0	18	739	1	369	0	1283	409	72	1223	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Final Vol.:	7	0	18	739	1	369	0	1283	409	72	1223	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.85	1.00	0.85	0.69	0.69	0.83	1.00	0.94	0.94	0.93	0.98	1.00
Lanes:	0.29	0.00	0.71	1.99	0.01	1.00	0.00	2.27	0.73	1.00	2.00	1.00
Final Sat.:	472	0	1146	2633	4	1583	0	4082	1303	1769	3724	1900

Capacity Analysis Module:

Vol/Sat:	0.02	0.00	0.02	0.28	0.28	0.23	0.00	0.31	0.31	0.04	0.33	0.00
Crit Moves:				****				****		****		
Green/Cycle:	0.39	0.00	0.39	0.39	0.39	0.39	0.00	0.44	0.44	0.06	0.49	0.00
Volume/Cap:	0.04	0.00	0.04	0.72	0.72	0.60	0.00	0.72	0.72	0.72	0.67	0.00
Uniform Del:	19.0	0.0	19.0	26.0	26.0	24.4	0.0	23.3	23.3	46.4	19.3	0.0
IncrcmntDel:	0.0	0.0	0.0	2.6	2.6	1.7	0.0	1.1	1.1	22.8	1.0	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	19.0	0.0	19.0	28.5	28.5	26.0	0.0	24.4	24.4	69.2	20.2	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	19.0	0.0	19.0	28.5	28.5	26.0	0.0	24.4	24.4	69.2	20.2	0.0
LOS by Move:	B	A	B	C	C	C	A	C	C	E	C	A
HCM2kAvgQ:	0	0	0	11	11	10	0	15	15	4	15	0

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #20 Rohnert Park Expwy/101 NB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.518

Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 19.2

Optimal Cycle: 28 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound						
Movement:	L	T	R	L	T	R	L	T	R	L	T	R				
Control:	Protected			Protected			Permitted			Permitted						
Rights:	Include			Include			Ignore			Ignore						
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0				
Lanes:	1	0	0	1	1	1	1	0	4	0	1	0	0	3	0	1

Volume Module:

Base Vol:	303	0	306	14	0	3	17	1631	273	0	985	350
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:	303	0	306	14	0	3	17	1631	273	0	985	350
Added Vol:	125	0	0	0	0	0	0	11	0	0	12	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	428	0	306	14	0	3	17	1642	273	0	997	350
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00	0.95	0.95	0.00
PHF Volume:	451	0	322	15	0	3	18	1728	0	0	1049	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	451	0	322	15	0	3	18	1728	0	0	1049	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Final Vol.:	451	0	322	15	0	3	18	1728	0	0	1049	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	1.00	0.83	0.93	1.00	0.83	0.21	0.98	1.00	1.00	0.98	1.00
Lanes:	1.00	0.00	2.00	1.00	0.00	1.00	1.00	4.00	1.00	0.00	3.00	1.00
Final Sat.:	1769	0	3165	1769	0	1583	400	7448	1900	0	5586	1900

Capacity Analysis Module:

Vol/Sat:	0.25	0.00	0.10	0.01	0.00	0.00	0.04	0.23	0.00	0.00	0.19	0.00
Crit Moves:	****				****			****				
Green/Cycle:	0.49	0.00	0.45	0.04	0.00	0.00	0.45	0.45	0.00	0.00	0.45	0.00
Volume/Cap:	0.52	0.00	0.22	0.22	0.00	xxxx	0.10	0.52	0.00	0.00	0.42	0.00
Uniform Del:	17.3	0.0	16.6	46.7	0.0	0.0	15.9	19.8	0.0	0.0	18.7	0.0
IncrcmntDel:	0.6	0.0	0.1	1.7	0.0	0.0	0.2	0.1	0.0	0.0	0.1	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00
Delay/Veh:	17.9	0.0	16.6	48.5	0.0	0.0	16.2	20.0	0.0	0.0	18.9	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	17.9	0.0	16.6	48.5	0.0	0.0	16.2	20.0	0.0	0.0	18.9	0.0
LOS by Move:	B	A	B	D	A	A	B	B	A	A	B	A
HCM2kAvgQ:	10	0	3	1	0	1	0	10	0	0	7	0

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #21 Rohnert Park Expwy/Commerce Blvd

Cycle (sec): 85 Critical Vol./Cap.(X): 0.835
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 30.7
Optimal Cycle: 81 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module:

Table with 13 columns representing different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module:

Table with 13 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with 13 columns. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #22 Gravenstein Hwy (SR 116)/ Stoney Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.782
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 39.3
Optimal Cycle: 73 Level Of Service: D

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module:

Table with 13 columns representing different volume and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module:

Table with 13 columns for saturation flow metrics: Sat/Lane, Adjustment, Lanes, Final Sat., etc.

Capacity Analysis Module:

Table with 13 columns for capacity analysis metrics: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, etc.

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

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #23 Gravenstein Hwy (SR 116)/ Redwood Rd

Cycle (sec): 75 Critical Vol./Cap.(X): 0.784

Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 27.7

Optimal Cycle: 67 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	0	1	0	1	1	0	2

Volume Module:

Base Vol:	48	24	63	485	29	96	102	625	32	53	738	333
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	24	63	485	29	96	102	625	32	53	738	333
Added Vol:	0	0	0	0	0	0	0	104	0	0	117	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	48	24	63	485	29	96	102	729	32	53	855	333
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	51	25	66	511	31	101	107	767	34	56	900	351
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	51	25	66	511	31	101	107	767	34	56	900	351
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	51	25	66	511	31	101	107	767	34	56	900	351

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.87	0.87	0.93	0.87	0.87	0.93	0.93	0.93	0.93	0.93	0.83
Lanes:	1.00	0.28	0.72	1.00	0.23	0.77	1.00	1.92	0.08	1.00	2.00	1.00
Final Sat.:	1769	458	1201	1769	382	1266	1769	3369	148	1769	3538	1583

Capacity Analysis Module:

Vol/Sat:	0.03	0.06	0.06	0.29	0.08	0.08	0.06	0.23	0.23	0.03	0.25	0.22
Crit Moves:	****			****			****			****		
Green/Cycle:	0.12	0.07	0.07	0.37	0.32	0.32	0.08	0.35	0.35	0.05	0.32	0.32
Volume/Cap:	0.25	0.78	0.78	0.78	0.25	0.25	0.78	0.65	0.65	0.65	0.78	0.68
Uniform Del:	30.2	34.3	34.3	21.1	18.7	18.7	34.0	20.3	20.3	35.0	23.0	22.0
IncrcmntDel:	0.6	28.5	28.5	6.2	0.2	0.2	25.0	1.2	1.2	15.7	3.6	3.8
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	30.8	62.8	62.8	27.3	18.9	18.9	59.0	21.5	21.5	50.7	26.6	25.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	30.8	62.8	62.8	27.3	18.9	18.9	59.0	21.5	21.5	50.7	26.6	25.8
LOS by Move:	C	E	E	C	B	B	E	C	C	D	C	C
HCM2kAvgQ:	1	4	4	13	2	2	4	9	9	2	12	8

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

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

 Intersection #24 Gravenstein Hwy and SB 101 Ramps

Cycle (sec): 70 Critical Vol./Cap.(X): 0.572
 Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 15.9
 Optimal Cycle: 37 Level Of Service: B

Street Name: SB 101 Ramps Gravenstein Hwy
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Permitted			Protected			Permitted			Protected		
Rights:	Include			Include			Ignore			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	2	0	1	0	0	1	1	0	0

Volume Module:

Base Vol:	0	0	0	639	0	212	0	819	361	99	900	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:	0	0	0	639	0	212	0	819	361	99	900	0
Added Vol:	0	0	0	0	0	0	0	0	104	0	117	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	639	0	212	0	819	465	99	1017	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00	0.95	0.95	0.95
PHF Volume:	0	0	0	673	0	223	0	862	0	104	1071	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	673	0	223	0	862	0	104	1071	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Final Vol.:	0	0	0	673	0	223	0	862	0	104	1071	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.90	1.00	0.83	1.00	0.93	1.00	0.93	0.93	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	0.00	2.00	1.00	1.00	2.00	0.00
Final Sat.:	0	0	0	3432	0	1583	0	3538	1900	1769	3538	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.20	0.00	0.14	0.00	0.24	0.00	0.06	0.30	0.00
Crit Moves:				****				****		****		
Green/Cycle:	0.00	0.00	0.00	0.34	0.00	0.34	0.00	0.43	0.00	0.10	0.53	0.00
Volume/Cap:	0.00	0.00	0.00	0.57	0.00	0.41	0.00	0.57	0.00	0.57	0.57	0.00
Uniform Del:	0.0	0.0	0.0	18.8	0.0	17.6	0.0	15.3	0.0	29.9	11.1	0.0
IncrcmntDel:	0.0	0.0	0.0	0.7	0.0	0.5	0.0	0.5	0.0	4.3	0.4	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
Delay/Veh:	0.0	0.0	0.0	19.5	0.0	18.1	0.0	15.8	0.0	34.3	11.6	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	19.5	0.0	18.1	0.0	15.8	0.0	34.3	11.6	0.0
LOS by Move:	A	A	A	B	A	B	A	B	A	C	B	A
HCM2kAvgQ:	0	0	0	7	0	4	0	8	0	3	9	0

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #25 Gravenstein Hwy and NB 101 Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.784
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 21.1
Optimal Cycle: 65 Level Of Service: C

Street Name: NB 101 Ramps Gravenstein Hwy
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Permitted Permitted Permitted
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 0 0 1 0 0 0 0 0 0 2 0 0 0 0 0 0 0

Volume Module:

Base Vol: 351 0 236 0 0 0 0 0 1461 0 0 617 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: 351 0 236 0 0 0 0 0 1461 0 0 617 0
Added Vol: 117 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 468 0 236 0 0 0 0 0 1461 0 0 617 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 493 0 248 0 0 0 0 0 1538 0 0 649 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 493 0 248 0 0 0 0 0 1538 0 0 649 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 493 0 248 0 0 0 0 0 1538 0 0 649 0

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.93 1.00 0.83 1.00 1.00 1.00 1.00 0.93 1.00 1.00 0.93 1.00
Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 2.00 0.00 0.00 2.00 0.00
Final Sat.: 1769 0 1583 0 0 0 0 0 3538 0 0 3538 0

Capacity Analysis Module:

Vol/Sat: 0.28 0.00 0.16 0.00 0.00 0.00 0.00 0.43 0.00 0.00 0.18 0.00
Crit Moves: ****
Green/Cycle: 0.36 0.00 0.36 0.00 0.00 0.00 0.00 0.55 0.00 0.00 0.55 0.00
Volume/Cap: 0.78 0.00 0.44 0.00 0.00 0.00 0.00 0.78 0.00 0.00 0.33 0.00
Uniform Del: 28.8 0.0 24.7 0.0 0.0 0.0 0.0 17.5 0.0 0.0 12.1 0.0
IncrcmntDel: 6.4 0.0 0.6 0.0 0.0 0.0 0.0 2.1 0.0 0.0 0.1 0.0
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 1.00 0.00 0.00 1.00 0.00
Delay/Veh: 35.2 0.0 25.2 0.0 0.0 0.0 0.0 19.7 0.0 0.0 12.2 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 35.2 0.0 25.2 0.0 0.0 0.0 0.0 19.7 0.0 0.0 12.2 0.0
LOS by Move: D A C A A A A B A A B A
HCM2kAvgQ: 15 0 6 0 0 0 0 21 0 0 6 0

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

Intersection #26 Millbrae Ave/Stony Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.533
 Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 21.6
 Optimal Cycle: 43 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	2	0	1	1	0	0	1	0	0	1

Volume Module:

Base Vol:	19	715	20	116	546	4	7	6	11	2	7	194
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:	19	715	20	116	546	4	7	6	11	2	7	194
Added Vol:	0	75	0	0	121	0	0	0	0	0	0	32
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	19	790	20	116	667	4	7	6	11	2	7	226
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	20	832	21	122	702	4	7	6	12	2	7	238
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	20	832	21	122	702	4	7	6	12	2	7	238
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	20	832	21	122	702	4	7	6	12	2	7	238

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.83	0.93	0.93	0.93	0.91	0.91	0.91	0.97	0.97	0.83
Lanes:	1.00	2.00	1.00	1.00	1.99	0.01	0.29	0.25	0.46	0.22	0.78	1.00
Final Sat.:	1769	3538	1583	1769	3513	21	502	431	789	409	1432	1583

Capacity Analysis Module:

Vol/Sat:	0.01	0.24	0.01	0.07	0.20	0.20	0.01	0.01	0.01	0.01	0.01	0.15
Crit Moves:	****			****			****			****		
Green/Cycle:	0.03	0.44	0.44	0.13	0.54	0.54	0.03	0.03	0.03	0.28	0.28	0.28
Volume/Cap:	0.37	0.53	0.03	0.53	0.37	0.37	0.53	0.53	0.53	0.02	0.02	0.53
Uniform Del:	47.5	20.4	15.8	40.7	13.2	13.2	48.0	48.0	48.0	25.9	25.9	30.3
IncrcmntDel:	4.2	0.4	0.0	2.4	0.1	0.1	11.2	11.2	11.2	0.0	0.0	1.2
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	51.8	20.8	15.9	43.1	13.3	13.3	59.2	59.2	59.2	25.9	25.9	31.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	51.8	20.8	15.9	43.1	13.3	13.3	59.2	59.2	59.2	25.9	25.9	31.6
LOS by Move:	D	C	B	D	B	B	E	E	E	C	C	C
HCM2kAvgQ:	1	10	0	4	7	7	2	2	2	0	0	7

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #27 Millbrae Ave/Primrose Ave

Average Delay (sec/veh): 0.5 Worst Case Level Of Service: B[11.6]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 1 0 0 0 0 1! 0 0 0 0 1! 0 0

Volume Module:

Base Vol: 0 0 1 0 1 0 1 139 3 4 199 2
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 1 0 1 0 1 139 3 4 199 2
Added Vol: 11 0 0 0 0 0 0 0 0 0 0 22 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 11 0 1 0 1 0 1 139 3 4 221 2
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 12 0 1 0 1 0 1 146 3 4 233 2
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 12 0 1 0 1 0 1 146 3 4 233 2

Critical Gap Module:

Critical Gp: 7.1 6.5 6.2 xxxxx 6.5 xxxxx 4.1 xxxxx xxxxx 4.1 xxxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 xxxxx 4.0 xxxxx 2.2 xxxxx xxxxx 2.2 xxxxx xxxxx

Capacity Module:

Cnflict Vol: 393 393 148 xxxxx 394 xxxxx 235 xxxxx xxxxx 149 xxxxx xxxxx
Potent Cap.: 570 546 904 xxxxx 546 xxxxx 1344 xxxxx xxxxx 1444 xxxxx xxxxx
Move Cap.: 568 544 904 xxxxx 544 xxxxx 1344 xxxxx xxxxx 1444 xxxxx xxxxx
Volume/Cap: 0.02 0.00 0.00 xxxxx 0.00 xxxxx 0.00 xxxxx xxxxx 0.00 xxxxx xxxxx

Level Of Service Module:

2Way95thQ: xxxxx xxxxx xxxxx xxxxx 0.0 xxxxx 0.0 xxxxx xxxxx 0.0 xxxxx xxxxx
Control Del: xxxxx xxxxx xxxxx xxxxx 11.6 xxxxx 7.7 xxxxx xxxxx 7.5 xxxxx xxxxx
LOS by Move: * * * * B * A * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx 586 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue: xxxxx 0.1 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd ConDel: xxxxx 11.3 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: * B * * * * * * * * * *
ApproachDel: 11.3 11.6 xxxxxxx xxxxxxx
ApproachLOS: B B * *

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #28 Millbrae Ave/Whistler Ave

Average Delay (sec/veh): 1.2 Worst Case Level Of Service: B[11.5]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 1 0 0 0 0 0 1! 0 0 0 0 1! 0 0 0 0 1! 0 0

Volume Module:

Base Vol: 1 9 0 4 0 1 1 123 2 4 208 8
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 1 9 0 4 0 1 1 123 2 4 208 8
Added Vol: 22 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 23 9 0 4 0 1 1 123 2 4 208 8
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 24 9 0 4 0 1 1 129 2 4 219 8
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 24 9 0 4 0 1 1 129 2 4 219 8

Critical Gap Module:

Critical Gp: 7.1 6.5 xxxxx 7.1 6.5 6.2 4.1 xxxxx xxxxx 4.1 xxxxx xxxxx
FollowUpTim: 3.5 4.0 xxxxx 3.5 4.0 3.3 2.2 xxxxx xxxxx 2.2 xxxxx xxxxx

Capacity Module:

Cnflict Vol: 365 368 xxxxx 369 365 223 227 xxxxx xxxxx 132 xxxxx xxxxx
Potent Cap.: 595 564 xxxxx 591 566 821 1353 xxxxx xxxxx 1466 xxxxx xxxxx
Move Cap.: 593 562 xxxxx 582 564 821 1353 xxxxx xxxxx 1466 xxxxx xxxxx
Volume/Cap: 0.04 0.02 xxxxx 0.01 0.00 0.00 0.00 xxxxx xxxxx 0.00 xxxxx xxxxx

Level Of Service Module:

2Way95thQ: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx 0.0 xxxxx xxxxx
Control Del: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 7.7 xxxxx xxxxx 7.5 xxxxx xxxxx
LOS by Move: * * * * * A * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: 584 xxxxx xxxxx xxxxx 618 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue: 0.2 xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd ConDel: 11.5 xxxxx xxxxx xxxxx 10.9 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: B * * * B * * * * *
ApproachDel: 11.5 10.9 xxxxxxx xxxxxxx
ApproachLOS: B B * *

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #29 Millbrae Ave/Langner Ave

Average Delay (sec/veh): 0.4 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:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	1!	0	0	0	0	0	0	1	0	0

Volume Module:

Base Vol:	5	0	11	0	0	0	0	149	9	4	270	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:	5	0	11	0	0	0	0	149	9	4	270	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	5	0	11	0	0	0	0	149	9	4	270	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	5	0	12	0	0	0	0	157	9	4	284	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	5	0	12	0	0	0	0	157	9	4	284	0

Critical Gap Module:

Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	454	454	162	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	166	xxxx	xxxxx
Potent Cap.:	567	505	889	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1424	xxxx	xxxxx
Move Cap.:	566	503	889	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1424	xxxx	xxxxx
Volume/Cap:	0.01	0.00	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	754	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	0.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx			
Shrd ConDel:	xxxxx	9.9	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx			
Shared LOS:	*	A	*	*	*	*	*	*	*	A	*	*			
ApproachDel:	9.9			xxxxxxx			xxxxxxx			xxxxxxx					
ApproachLOS:	A			*			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #30 Millbrae Ave/Labath Ave

Average Delay (sec/veh): 1.0 Worst Case Level Of Service: B[11.2]

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

Volume Module:

Base Vol:	25	0	8	0	0	0	0	155	9	11	250	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:	25	0	8	0	0	0	0	155	9	11	250	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	25	0	8	0	0	0	0	155	9	11	250	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	26	0	8	0	0	0	0	163	9	12	263	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	26	0	8	0	0	0	0	163	9	12	263	0

Critical Gap Module:

Critical Gp:	6.4	6.5	6.2	7.1	6.5	6.2	xxxxx	xxxxx	xxxxx	4.1	xxxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	xxxxx	xxxxx	xxxxx	2.2	xxxxx	xxxxx

Capacity Module:

Cnflict Vol:	454	454	168	458	459	263	xxxxx	xxxxx	xxxxx	173	xxxxx	xxxxx
Potent Cap.:	567	505	881	516	502	780	xxxxx	xxxxx	xxxxx	1416	xxxxx	xxxxx
Move Cap.:	564	501	881	508	498	780	xxxxx	xxxxx	xxxxx	1416	xxxxx	xxxxx
Volume/Cap:	0.05	0.00	0.01	0.00	0.00	0.00	xxxxx	xxxxx	xxxxx	0.01	xxxxx	xxxxx

Level Of Service Module:

2Way95thQ:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx			
Control Del:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	7.6	xxxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxxx	618	xxxxx	xxxxx	0	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
SharedQueue:	xxxxx	0.2	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shrd ConDel:	xxxxx	11.2	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	7.6	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shared LOS:	*	B	*	*	*	*	*	*	*	A	*	*	*	*	*
ApproachDel:	11.2			xxxxxxx			xxxxxxx			xxxxxxx					
ApproachLOS:	B			*			*			*					

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #31 Millbrae Ave/Dowdell Ave

Average Delay (sec/veh): 1.0 Worst Case Level Of Service: B[11.3]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 1 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 1 0 0

Volume Module:

Base Vol: 37 0 0 0 0 0 0 0 135 22 0 235 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: 37 0 0 0 0 0 0 0 135 22 0 235 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 37 0 0 0 0 0 0 0 135 22 0 235 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 39 0 0 0 0 0 0 0 142 23 0 247 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 39 0 0 0 0 0 0 0 142 23 0 247 0

Critical Gap Module:

Critical Gp: 6.4 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim: 3.5 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxxx xxxx xxxxx

Capacity Module:

Cnflict Vol: 401 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Potent Cap.: 609 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Move Cap.: 609 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Volume/Cap: 0.06 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx

Level Of Service Module:

2Way95thQ: 0.2 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Control Del: 11.3 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
LOS by Move: B * * * * * * * * * * * * * * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
SharedQueue:xxxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxxx xxxx xxxxx xxxxx
Shrd ConDel:xxxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxxx xxxx xxxxx xxxxx
Shared LOS: * * * * * * * * * * * * * * * *
ApproachDel: 11.3 xxxxxxx xxxxxxx xxxxxxx
ApproachLOS: B * * *

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

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

Intersection #55 Golf Course Dr/Commerce Blvd & Roberts Lake Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.791
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 37.0
Optimal Cycle: 75 Level Of Service: D

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

**CUMULATIVE 2020 + ALTERNATIVE C
MITIGATED TRAFFIC CONDITIONS
(TRAFFIX)**

 Impact Analysis Report
 Level Of Service

Intersection	Base LOS	Base		Future LOS	Future		Change in
		Del/ Veh	V/ C		Del/ Veh	V/ C	
# 1 Wilfred Ave/Stony Point Rd	B	18.4	0.600	C	31.0	0.827	+12.683 D/V
# 2 Wilfred Ave/Primrose Ave	B	12.4	0.000	D	28.0	0.000	+15.505 D/V
# 3 Wilfred Ave/Whistler Ave	B	15.6	0.213	D	41.4	0.899	+25.782 D/V
# 4 Langner Ave/Wilfred Ave	B	12.2	0.000	F	184.5	0.000	+172.280 D/V
# 5 Wilfred Ave/Labath Ave	C	34.9	0.601	D	41.7	0.887	+ 6.795 D/V
# 6 Dowell Ave/Wilfred Ave	D	36.2	0.770	D	53.7	1.013	+17.449 D/V
# 7 Wilfred Ave/Redwood Dr	D	38.4	0.851	D	50.8	1.016	+12.389 D/V
# 9 Wilfred Ave/101 SB Ramp	C	30.7	0.724	D	51.4	1.071	+20.707 D/V
# 12 101 NB Ramps/Commerce Blvd	D	42.3	0.770	D	42.9	0.817	+ 0.572 D/V
# 13 New Driveway/Stony Point Rd	A	0.0	0.000	A	0.0	0.000	+ 0.000 D/V
# 15 Redwood Dr/Business Park Dr	C	16.5	0.000	C	16.5	0.000	+ 0.000 D/V
# 16 Rohnert Park Expwy/Stony Point	C	22.1	0.619	C	31.4	0.858	+ 9.368 D/V
# 17 Rohnert Park Expwy/Labath Ave	C	30.7	0.522	C	33.9	0.561	+ 3.165 D/V
# 18 Rohnert Park Expwy/Redwood Dr	C	33.1	0.707	C	33.3	0.705	+ 0.155 D/V
# 19 Rohnert Park Expwy/101 SB Ramp	C	24.5	0.710	C	24.7	0.740	+ 0.229 D/V
# 20 Rohnert Park Expwy/101 NB Ramp	B	17.1	0.449	C	20.0	0.529	+ 2.953 D/V
# 21 Rohnert Park Expwy/Commerce Bl	C	33.2	0.822	C	33.3	0.825	+ 0.118 D/V
# 22 Gravenstein Hwy (SR 116)/ Ston	D	39.9	0.829	D	42.2	0.834	+ 2.259 D/V
# 23 Gravenstein Hwy (SR 116)/ Redw	C	33.8	0.905	D	36.1	0.907	+ 2.300 D/V
# 24 Gravenstein Hwy and SB 101 Ram	B	15.4	0.596	C	27.5	0.606	+12.115 D/V
# 25 Gravenstein Hwy and NB 101 Ram	B	18.7	0.767	C	23.0	0.844	+ 4.301 D/V
# 26 Millbrae Ave/Stony Point Rd	C	21.8	0.517	C	22.3	0.567	+ 0.447 D/V
# 27 Millbrae Ave/Primrose Ave	B	12.4	0.000	B	12.6	0.000	+ 0.225 D/V
# 28 Millbrae Ave/Whistler Ave	B	12.4	0.000	B	12.6	0.000	+ 0.214 D/V
# 29 Millbrae Ave/Langner Ave	B	11.2	0.000	B	11.2	0.000	+ 0.000 D/V

Intersection		Base		Future		Change in
		Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C	
# 30 Millbrae Ave/Labath Ave	B	13.5	0.000	B 13.5	0.000	+ 0.000 D/V
# 31 Millbrae Ave/Dowdell Ave	B	11.6	0.000	B 11.6	0.000	+ 0.000 D/V
# 55 Golf Course Dr/Commerce Blvd &	D	46.5	0.919	D 53.2	0.970	+ 6.678 D/V

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

Intersection #1 Wilfred Ave/Stony Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.827
Loss Time (sec): 9 (Y+R=0.0 sec) Average Delay (sec/veh): 31.0
Optimal Cycle: 75 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected, Permitted), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic movements and 13 rows of volume-related metrics such as Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 13 columns and 4 rows showing Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns and 13 rows showing Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, etc.

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Wilfred Ave/Primrose Ave

Average Delay (sec/veh): 1.7 Worst Case Level Of Service: D[28.0]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 1 0 0 1 0 0 1! 0 0 1 0 0 1 0 1 0 0 1 0

Volume Module:

Base Vol: 10 10 10 10 10 10 10 170 10 9 280 9
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: 10 10 10 10 10 10 10 170 10 9 280 9
Added Vol: 0 11 0 0 0 0 0 376 0 0 301 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 10 21 10 10 10 10 10 546 10 9 581 9
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 11 22 11 11 11 11 11 575 11 9 612 9
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 11 22 11 11 11 11 11 575 11 9 612 9

Critical Gap Module:

Critical Gp: 7.1 6.5 6.2 7.1 6.5 6.2 4.1 xxxx xxxxx 4.1 xxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 3.5 4.0 3.3 2.2 xxxx xxxxx 2.2 xxxx xxxxx

Capacity Module:

Cnflict Vol: 1247 1241 580 1253 1242 616 621 xxxx xxxxx 585 xxxx xxxxx
Potent Cap.: 152 176 518 150 176 494 969 xxxx xxxxx 999 xxxx xxxxx
Move Cap.: 139 173 518 131 173 494 969 xxxx xxxxx 999 xxxx xxxxx
Volume/Cap: 0.08 0.13 0.02 0.08 0.06 0.02 0.01 xxxx xxxx 0.01 xxxx xxxx

Level Of Service Module:

2Way95thQ: xxxx xxxx 0.1 xxxx xxxx xxxxx 0.0 xxxx xxxxx 0.0 xxxx xxxxx
Control Del:xxxxx xxxx 12.1 xxxxx xxxx xxxxx 8.8 xxxx xxxxx 8.6 xxxx xxxxx
LOS by Move: * * B * * * A * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: 160 xxxx xxxxx xxxx 194 xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
SharedQueue: 0.7 xxxx xxxxx xxxxx 0.6 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel: 33.1 xxxx xxxxx xxxxx 27.1 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS: D * * * D * * * * *
ApproachDel: 28.0 27.1 xxxxxxx xxxxxxx
ApproachLOS: D D * *

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

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

Intersection #3 Wilfred Ave/Whistler Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.899
Loss Time (sec): 9 (Y+R=0.0 sec) Average Delay (sec/veh): 41.4
Optimal Cycle: 102 Level Of Service: D

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Split Phase, Permitted, Protected), Rights (Include), Min. Green, and Lanes.

Volume Module:

Table with 13 columns representing different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module:

Table with 13 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with 13 columns. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Langner Ave/Wilfred Ave

Average Delay (sec/veh): 5.0 Worst Case Level Of Service: F[184.5]

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

Volume Module:

Base Vol:	10	10	10	10	10	10	10	170	10	9	280	9
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:	10	10	10	10	10	10	10	170	10	9	280	9
Added Vol:	0	0	0	0	0	0	0	742	0	0	836	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	10	10	10	10	10	10	912	10	9	1116	9
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	11	11	11	11	11	11	960	11	9	1175	9
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	11	11	11	11	11	11	11	960	11	9	1175	9

Critical Gap Module:

Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	2195	2189	965	2191	2185	1175	1184	xxxx	xxxxx	971	xxxx	xxxxx
Potent Cap.:	33	46	312	33	46	236	597	xxxx	xxxxx	718	xxxx	xxxxx
Move Cap.:	25	45	312	26	45	236	597	xxxx	xxxxx	718	xxxx	xxxxx
Volume/Cap:	0.42	0.24	0.03	0.41	0.23	0.04	0.02	xxxx	xxxx	0.01	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	0.1	0.1	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	21.0	11.1	xxxx	xxxxx	10.1	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	C	B	*	*	B	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	46	xxxxx	33	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	2.7	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	185	xxxxx	232.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	F	*	F	*	*	*	*	*	*	*	*			
ApproachDel:	184.5			161.7			xxxxxx			xxxxxx					
ApproachLOS:	F			F			*			*					

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

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

Intersection #5 Wilfred Ave/Labath Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.887
Loss Time (sec): 12 (Y+R=0.0 sec) Average Delay (sec/veh): 41.7
Optimal Cycle: 104 Level Of Service: D

Table with columns for Approach (North, South, East, West Bound) and Movement (L, T, R). Rows include Control, Rights, Min. Green, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

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

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

Intersection #6 Dowell Ave/Wilfred Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 1.013
Loss Time (sec): 9 (Y+R=0.0 sec) Average Delay (sec/veh): 53.7
Optimal Cycle: 180 Level Of Service: D

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module:

Table with 13 columns representing different volume metrics and 13 rows of data including Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module:

Table with 13 columns representing saturation flow metrics and 4 rows of data including Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with 13 columns representing capacity analysis metrics and 14 rows of data including Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 Wilfred Ave/Redwood Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 1.016
Loss Time (sec): 12 (Y+R=0.0 sec) Average Delay (sec/veh): 50.8
Optimal Cycle: 180 Level Of Service: D

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Split Phase, Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic volumes and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 13 columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, etc.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #9 Wilfred Ave/101 SB Ramp

Cycle (sec): 145 Critical Vol./Cap.(X): 1.071
Loss Time (sec): 9 (Y+R=0.0 sec) Average Delay (sec/veh): 51.4
Optimal Cycle: 180 Level Of Service: D

Street Name: US-101 SB Ramp Wilfred Avenue
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Permitted Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 0 0 0 1 0 1 1 0 0 0 2 0 1 2 0 2 0 0

Volume Module:
Base Vol: 0 0 0 355 288 482 0 1257 283 77 682 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: 0 0 0 355 288 482 0 1257 283 77 682 0
Added Vol: 0 0 0 0 0 218 0 204 527 0 606 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 355 288 700 0 1461 810 77 1288 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 0 0 0 374 303 737 0 1538 853 81 1356 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 0 0 374 303 737 0 1538 853 81 1356 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 0 0 0 374 303 737 0 1538 853 81 1356 0

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 1.00 1.00 1.00 0.83 0.88 0.88 1.00 0.98 0.83 0.93 0.98 1.00
Lanes: 0.00 0.00 0.00 1.00 1.00 1.00 0.00 2.00 1.00 2.00 2.00 0.00
Final Sat.: 0 0 0 1583 1665 1665 0 3724 1583 3538 3724 0

Capacity Analysis Module:
Vol/Sat: 0.00 0.00 0.00 0.24 0.18 0.44 0.00 0.41 0.54 0.02 0.36 0.00
Crit Moves: ****
Green/Cycle: 0.00 0.00 0.00 0.41 0.41 0.41 0.00 0.50 0.50 0.02 0.52 0.00
Volume/Cap: 0.00 0.00 0.00 0.57 0.44 1.07 0.00 0.82 1.07 1.07 0.69 0.00
Uniform Del: 0.0 0.0 0.0 32.7 30.5 42.5 0.0 30.5 36.0 70.9 25.8 0.0
IncrcmntDel: 0.0 0.0 0.0 1.2 0.1 49.8 0.0 3.0 52.6 124.1 1.1 0.0
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 0.00 0.00 0.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 0.00
Delay/Veh: 0.0 0.0 0.0 33.9 30.6 92.3 0.0 33.5 88.6 195.0 26.9 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 0.0 0.0 33.9 30.6 92.3 0.0 33.5 88.6 195.0 26.9 0.0
LOS by Move: A A A C C F A C F F C A
HCM2kAvgQ: 0 0 0 13 10 43 0 30 49 4 23 0

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #12 101 NB Ramps/Commerce Blvd

Cycle (sec): 145 Critical Vol./Cap.(X): 0.817
Loss Time (sec): 12 (Y+R=0.0 sec) Average Delay (sec/veh): 42.9
Optimal Cycle: 91 Level Of Service: D

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected, Split Phase), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic volumes and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 13 columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, etc.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #13 New Driveway/Stony Point Rd

Average Delay (sec/veh): 0.0 Worst Case Level Of Service: A[0.0]

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	1	0	0	1	0	0	0	0	0	0

Volume Module:

Base Vol:	0	765	0	0	664	0	0	0	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
Initial Bse:	0	765	0	0	664	0	0	0	0	0	0	0
Added Vol:	0	255	0	0	226	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	1020	0	0	890	0	0	0	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
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	1074	0	0	937	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	1074	0	0	937	0	0	0	0	0	0	0

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3

Capacity Module:

Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	1074
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	270
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	270
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.00

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*			
ApproachDel:	xxxxxxx			xxxxxxx			xxxxxxx			xxxxxxx					
ApproachLOS:	*			*			*			*					

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #15 Redwood Dr/Business Park Dr

Average Delay (sec/veh): 3.2 Worst Case Level Of Service: C[16.5]

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: 1 0 2 0 0 0 0 1 1 0 1 0 0 0 0 0

Volume Module:

Base Vol: 12 359 0 0 363 25 144 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: 12 359 0 0 363 25 144 0 31 0 0 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 12 359 0 0 363 25 144 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 13 378 0 0 382 26 152 0 33 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 13 378 0 0 382 26 152 0 33 0 0 0

Critical Gap Module:

Critical Gp: 4.1 xxxx xxxxx xxxxx xxxx xxxxx 6.8 xxxx 6.9 xxxxx xxxx xxxxx
FollowUpTim: 2.2 xxxx xxxxx xxxxx xxxx xxxxx 3.5 xxxx 3.3 xxxxx xxxx xxxxx

Capacity Module:

Cnflct Vol: 408 xxxx xxxxx xxxxx xxxx xxxxx 609 xxxx 204 xxxx xxxx xxxxx
Potent Cap.: 1161 xxxx xxxxx xxxxx xxxx xxxxx 431 xxxx 809 xxxx xxxx xxxxx
Move Cap.: 1161 xxxx xxxxx xxxxx xxxx xxxxx 428 xxxx 809 xxxx xxxx xxxxx
Volume/Cap: 0.01 xxxx xxxx xxxxx xxxx xxxxx 0.35 xxxx 0.04 xxxx xxxx xxxxx

Level Of Service Module:

2Way95thQ: 0.0 xxxx xxxxx xxxxx xxxx xxxxx 1.6 xxxx 0.1 xxxx xxxx xxxxx
Control Del: 8.1 xxxx xxxxx xxxxx xxxx xxxxx 18.0 xxxx 9.6 xxxxx xxxx xxxxx
LOS by Move: A * * * * * C * A * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx xxxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS: * * * * * * * * * * * * *
ApproachDel: xxxxxx xxxxxx 16.5 xxxxxx
ApproachLOS: * * C *

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #16 Rohnert Park Expwy/Stony Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.858
Loss Time (sec): 6 (Y+R=0.0 sec) Average Delay (sec/veh): 31.4
Optimal Cycle: 74 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Permitted/Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 12 columns for volume metrics. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 12 columns for saturation flow metrics. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns for capacity analysis metrics. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #17 Rohnert Park Expwy/Labath Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.561
Loss Time (sec): 12 (Y+R=0.0 sec) Average Delay (sec/veh): 33.9
Optimal Cycle: 45 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic movements and 13 rows of volume-related metrics such as Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 13 columns and 4 rows showing Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns and 13 rows showing metrics like Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, etc.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #18 Rohnert Park Expwy/Redwood Dr

Cycle (sec): 90 Critical Vol./Cap.(X): 0.705

Loss Time (sec): 12 (Y+R=0.0 sec) Average Delay (sec/veh): 33.3

Optimal Cycle: 59 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Control:	Protected			Protected			Protected			Protected											
Rights:	Include			Include			Include			Include											
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0									
Lanes:	1	0	1	1	1	1	2	0	1	0	1	1	0	3	0	1	2	0	2	0	1

Volume Module:

Base Vol:	173	326	510	339	301	236	216	700	163	377	603	318
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:	173	326	510	339	301	236	216	700	163	377	603	318
Added Vol:	0	0	0	0	0	0	0	122	0	0	138	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	173	326	510	339	301	236	216	822	163	377	741	318
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	182	343	537	357	317	248	227	865	172	397	780	335
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	182	343	537	357	317	248	227	865	172	397	780	335
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	182	343	537	357	317	248	227	865	172	397	780	335

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.89	0.89	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.83
Lanes:	1.00	1.17	1.83	2.00	1.00	1.00	1.00	3.00	1.00	2.00	2.00	1.00
Final Sat.:	1769	1980	3098	3538	1862	1583	1769	5586	1583	3538	3724	1583

Capacity Analysis Module:

Vol/Sat:	0.10	0.17	0.17	0.10	0.17	0.16	0.13	0.15	0.11	0.11	0.21	0.21
Crit Moves:	****			****			****			****		
Green/Cycle:	0.15	0.24	0.24	0.14	0.24	0.24	0.18	0.28	0.28	0.20	0.30	0.30
Volume/Cap:	0.71	0.71	0.71	0.71	0.71	0.65	0.71	0.56	0.39	0.56	0.71	0.71
Uniform Del:	36.6	31.0	31.0	36.8	31.2	30.7	34.5	27.8	26.3	32.3	28.1	28.2
IncrcmntDel:	8.6	1.9	1.9	4.6	5.0	3.9	6.9	0.5	0.6	1.0	2.1	5.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	45.2	32.9	32.9	41.4	36.3	34.7	41.5	28.2	26.9	33.3	30.2	33.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	45.2	32.9	32.9	41.4	36.3	34.7	41.5	28.2	26.9	33.3	30.2	33.3
LOS by Move:	D	C	C	D	D	C	D	C	C	C	C	C
HCM2kAvgQ:	6	9	9	6	9	7	7	7	4	6	11	10

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #19 Rohnert Park Expwy/101 SB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.740
 Loss Time (sec): 12 (Y+R=0.0 sec) Average Delay (sec/veh): 24.7
 Optimal Cycle: 65 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1	0	0	1	0	0	2	1	0	1

Volume Module:

Base Vol:	6	0	17	611	1	427	0	1252	297	68	862	255
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:	6	0	17	611	1	427	0	1252	297	68	862	255
Added Vol:	0	0	0	0	0	0	0	11	111	0	138	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	6	0	17	611	1	427	0	1263	408	68	1000	255
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00
PHF Volume:	6	0	18	643	1	449	0	1329	429	72	1053	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	6	0	18	643	1	449	0	1329	429	72	1053	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Final Vol.:	6	0	18	643	1	449	0	1329	429	72	1053	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.86	1.00	0.86	0.69	0.69	0.83	1.00	0.94	0.94	0.93	0.98	1.00
Lanes:	0.26	0.00	0.74	1.99	0.01	1.00	0.00	2.27	0.73	1.00	2.00	1.00
Final Sat.:	426	0	1206	2636	4	1583	0	4066	1313	1769	3724	1900

Capacity Analysis Module:

Vol/Sat:	0.01	0.00	0.01	0.24	0.24	0.28	0.00	0.33	0.33	0.04	0.28	0.00
Crit Moves:						****		****		****		
Green/Cycle:	0.38	0.00	0.38	0.38	0.38	0.38	0.00	0.44	0.44	0.05	0.50	0.00
Volume/Cap:	0.04	0.00	0.04	0.64	0.64	0.74	0.00	0.74	0.74	0.74	0.57	0.00
Uniform Del:	19.3	0.0	19.3	25.1	25.1	26.5	0.0	23.2	23.2	46.6	17.7	0.0
IncrcmntDel:	0.0	0.0	0.0	1.3	1.3	4.8	0.0	1.3	1.3	25.9	0.4	0.0
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	19.3	0.0	19.3	26.5	26.5	31.4	0.0	24.4	24.4	72.5	18.1	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	19.3	0.0	19.3	26.5	26.5	31.4	0.0	24.4	24.4	72.5	18.1	0.0
LOS by Move:	B	A	B	C	C	C	A	C	C	E	B	A
HCM2kAvgQ:	0	0	0	9	9	13	0	16	16	4	12	0

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #20 Rohnert Park Expwy/101 NB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.529

Loss Time (sec): 6 (Y+R=0.0 sec) Average Delay (sec/veh): 20.0

Optimal Cycle: 29 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound						
Movement:	L	T	R	L	T	R	L	T	R	L	T	R				
Control:	Protected			Protected			Permitted			Permitted						
Rights:	Include			Include			Ignore			Ignore						
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0				
Lanes:	1	0	0	1	1	1	1	0	4	0	1	0	0	3	0	1

Volume Module:

Base Vol:	339	0	345	14	0	3	21	1556	298	0	841	383
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:	339	0	345	14	0	3	21	1556	298	0	841	383
Added Vol:	125	0	0	0	0	0	0	11	0	0	12	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	464	0	345	14	0	3	21	1567	298	0	853	383
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00	0.95	0.95	0.00
PHF Volume:	488	0	363	15	0	3	22	1649	0	0	898	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	488	0	363	15	0	3	22	1649	0	0	898	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Final Vol.:	488	0	363	15	0	3	22	1649	0	0	898	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	1.00	0.83	0.93	1.00	0.83	0.25	0.98	1.00	1.00	0.98	1.00
Lanes:	1.00	0.00	2.00	1.00	0.00	1.00	1.00	4.00	1.00	0.00	3.00	1.00
Final Sat.:	1769	0	3165	1769	0	1583	471	7448	1900	0	5586	1900

Capacity Analysis Module:

Vol/Sat:	0.28	0.00	0.11	0.01	0.00	0.00	0.05	0.22	0.00	0.00	0.16	0.00
Crit Moves:	****				****			****				
Green/Cycle:	0.52	0.00	0.49	0.04	0.00	0.00	0.42	0.42	0.00	0.00	0.42	0.00
Volume/Cap:	0.53	0.00	0.24	0.24	0.00	xxxx	0.11	0.53	0.00	0.00	0.38	0.00
Uniform Del:	15.8	0.0	14.9	46.9	0.0	0.0	17.7	21.7	0.0	0.0	20.2	0.0
IncrcmntDel:	0.6	0.0	0.1	1.9	0.0	0.0	0.3	0.2	0.0	0.0	0.1	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00
Delay/Veh:	16.4	0.0	15.0	48.9	0.0	0.0	18.0	21.9	0.0	0.0	20.3	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	16.4	0.0	15.0	48.9	0.0	0.0	18.0	21.9	0.0	0.0	20.3	0.0
LOS by Move:	B	A	B	D	A	A	B	C	A	A	C	A
HCM2kAvgQ:	10	0	3	1	0	1	1	10	0	0	6	0

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #21 Rohnert Park Expwy/Commerce Blvd

Cycle (sec): 85 Critical Vol./Cap.(X): 0.825
Loss Time (sec): 12 (Y+R=0.0 sec) Average Delay (sec/veh): 33.3
Optimal Cycle: 78 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Split Phase, Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #22 Gravenstein Hwy (SR 116)/ Stoney Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.834

Loss Time (sec): 12 (Y+R=0.0 sec) Average Delay (sec/veh): 42.2

Optimal Cycle: 86 Level Of Service: D

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 1 0 1 1 0 1 0 1 0 1 0 2 0 1

Volume Module:

Base Vol: 323 483 113 107 358 235 149 583 228 140 661 113
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: 323 483 113 107 358 235 149 583 228 140 661 113
Added Vol: 0 0 0 104 0 0 0 0 0 0 0 0 117
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 323 483 113 211 358 235 149 583 228 140 661 230
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 340 508 119 222 377 247 157 614 240 147 696 242
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 340 508 119 222 377 247 157 614 240 147 696 242
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 340 508 119 222 377 247 157 614 240 147 696 242

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.93 0.98 0.83 0.93 0.98 0.83 0.93 0.89 0.89 0.93 0.93 0.83
Lanes: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.44 0.56 1.00 2.00 1.00
Final Sat.: 1769 1862 1583 1769 1862 1583 1769 2436 953 1769 3538 1583

Capacity Analysis Module:

Vol/Sat: 0.19 0.27 0.08 0.13 0.20 0.16 0.09 0.25 0.25 0.08 0.20 0.15
Crit Moves: ****
Green/Cycle: 0.23 0.33 0.33 0.15 0.25 0.25 0.12 0.30 0.30 0.10 0.28 0.28
Volume/Cap: 0.83 0.83 0.23 0.83 0.83 0.64 0.71 0.83 0.83 0.83 0.71 0.55
Uniform Del: 36.4 31.1 24.5 41.3 35.7 33.8 42.0 32.6 32.6 44.2 32.5 30.9
IncrcmntDel: 12.8 9.6 0.2 19.7 11.7 3.5 10.2 6.0 6.0 27.5 2.4 1.5
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Delay/Veh: 49.2 40.7 24.7 61.0 47.4 37.3 52.2 38.6 38.6 71.6 35.0 32.4
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 49.2 40.7 24.7 61.0 47.4 37.3 52.2 38.6 38.6 71.6 35.0 32.4
LOS by Move: D D C E D D D D E C C
HCM2kAvgQ: 12 17 3 9 13 8 6 15 15 7 11 7

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #23 Gravenstein Hwy (SR 116)/ Redwood Rd

Cycle (sec): 70 Critical Vol./Cap.(X): 0.907
Loss Time (sec): 12 (Y+R=0.0 sec) Average Delay (sec/veh): 36.1
Optimal Cycle: OPTIMIZED Level Of Service: D

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns for different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns for different traffic movements. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns for different traffic movements. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

 Level Of Service Computation Report
 2000 HCM Operations Method (Future Volume Alternative)

 Intersection #24 Gravenstein Hwy and SB 101 Ramps

Cycle (sec): 70 Critical Vol./Cap.(X): 0.606
 Loss Time (sec): 9 (Y+R=0.0 sec) Average Delay (sec/veh): 27.5
 Optimal Cycle: 99 Level Of Service: C

Street Name: SB 101 Ramps Gravenstein Hwy
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Permitted			Protected			Permitted			Protected		
Rights:	Include			Include			Ignore			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	2	0	1	0	0	1	1	0	0

Volume Module:

Base Vol:	0	0	0	640	0	258	0	953	412	66	998	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:	0	0	0	640	0	258	0	953	412	66	998	0
Added Vol:	0	0	0	0	0	0	0	0	104	0	117	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	640	0	258	0	953	516	66	1115	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00	0.95	0.95	0.95
PHF Volume:	0	0	0	674	0	272	0	1003	0	69	1174	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	674	0	272	0	1003	0	69	1174	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Final Vol.:	0	0	0	674	0	272	0	1003	0	69	1174	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.90	1.00	0.83	1.00	0.93	1.00	0.93	0.93	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	0.00	2.00	1.00	1.00	2.00	0.00
Final Sat.:	0	0	0	3432	0	1583	0	3538	1900	1769	3538	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.20	0.00	0.17	0.00	0.28	0.00	0.04	0.33	0.00
Crit Moves:				****							****	
Green/Cycle:	0.00	0.00	0.00	0.21	0.00	0.21	0.00	0.30	0.00	0.36	0.66	0.00
Volume/Cap:	0.00	0.00	0.00	0.93	0.00	0.81	0.00	0.93	0.00	0.11	0.50	0.00
Uniform Del:	0.0	0.0	0.0	27.1	0.0	26.3	0.0	23.6	0.0	15.1	6.0	0.0
IncrcmntDel:	0.0	0.0	0.0	18.7	0.0	14.2	0.0	13.9	0.0	0.1	0.2	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
Delay/Veh:	0.0	0.0	0.0	45.8	0.0	40.5	0.0	37.6	0.0	15.2	6.2	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	45.8	0.0	40.5	0.0	37.6	0.0	15.2	6.2	0.0
LOS by Move:	A	A	A	D	A	D	A	D	A	B	A	A
HCM2kAvgQ:	0	0	0	12	0	8	0	16	0	1	7	0

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #25 Gravenstein Hwy and NB 101 Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.844
Loss Time (sec): 9 (Y+R=0.0 sec) Average Delay (sec/veh): 23.0
Optimal Cycle: 80 Level Of Service: C

Table with columns for Street Name (NB 101 Ramps, Gravenstein Hwy), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Protected, Permitted), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol., and values for each approach.

Saturation Flow Module: Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat., and values for each approach.

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ, and values for each approach.

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #26 Millbrae Ave/Stony Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.567
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 22.3
Optimal Cycle: 46 Level Of Service: C

Table with columns for Approach (North, South, East, West Bound) and Movement (L, T, R). Rows include Control, Rights, Min. Green, and Lanes.

Volume Module table with columns for various volume and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, etc.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #27 Millbrae Ave/Primrose Ave

Average Delay (sec/veh): 0.5 Worst Case Level Of Service: B[12.6]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 1 0 0 0 0 1! 0 0 0 0 1! 0 0

Volume Module:

Base Vol: 1 0 2 0 1 0 1 161 5 7 265 2
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: 1 0 2 0 1 0 1 161 5 7 265 2
Added Vol: 11 0 0 0 0 0 0 0 0 0 22 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 12 0 2 0 1 0 1 161 5 7 287 2
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 13 0 2 0 1 0 1 169 5 7 302 2
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 13 0 2 0 1 0 1 169 5 7 302 2

Critical Gap Module:

Critical Gp: 7.1 6.5 6.2 xxxxx 6.5 xxxxx 4.1 xxxxx xxxxx 4.1 xxxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 xxxxx 4.0 xxxxx 2.2 xxxxx xxxxx 2.2 xxxxx xxxxx

Capacity Module:

Cnflict Vol: 493 493 172 xxxxx 495 xxxxx 304 xxxxx xxxxx 175 xxxxx xxxxx
Potent Cap.: 490 480 877 xxxxx 479 xxxxx 1268 xxxxx xxxxx 1414 xxxxx xxxxx
Move Cap.: 487 477 877 xxxxx 476 xxxxx 1268 xxxxx xxxxx 1414 xxxxx xxxxx
Volume/Cap: 0.03 0.00 0.00 xxxxx 0.00 xxxxx 0.00 xxxxx xxxxx 0.01 xxxxx xxxxx

Level Of Service Module:

2Way95thQ: xxxxx xxxxx xxxxx xxxxx 0.0 xxxxx 0.0 xxxxx xxxxx 0.0 xxxxx xxxxx
Control Del: xxxxx xxxxx xxxxx xxxxx 12.6 xxxxx 7.8 xxxxx xxxxx 7.6 xxxxx xxxxx
LOS by Move: * * * * B * A * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx 520 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue: xxxxx 0.1 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd ConDel: xxxxx 12.1 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: * B * * * * * * * * * *
ApproachDel: 12.1 12.6 xxxxxxx xxxxxxx
ApproachLOS: B B * *

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #28 Millbrae Ave/Whistler Ave

Average Delay (sec/veh): 1.1 Worst Case Level Of Service: B[12.6]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 1 0 0 0 0 0 1! 0 0 0 0 1! 0 0 0 0 1! 0 0

Volume Module:

Base Vol: 1 9 0 4 0 1 1 146 2 4 279 8
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 1 9 0 4 0 1 1 146 2 4 279 8
Added Vol: 22 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 23 9 0 4 0 1 1 146 2 4 279 8
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 24 9 0 4 0 1 1 154 2 4 294 8
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 24 9 0 4 0 1 1 154 2 4 294 8

Critical Gap Module:

Critical Gp: 7.1 6.5 xxxxx 7.1 6.5 6.2 4.1 xxxxx xxxxx 4.1 xxxxx xxxxx
FollowUpTim: 3.5 4.0 xxxxx 3.5 4.0 3.3 2.2 xxxxx xxxxx 2.2 xxxxx xxxxx

Capacity Module:

Cnflict Vol: 464 467 xxxxx 468 464 298 302 xxxxx xxxxx 156 xxxxx xxxxx
Potent Cap.: 512 496 xxxxx 509 498 746 1270 xxxxx xxxxx 1437 xxxxx xxxxx
Move Cap.: 510 494 xxxxx 500 496 746 1270 xxxxx xxxxx 1437 xxxxx xxxxx
Volume/Cap: 0.05 0.02 xxxxx 0.01 0.00 0.00 0.00 xxxxx xxxxx 0.00 xxxxx xxxxx

Level Of Service Module:

2Way95thQ: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx 0.0 xxxxx xxxxx
Control Del: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 7.8 xxxxx xxxxx 7.5 xxxxx xxxxx
LOS by Move: * * * * * A * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: 505 xxxxx xxxxx xxxxx 535 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue: 0.2 xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd ConDel: 12.6 xxxxx xxxxx xxxxx 11.8 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: B * * * * B * * * *
ApproachDel: 12.6 11.8 xxxxxxx xxxxxxx
ApproachLOS: B B * *

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #29 Millbrae Ave/Langner Ave

Average Delay (sec/veh): 1.1 Worst Case Level Of Service: B[11.2]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 0 0 0 0 1 0 0 1 0 0 0 0

Volume Module:

Base Vol: 27 0 25 0 0 0 0 154 27 7 331 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: 27 0 25 0 0 0 0 154 27 7 331 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 27 0 25 0 0 0 0 154 27 7 331 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 28 0 26 0 0 0 0 162 28 7 348 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 28 0 26 0 0 0 0 162 28 7 348 0

Critical Gap Module:

Critical Gp: 6.4 6.5 6.2 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 4.1 xxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 2.2 xxxx xxxxx

Capacity Module:

Cnflict Vol: 539 539 176 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 191 xxxx xxxxx
Potent Cap.: 507 452 872 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 1395 xxxx xxxxx
Move Cap.: 505 449 872 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 1395 xxxx xxxxx
Volume/Cap: 0.06 0.00 0.03 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 0.01 xxxx xxxxx

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx 0.0 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxxx xxxx xxxxx xxxxxx xxxx xxxxx xxxxx 7.6 xxxx xxxxx
LOS by Move: * * * * * * * * * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx 633 xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
SharedQueue:xxxxx 0.3 xxxxx xxxxx xxxx xxxxx xxxxxx xxxx xxxxx 0.0 xxxx xxxxx
Shrd ConDel:xxxxx 11.2 xxxxx xxxxx xxxx xxxxx xxxxxx xxxx xxxxx 7.6 xxxx xxxxx
Shared LOS: * B * * * * * * * * * A * *
ApproachDel: 11.2 xxxxxxx xxxxxxx xxxxxxx
ApproachLOS: B * * *

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #30 Millbrae Ave/Labath Ave

Average Delay (sec/veh): 3.7 Worst Case Level Of Service: B[13.5]

Approach:	North Bound			South Bound			East Bound			West Bound										
Movement:	L	T	R	L	T	R	L	T	R	L	T	R								
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled										
Rights:	Include			Include			Include			Include										
Lanes:	0	0	1!	0	0	0	0	1!	0	0	0	0	0	1	0	0	1	0	0	0

Volume Module:

Base Vol:	114	0	26	0	0	0	0	160	23	36	225	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:	114	0	26	0	0	0	0	160	23	36	225	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	114	0	26	0	0	0	0	160	23	36	225	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	120	0	27	0	0	0	0	168	24	38	237	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	120	0	27	0	0	0	0	168	24	38	237	0

Critical Gap Module:

Critical Gp:	6.4	6.5	6.2	7.1	6.5	6.2	xxxxx	xxxxx	xxxxx	4.1	xxxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	xxxxx	xxxxx	xxxxx	2.2	xxxxx	xxxxx

Capacity Module:

Cnflict Vol:	493	493	181	507	505	237	xxxxx	xxxxx	xxxxx	193	xxxxx	xxxxx
Potent Cap.:	539	480	867	479	472	807	xxxxx	xxxxx	xxxxx	1393	xxxxx	xxxxx
Move Cap.:	527	467	867	454	459	807	xxxxx	xxxxx	xxxxx	1393	xxxxx	xxxxx
Volume/Cap:	0.23	0.00	0.03	0.00	0.00	0.00	xxxxx	xxxxx	xxxxx	0.03	xxxxx	xxxxx

Level Of Service Module:

2Way95thQ:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.1	xxxxx	xxxxx			
Control Del:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	7.7	xxxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxxx	569	xxxxx	xxxxx	0	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx			
SharedQueue:	xxxxx	1.0	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.1	xxxxx	xxxxx			
Shrd ConDel:	xxxxx	13.5	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	7.7	xxxxx	xxxxx			
Shared LOS:	*	B	*	*	*	*	*	*	*	A	*	*			
ApproachDel:	13.5			xxxxxxx			xxxxxxx			xxxxxxx					
ApproachLOS:	B			*			*			*					

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #31 Millbrae Ave/Dowdell Ave

Average Delay (sec/veh): 1.4 Worst Case Level Of Service: B[11.6]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	1	0	0	0	0	0	0	0	1	0	0	1

Volume Module:

Base Vol:	55	0	0	0	0	0	0	131	51	0	235	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:	55	0	0	0	0	0	0	131	51	0	235	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	55	0	0	0	0	0	0	131	51	0	235	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	58	0	0	0	0	0	0	138	54	0	247	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	58	0	0	0	0	0	0	138	54	0	247	0

Critical Gap Module:

Critical Gp:	6.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	412	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	600	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	600	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.10	xxxx	xxxx	xxxxx	xxxx	xxxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxxx

Level Of Service Module:

2Way95thQ:	0.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
Control Del:	11.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
LOS by Move:	B	*	*	*	*	*	*	*	*	*	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*			
ApproachDel:	11.6			xxxxxx			xxxxxx			xxxxxx					
ApproachLOS:	B			*			*			*					

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #55 Golf Course Dr/Commerce Blvd & Roberts Lake Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.970
Loss Time (sec): 12 (Y+R=0.0 sec) Average Delay (sec/veh): 53.2
Optimal Cycle: 155 Level Of Service: D

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

**NEAR-TERM 2008 + ALTERNATIVE D
MITIGATED TRAFFIC CONDITIONS
(TRAFFIX)**

 Impact Analysis Report
 Level Of Service

Intersection		Base		Future		Change in	
		Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C		
# 1 Wilfred Ave/Stony Point Rd	B	17.8	0.679	C	23.4 0.774	+ 5.539	D/V
# 2 Wilfred Ave/Primrose Ave	C	22.2	0.255	D	46.7 0.883	+24.465	D/V
# 3 Wilfred Ave/Whistler Ave	B	11.3	0.000	D	27.3 0.000	+15.997	D/V
# 4 Langner Ave/Wilfred Ave	B	11.3	0.000	D	27.0 0.000	+15.751	D/V
# 5 Wilfred Ave/Labath Ave	C	25.6	0.551	C	27.7 0.827	+ 2.074	D/V
# 6 Dowell Ave/Wilfred Ave	C	26.9	0.666	D	52.1 1.018	+25.196	D/V
# 7 Wilfred Ave/Redwood Dr	D	37.5	0.727	D	44.6 0.880	+ 7.106	D/V
# 8 Redwood Dr/Commerce Blvd	C	26.6	0.290	C	26.6 0.292	-0.029	D/V
# 9 Wilfred Ave/101 SB Ramp	C	30.6	0.630	D	38.5 0.892	+ 7.928	D/V
# 12 101 NB Ramps/Commerce Blvd	C	26.4	0.665	C	27.1 0.699	+ 0.617	D/V
# 13 New Driveway/Stony Point Rd	A	0.9	0.517	B	10.6 0.642	+ 9.692	D/V
# 15 Redwood Dr/Business Park Dr	D	26.5	0.000	D	26.5 0.000	+ 0.000	D/V
# 16 Rohnert Park Expwy/Stony Point	C	24.0	0.665	D	43.8 0.971	+19.802	D/V
# 17 Rohnert Park Expwy/Labath Ave	C	29.8	0.576	C	33.9 0.590	+ 4.075	D/V
# 18 Rohnert Park Expwy/Redwood Dr	C	32.8	0.721	C	33.2 0.743	+ 0.380	D/V
# 19 Rohnert Park Expwy/101 SB Ramp	C	21.1	0.716	C	21.5 0.753	+ 0.397	D/V
# 20 Rohnert Park Expwy/101 NB Ramp	B	15.8	0.437	C	21.8 0.592	+ 6.082	D/V
# 21 Rohnert Park Expwy/Commerce Bl	C	29.7	0.844	C	29.7 0.844	+ 0.002	D/V
# 22 Gravenstein Hwy (SR 116)/ Ston	D	37.1	0.766	D	40.9 0.812	+ 3.815	D/V
# 23 Gravenstein Hwy (SR 116)/ Redw	C	25.2	0.675	C	24.9 0.729	-0.314	D/V
# 24 Gravenstein Hwy and SB 101 Ram	B	15.9	0.572	C	22.7 0.590	+ 6.777	D/V
# 25 Gravenstein Hwy and NB 101 Ram	B	17.3	0.707	C	22.9 0.817	+ 5.594	D/V
# 26 Millbrae Ave/Stony Point Rd	C	21.2	0.483	C	21.1 0.515	-0.135	D/V
# 27 Millbrae Ave/Primrose Ave	B	11.4	0.000	B	11.4 0.000	+ 0.000	D/V
# 28 Millbrae Ave/Whistler Ave	B	11.5	0.000	B	11.5 0.000	+ 0.000	D/V

Intersection		Base		Future		Change in	
		Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C		
# 29 Millbrae Ave/Langner Ave	A	9.9	0.000	A 9.9	0.000	+ 0.000	D/V
# 30 Millbrae Ave/Labath Ave	B	11.2	0.000	B 11.2	0.000	+ 0.000	D/V
# 31 Millbrae Ave/Dowdell Ave	B	11.3	0.000	B 11.3	0.000	+ 0.000	D/V
# 55 Golf Course Dr/Commerce Blvd &	D	36.0	0.740	D 36.7	0.775	+ 0.619	D/V

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 Wilfred Ave/Stony Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.774
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 23.4
Optimal Cycle: 71 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 13 columns for different traffic volumes and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 13 columns for saturation flow rates and adjustment factors like Sat/Lane, Adjustment, Lanes, etc.

Capacity Analysis Module: Table with 13 columns for capacity analysis metrics like Vol/Sat, Crit Moves, Green/Cycle, etc.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
 2000 HCM Operations Method (Future Volume Alternative)

Intersection #2 Wilfred Ave/Primrose Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.883
 Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 46.7
 Optimal Cycle: 95 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1!	0	0	0	0	0	1!	0	0	0

Volume Module:

Base Vol:	10	10	10	10	10	10	10	131	10	10	201	10
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:	10	10	10	10	10	10	10	131	10	10	201	10
Added Vol:	0	15	476	0	0	0	0	0	84	335	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	25	486	10	10	10	10	131	94	345	201	10
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	26	512	11	11	11	11	138	99	363	212	11
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	11	26	512	11	11	11	11	138	99	363	212	11
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	11	26	512	11	11	11	11	138	99	363	212	11

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.85	0.85	0.85	0.81	0.81	0.81	0.93	0.93	0.93	0.95	0.95	0.95
Lanes:	0.02	0.05	0.93	0.34	0.33	0.33	0.04	0.56	0.40	0.62	0.36	0.02
Final Sat.:	31	78	1512	513	513	513	75	980	703	1118	652	32

Capacity Analysis Module:

Vol/Sat:	0.34	0.34	0.34	0.02	0.02	0.02	0.14	0.14	0.14	0.32	0.32	0.32
Crit Moves:	****						****			****		
Green/Cycle:	0.38	0.38	0.38	0.38	0.38	0.38	0.16	0.16	0.16	0.37	0.37	0.37
Volume/Cap:	0.88	0.88	0.88	0.05	0.05	0.05	0.88	0.88	0.88	0.88	0.88	0.88
Uniform Del:	28.8	28.8	28.8	19.4	19.4	19.4	41.1	41.1	41.1	29.6	29.6	29.6
IncrcmntDel:	14.1	14.1	14.1	0.0	0.0	0.0	26.3	26.3	26.3	13.3	13.3	13.3
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	42.8	42.8	42.8	19.5	19.5	19.5	67.5	67.5	67.5	42.9	42.9	42.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	42.8	42.8	42.8	19.5	19.5	19.5	67.5	67.5	67.5	42.9	42.9	42.9
LOS by Move:	D	D	D	B	B	B	E	E	E	D	D	D
HCM2kAvgQ:	19	19	19	1	1	1	11	11	11	20	20	20

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 Wilfred Ave/Whistler Ave

Average Delay (sec/veh): 1.4 Worst Case Level Of Service: D[27.3]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 1! 0 0 0 0 1! 0 0 0 0 1! 0 0

Volume Module:

Base Vol: 10 10 10 10 10 10 10 131 10 10 200 20
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: 10 10 10 10 10 10 10 131 10 10 200 20
Added Vol: 0 0 0 0 0 0 0 476 0 0 335 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 10 10 10 10 10 10 10 607 10 10 535 20
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 11 11 11 11 11 11 11 639 11 11 563 21
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 11 11 11 11 11 11 11 639 11 11 563 21

Critical Gap Module:

Critical Gp: 7.1 6.5 6.2 7.1 6.5 6.2 4.1 xxxx xxxxx 4.1 xxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 3.5 4.0 3.3 2.2 xxxx xxxxx 2.2 xxxx xxxxx

Capacity Module:

Cnflct Vol: 1271 1271 644 1271 1265 574 584 xxxx xxxxx 649 xxxx xxxxx
Potent Cap.: 146 169 476 146 171 522 1000 xxxx xxxxx 946 xxxx xxxxx
Move Cap.: 134 166 476 134 167 522 1000 xxxx xxxxx 946 xxxx xxxxx
Volume/Cap: 0.08 0.06 0.02 0.08 0.06 0.02 0.01 xxxx xxxx 0.01 xxxx xxxx

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx 0.0 xxxx xxxxx 0.0 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx 8.6 xxxx xxxxx 8.8 xxxx xxxxx
LOS by Move: * * * * * A * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx 192 xxxxx xxxx 195 xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
SharedQueue:xxxxx 0.6 xxxxx xxxxx 0.6 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 27.3 xxxxx xxxxx 27.0 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS: * D * * D * * * * *
ApproachDel: 27.3 27.0 xxxxxx xxxxxx
ApproachLOS: D D * *

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Langner Ave/Wilfred Ave

Average Delay (sec/veh): 1.4 Worst Case Level Of Service: D[27.0]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 1! 0 0 0 0 1! 0 0 0 0 1! 0 0

Volume Module:

Base Vol: 10 10 10 10 10 10 10 130 10 10 200 10
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: 10 10 10 10 10 10 10 130 10 10 200 10
Added Vol: 0 0 0 0 0 0 0 476 0 0 335 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 10 10 10 10 10 10 10 606 10 10 535 10
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 11 11 11 11 11 11 11 638 11 11 563 11
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 11 11 11 11 11 11 11 638 11 11 563 11

Critical Gap Module:

Critical Gp: 7.1 6.5 6.2 7.1 6.5 6.2 4.1 xxxx xxxxx 4.1 xxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 3.5 4.0 3.3 2.2 xxxx xxxxx 2.2 xxxx xxxxx

Capacity Module:

Cnflict Vol: 1264 1259 643 1264 1259 568 574 xxxx xxxxx 648 xxxx xxxxx
Potent Cap.: 148 172 477 148 172 526 1009 xxxx xxxxx 947 xxxx xxxxx
Move Cap.: 136 168 477 135 168 526 1009 xxxx xxxxx 947 xxxx xxxxx
Volume/Cap: 0.08 0.06 0.02 0.08 0.06 0.02 0.01 xxxx xxxx 0.01 xxxx xxxx

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx 0.0 xxxx xxxxx 0.0 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx 8.6 xxxx xxxxx 8.8 xxxx xxxxx
LOS by Move: * * * * * A * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx 195 xxxxx xxxx 197 xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
SharedQueue:xxxxx 0.6 xxxxx xxxxx 0.6 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 27.0 xxxxx xxxxx 26.7 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS: * D * * D * * * * * * * *
ApproachDel: 27.0 26.7 xxxxxxx xxxxxxx
ApproachLOS: D D * *

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 Wilfred Ave/Labath Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.827
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 27.7
Optimal Cycle: 75 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Split Phase, Permitted), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns for different volume metrics (Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.) and 4 rows of data.

Saturation Flow Module: Table with 13 columns for saturation flow metrics (Sat/Lane, Adjustment, Lanes, Final Sat.) and 4 rows of data.

Capacity Analysis Module: Table with 13 columns for capacity analysis metrics (Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ) and 13 rows of data.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 Dowell Ave/Wilfred Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 1.018
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 52.1
Optimal Cycle: 180 Level Of Service: D

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Permitted, Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns for different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 Wilfred Ave/Redwood Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.880
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 44.6
Optimal Cycle: 101 Level Of Service: D

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic movements and 13 rows of volume-related metrics such as Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 13 columns and 4 rows showing Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns and 13 rows showing Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, etc.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 Redwood Dr/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.292
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 26.6
Optimal Cycle: 31 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic volumes and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 13 columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, etc.

Note: Queue reported is the number of cars per lane.

 Level Of Service Computation Report
 2000 HCM Operations Method (Future Volume Alternative)

 Intersection #9 Wilfred Ave/101 SB Ramp

Cycle (sec): 145 Critical Vol./Cap.(X): 0.892
 Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 38.5
 Optimal Cycle: 114 Level Of Service: D

Street Name: US-101 SB Ramp Wilfred Avenue
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Permitted			Protected			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	1	0	1	0	0	1	2	0	2

Volume Module:

Base Vol:	0	0	0	328	324	459	0	737	219	89	476	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:	0	0	0	328	324	459	0	737	219	89	476	0
Added Vol:	0	0	0	0	0	151	0	141	328	0	176	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	328	324	610	0	878	547	89	652	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	345	341	642	0	924	576	94	686	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	345	341	642	0	924	576	94	686	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	345	341	642	0	924	576	94	686	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.83	0.88	0.88	1.00	0.92	0.92	0.93	0.98	1.00
Lanes:	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.23	0.77	2.00	2.00	0.00
Final Sat.:	0	0	0	1583	1680	1680	0	2161	1347	3538	3724	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.22	0.20	0.38	0.00	0.43	0.43	0.03	0.18	0.00
Crit Moves:						****		****		****		
Green/Cycle:	0.00	0.00	0.00	0.43	0.43	0.43	0.00	0.48	0.48	0.03	0.51	0.00
Volume/Cap:	0.00	0.00	0.00	0.51	0.47	0.89	0.00	0.89	0.89	0.89	0.36	0.00
Uniform Del:	0.0	0.0	0.0	30.3	29.7	38.3	0.0	34.3	34.3	70.1	21.4	0.0
IncrcmntDel:	0.0	0.0	0.0	0.6	0.2	9.3	0.0	6.4	6.4	54.8	0.1	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	0.0	0.0	0.0	30.9	29.9	47.6	0.0	40.8	40.8	124.9	21.5	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	30.9	29.9	47.6	0.0	40.8	40.8	124.9	21.5	0.0
LOS by Move:	A	A	A	C	C	D	A	D	D	F	C	A
HCM2kAvgQ:	0	0	0	11	11	29	0	33	33	4	9	0

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #12 101 NB Ramps/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.699
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 27.1
Optimal Cycle: 59 Level Of Service: C

Table with columns for Approach (North, South, East, West Bound) and Movement (L, T, R). Rows include Control, Rights, Min. Green, and Lanes.

Volume Module:

Table with 13 columns representing different traffic movements and 14 rows of volume-related metrics like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module:

Table with 13 columns and 4 rows showing saturation flow metrics like Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with 13 columns and 14 rows showing capacity analysis metrics like Vol/Sat, Crit Moves, Green/Cycle, etc.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #13 New Driveway/Stony Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.642
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 10.6
Optimal Cycle: 45 Level Of Service: B

Table with columns: Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Permitted, Protected), Rights (Include), Min. Green, Lanes.

Volume Module: Table with columns: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module: Table with columns: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module: Table with columns: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #15 Redwood Dr/Business Park Dr

Average Delay (sec/veh): 5.6 Worst Case Level Of Service: D[26.5]

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:	1	0	2	0	0	1	1	0	0	1	0	0

Volume Module:

Base Vol:	33	464	0	0	489	41	172	0	89	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:	33	464	0	0	489	41	172	0	89	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	33	464	0	0	489	41	172	0	89	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	35	488	0	0	515	43	181	0	94	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	35	488	0	0	515	43	181	0	94	0	0	0

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.8	6.5	6.9	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	558	xxxx	xxxxx	xxxx	xxxx	xxxxx	850	1094	279	xxxx	xxxx	xxxxx
Potent Cap.:	1023	xxxx	xxxxx	xxxx	xxxx	xxxxx	303	216	724	xxxx	xxxx	xxxxx
Move Cap.:	1023	xxxx	xxxxx	xxxx	xxxx	xxxxx	296	208	724	xxxx	xxxx	xxxxx
Volume/Cap:	0.03	xxxx	xxxx	xxxx	xxxx	xxxx	0.61	0.00	0.13	xxxx	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	3.8	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	8.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	34.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	*	*	*	D	*	*	*	*	*
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	724	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	0.4	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	10.7	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	B	*	*	*
ApproachDel:	xxxxxxx			xxxxxxx			26.5			xxxxxxx		
ApproachLOS:	*			*			D			*		

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #16 Rohnert Park Expwy/Stony Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.971

Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 43.8

Optimal Cycle: 165 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Control:	Permitted			Protected			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1	0	0	1	0	0	0	1	0	0

Volume Module:

Base Vol:	0	546	251	212	421	0	0	0	0	257	0	286
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	546	251	212	421	0	0	0	0	257	0	286
Added Vol:	0	168	0	43	148	0	0	0	0	0	0	251
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	714	251	255	569	0	0	0	0	257	0	537
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	752	264	268	599	0	0	0	0	271	0	565
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	752	264	268	599	0	0	0	0	271	0	565
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	752	264	268	599	0	0	0	0	271	0	565

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.98	0.83	0.93	0.98	1.00	1.00	1.00	1.00	0.93	1.00	0.83
Lanes:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	1862	1583	1769	1862	0	0	0	0	1769	0	1583

Capacity Analysis Module:

Vol/Sat:	0.00	0.40	0.17	0.15	0.32	0.00	0.00	0.00	0.00	0.15	0.00	0.36
Crit Moves:	****			****						****		
Green/Cycle:	0.00	0.42	0.42	0.16	0.57	0.00	0.00	0.00	0.00	0.37	0.00	0.37
Volume/Cap:	0.00	0.97	0.40	0.97	0.56	0.00	0.00	0.00	0.00	0.42	0.00	0.97
Uniform Del:	0.0	28.6	20.5	42.0	13.5	0.0	0.0	0.0	0.0	23.6	0.0	31.1
IncrcmntDel:	0.0	25.2	0.4	45.9	0.7	0.0	0.0	0.0	0.0	0.4	0.0	29.9
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Delay/Veh:	0.0	53.8	20.9	87.9	14.2	0.0	0.0	0.0	0.0	24.0	0.0	61.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	53.8	20.9	87.9	14.2	0.0	0.0	0.0	0.0	24.0	0.0	61.0
LOS by Move:	A	D	C	F	B	A	A	A	A	C	A	E
HCM2kAvgQ:	0	29	6	13	12	0	0	0	0	6	0	23

Note: Queue reported is the number of cars per lane.

 Level Of Service Computation Report
 2000 HCM Operations Method (Future Volume Alternative)

 Intersection #17 Rohnert Park Expwy/Labath Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.590
 Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 33.9
 Optimal Cycle: 47 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	0	1	1	1	1	0	0	1	0	1

Volume Module:

Base Vol:	64	19	154	270	43	99	50	600	36	202	575	154
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:	64	19	154	270	43	99	50	600	36	202	575	154
Added Vol:	0	0	0	0	0	0	0	43	0	0	251	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	64	19	154	270	43	99	50	643	36	202	826	154
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	67	20	162	284	45	104	53	677	38	213	869	162
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	67	20	162	284	45	104	53	677	38	213	869	162
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	67	20	162	284	45	104	53	677	38	213	869	162

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.85	0.85	0.93	0.88	0.88	0.93	0.98	0.83	0.93	0.98	0.83
Lanes:	2.00	0.22	1.78	1.00	0.30	0.70	1.00	2.00	1.00	1.00	3.00	1.00
Final Sat.:	3538	355	2874	1769	505	1162	1769	3724	1583	1769	5586	1583

Capacity Analysis Module:

Vol/Sat:	0.02	0.06	0.06	0.16	0.09	0.09	0.03	0.18	0.02	0.12	0.16	0.10
Crit Moves:	****			****			****			****		
Green/Cycle:	0.07	0.12	0.12	0.25	0.29	0.29	0.26	0.28	0.28	0.24	0.26	0.26
Volume/Cap:	0.27	0.47	0.47	0.64	0.31	0.31	0.11	0.65	0.09	0.50	0.60	0.39
Uniform Del:	44.1	41.0	41.0	33.5	27.7	27.7	28.2	31.7	26.6	32.8	32.4	30.5
IncrcmntDel:	0.6	0.9	0.9	3.2	0.4	0.4	0.1	1.5	0.1	0.9	0.7	0.6
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	44.7	41.9	41.9	36.7	28.1	28.1	28.3	33.1	26.6	33.8	33.1	31.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	44.7	41.9	41.9	36.7	28.1	28.1	28.3	33.1	26.6	33.8	33.1	31.1
LOS by Move:	D	D	D	D	C	C	C	C	C	C	C	C
HCM2kAvgQ:	1	3	3	9	4	4	1	10	1	6	8	4

 Note: Queue reported is the number of cars per lane.

 Level Of Service Computation Report
 2000 HCM Operations Method (Future Volume Alternative)

 Intersection #18 Rohnert Park Expwy/Redwood Dr

Cycle (sec): 90 Critical Vol./Cap.(X): 0.743
 Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 33.2
 Optimal Cycle: 64 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	1	1	2	0	1	0	1	1

Volume Module:

Base Vol:	137	252	422	364	264	243	233	701	146	371	656	358
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:	137	252	422	364	264	243	233	701	146	371	656	358
Added Vol:	0	0	0	0	0	0	0	43	0	0	251	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	137	252	422	364	264	243	233	744	146	371	907	358
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	144	265	444	383	278	256	245	783	154	391	955	377
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	144	265	444	383	278	256	245	783	154	391	955	377
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	144	265	444	383	278	256	245	783	154	391	955	377

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.89	0.89	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.83
Lanes:	1.00	1.12	1.88	2.00	1.00	1.00	1.00	3.00	1.00	2.00	2.00	1.00
Final Sat.:	1769	1892	3169	3538	1862	1583	1769	5586	1583	3538	3724	1583

Capacity Analysis Module:

Vol/Sat:	0.08	0.14	0.14	0.11	0.15	0.16	0.14	0.14	0.10	0.11	0.26	0.24
Crit Moves:	****			****			****			****		
Green/Cycle:	0.11	0.19	0.19	0.15	0.22	0.22	0.19	0.30	0.30	0.23	0.35	0.35
Volume/Cap:	0.73	0.74	0.74	0.74	0.67	0.73	0.74	0.47	0.33	0.47	0.74	0.69
Uniform Del:	38.6	34.4	34.4	36.8	32.0	32.5	34.6	25.8	24.6	29.7	25.9	25.3
IncrcmntDel:	12.6	3.2	3.2	5.7	4.3	7.4	8.8	0.2	0.4	0.4	2.4	3.7
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	51.2	37.6	37.6	42.6	36.2	39.8	43.3	26.0	25.0	30.1	28.3	29.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	51.2	37.6	37.6	42.6	36.2	39.8	43.3	26.0	25.0	30.1	28.3	29.0
LOS by Move:	D	D	D	D	D	D	D	C	C	C	C	C
HCM2kAvgQ:	6	8	8	7	8	8	8	6	3	5	13	10

 Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #19 Rohnert Park Expwy/101 SB Ramps

Cycle (sec): 80 Critical Vol./Cap.(X): 0.753
 Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 21.5
 Optimal Cycle: 63 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1	0	0	1	0	0	2	1	0	1

Volume Module:

Base Vol:	7	0	17	702	1	351	0	1208	278	68	1024	199
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:	7	0	17	702	1	351	0	1208	278	68	1024	199
Added Vol:	0	0	0	0	0	0	0	7	36	0	251	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	7	0	17	702	1	351	0	1215	314	68	1275	199
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00
PHF Volume:	7	0	18	739	1	369	0	1279	331	72	1342	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	7	0	18	739	1	369	0	1279	331	72	1342	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Final Vol.:	7	0	18	739	1	369	0	1279	331	72	1342	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.85	1.00	0.85	0.70	0.70	0.83	1.00	0.95	0.95	0.93	0.98	1.00
Lanes:	0.29	0.00	0.71	1.99	0.01	1.00	0.00	2.38	0.62	1.00	2.00	1.00
Final Sat.:	472	0	1146	2640	4	1583	0	4301	1112	1769	3724	1900

Capacity Analysis Module:

Vol/Sat:	0.02	0.00	0.02	0.28	0.28	0.23	0.00	0.30	0.30	0.04	0.36	0.00
Crit Moves:				****	****	****	****	****	****	****	****	****
Green/Cycle:	0.37	0.00	0.37	0.37	0.37	0.37	0.00	0.42	0.42	0.06	0.48	0.00
Volume/Cap:	0.04	0.00	0.04	0.75	0.75	0.63	0.00	0.71	0.71	0.71	0.75	0.00
Uniform Del:	16.0	0.0	16.0	21.9	21.9	20.6	0.0	19.1	19.1	37.0	17.0	0.0
IncrcmntDel:	0.0	0.0	0.0	3.3	3.3	2.2	0.0	1.0	1.0	20.3	1.9	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	16.1	0.0	16.1	25.3	25.3	22.8	0.0	20.1	20.1	57.3	18.9	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	16.1	0.0	16.1	25.3	25.3	22.8	0.0	20.1	20.1	57.3	18.9	0.0
LOS by Move:	B	A	B	C	C	C	A	C	C	E	B	A
HCM2kAvgQ:	0	0	0	10	10	8	0	12	12	3	15	0

Note: Queue reported is the number of cars per lane.

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #20 Rohnert Park Expwy/101 NB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.592
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 21.8
Optimal Cycle: 32 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Protected/Permitted), Rights (Include/Ignore), Min. Green, and Lanes.

Volume Module:

Table with 13 columns representing different volume metrics like Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module:

Table with 13 columns for saturation flow metrics: Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with 13 columns for capacity analysis metrics: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #21 Rohnert Park Expwy/Commerce Blvd

Cycle (sec): 80 Critical Vol./Cap.(X): 0.844

Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 29.7

Optimal Cycle: 81 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	1	1	0	1	0	1	2	0	1	0	2

Volume Module:

Base Vol:	380	286	224	102	230	183	270	1138	545	141	771	170
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:	380	286	224	102	230	183	270	1138	545	141	771	170
Added Vol:	0	0	0	0	0	0	0	7	0	0	8	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	380	286	224	102	230	183	270	1145	545	141	779	170
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	400	301	236	107	242	193	284	1205	574	148	820	179
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	400	301	236	107	242	193	284	1205	574	148	820	179
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	400	301	236	107	242	193	284	1205	574	148	820	179

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.83	0.97	0.97	0.83	0.93	0.98	0.83	0.93	0.95	0.95
Lanes:	1.71	1.29	1.00	1.00	2.00	1.00	2.00	2.00	1.00	1.00	2.46	0.54
Final Sat.:	3098	2332	1583	1834	3668	1583	3538	3724	1583	1769	4462	974

Capacity Analysis Module:

Vol/Sat:	0.13	0.13	0.15	0.06	0.07	0.12	0.08	0.32	0.36	0.08	0.18	0.18
Crit Moves:			****			****			****	****		
Green/Cycle:	0.18	0.18	0.18	0.14	0.14	0.14	0.16	0.43	0.43	0.10	0.37	0.37
Volume/Cap:	0.73	0.73	0.84	0.41	0.46	0.84	0.50	0.75	0.84	0.84	0.50	0.50
Uniform Del:	31.1	31.1	31.9	31.1	31.4	33.3	30.6	19.2	20.4	35.4	19.6	19.6
IncrcmntDel:	2.9	2.9	20.2	0.3	0.4	23.8	0.7	2.1	9.4	29.2	0.2	0.2
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	34.0	34.0	52.1	31.4	31.8	57.2	31.3	21.3	29.8	64.6	19.8	19.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	34.0	34.0	52.1	31.4	31.8	57.2	31.3	21.3	29.8	64.6	19.8	19.8
LOS by Move:	C	C	D	C	C	E	C	C	C	E	B	B
HCM2kAvgQ:	7	7	8	3	3	7	4	14	16	6	7	7

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #22 Gravenstein Hwy (SR 116)/ Stoney Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.812
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 40.9
Optimal Cycle: 80 Level Of Service: D

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module:

Table with 13 columns representing different traffic metrics and 13 rows of data including Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module:

Table with 13 columns representing saturation flow metrics and 4 rows of data including Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with 13 columns representing capacity analysis metrics and 13 rows of data including Vol/Sat, Crit Moves, Green/Cycle, etc.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #23 Gravenstein Hwy (SR 116)/ Redwood Rd

Cycle (sec): 80 Critical Vol./Cap.(X): 0.729
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 24.9
Optimal Cycle: 44 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns for different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #24 Gravenstein Hwy and SB 101 Ramps

Cycle (sec): 70 Critical Vol./Cap.(X): 0.590
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 22.7
Optimal Cycle: 77 Level Of Service: C

Street Name: SB 101 Ramps Gravenstein Hwy
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Permitted Protected
Rights: Include Include Ignore Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 0 0 0 2 0 0 1 0 0 0 2 0 1 1 0 2 0 0

Volume Module:
Base Vol: 0 0 0 639 0 212 0 819 361 99 900 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: 0 0 0 639 0 212 0 819 361 99 900 0
Added Vol: 0 0 0 0 0 0 0 0 148 0 168 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 639 0 212 0 819 509 99 1068 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.00 0.95 0.95 0.95
PHF Volume: 0 0 0 673 0 223 0 862 0 104 1124 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 0 0 673 0 223 0 862 0 104 1124 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
Final Vol.: 0 0 0 673 0 223 0 862 0 104 1124 0

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 1.00 1.00 1.00 0.90 1.00 0.83 1.00 0.93 1.00 0.93 0.93 1.00
Lanes: 0.00 0.00 0.00 2.00 0.00 1.00 0.00 2.00 1.00 1.00 2.00 0.00
Final Sat.: 0 0 0 3432 0 1583 0 3538 1900 1769 3538 0

Capacity Analysis Module:
Vol/Sat: 0.00 0.00 0.00 0.20 0.00 0.14 0.00 0.24 0.00 0.06 0.32 0.00
Crit Moves: ****
Green/Cycle: 0.00 0.00 0.00 0.23 0.00 0.23 0.00 0.28 0.00 0.37 0.65 0.00
Volume/Cap: 0.00 0.00 0.00 0.87 0.00 0.63 0.00 0.87 0.00 0.16 0.49 0.00
Uniform Del: 0.0 0.0 0.0 26.1 0.0 24.4 0.0 24.0 0.0 15.0 6.4 0.0
IncrmntDel: 0.0 0.0 0.0 10.4 0.0 3.5 0.0 8.4 0.0 0.1 0.2 0.0
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 0.00 0.00 0.00 1.00 0.00 1.00 0.00 1.00 0.00 1.00 1.00 0.00
Delay/Veh: 0.0 0.0 0.0 36.5 0.0 27.9 0.0 32.3 0.0 15.1 6.6 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 0.0 0.0 36.5 0.0 27.9 0.0 32.3 0.0 15.1 6.6 0.0
LOS by Move: A A A D A C A C A B A A
HCM2kAvgQ: 0 0 0 11 0 5 0 13 0 2 7 0

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #25 Gravenstein Hwy and NB 101 Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.817
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 22.9
Optimal Cycle: 73 Level Of Service: C

Street Name: NB 101 Ramps Gravenstein Hwy
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Permitted Permitted Permitted
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 0 0 1 0 0 0 0 0 0 2 0 0 0 0 0 0

Volume Module:

Base Vol: 351 0 236 0 0 0 0 0 1461 0 0 617 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: 351 0 236 0 0 0 0 0 1461 0 0 617 0
Added Vol: 168 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 519 0 236 0 0 0 0 0 1461 0 0 617 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 546 0 248 0 0 0 0 0 1538 0 0 649 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 546 0 248 0 0 0 0 0 1538 0 0 649 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 546 0 248 0 0 0 0 0 1538 0 0 649 0

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.93 1.00 0.83 1.00 1.00 1.00 1.00 0.93 1.00 1.00 0.93 1.00
Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 2.00 0.00 0.00 2.00 0.00
Final Sat.: 1769 0 1583 0 0 0 0 0 3538 0 0 3538 0

Capacity Analysis Module:

Vol/Sat: 0.31 0.00 0.16 0.00 0.00 0.00 0.00 0.43 0.00 0.00 0.18 0.00
Crit Moves: ****
Green/Cycle: 0.38 0.00 0.38 0.00 0.00 0.00 0.00 0.53 0.00 0.00 0.53 0.00
Volume/Cap: 0.82 0.00 0.42 0.00 0.00 0.00 0.00 0.82 0.00 0.00 0.35 0.00
Uniform Del: 28.0 0.0 22.9 0.0 0.0 0.0 0.0 19.4 0.0 0.0 13.4 0.0
IncrmntDel: 7.8 0.0 0.5 0.0 0.0 0.0 0.0 2.9 0.0 0.0 0.1 0.0
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 1.00 0.00 0.00 1.00 0.00
Delay/Veh: 35.8 0.0 23.4 0.0 0.0 0.0 0.0 22.3 0.0 0.0 13.5 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 35.8 0.0 23.4 0.0 0.0 0.0 0.0 22.3 0.0 0.0 13.5 0.0
LOS by Move: D A C A A A A C A A B A
HCM2kAvgQ: 17 0 6 0 0 0 0 22 0 0 6 0

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #26 Millbrae Ave/Stony Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.515

Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 21.1

Optimal Cycle: 42 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound							
Movement:	L	T	R		L	T	R		L	T	R		L	T	R					
Control:	Protected				Protected				Split Phase				Split Phase							
Rights:	Include				Include				Include				Include							
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0					
Lanes:	1	0	2	0	1	1	0	1	1	0	0	0	1	0	0	0	1	0	0	1

Volume Module:

Base Vol:	19	715	20	116	546	4	7	6	11	2	7	194
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:	19	715	20	116	546	4	7	6	11	2	7	194
Added Vol:	0	59	0	0	84	0	0	0	0	0	0	15
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	19	774	20	116	630	4	7	6	11	2	7	209
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	20	815	21	122	663	4	7	6	12	2	7	220
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	20	815	21	122	663	4	7	6	12	2	7	220
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	20	815	21	122	663	4	7	6	12	2	7	220

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.83	0.93	0.93	0.93	0.91	0.91	0.91	0.97	0.97	0.83
Lanes:	1.00	2.00	1.00	1.00	1.99	0.01	0.29	0.25	0.46	0.22	0.78	1.00
Final Sat.:	1769	3538	1583	1769	3512	22	502	431	789	409	1432	1583

Capacity Analysis Module:

Vol/Sat:	0.01	0.23	0.01	0.07	0.19	0.19	0.01	0.01	0.01	0.01	0.01	0.14
Crit Moves:	****			****			****			****		
Green/Cycle:	0.03	0.45	0.45	0.13	0.55	0.55	0.03	0.03	0.03	0.27	0.27	0.27
Volume/Cap:	0.34	0.51	0.03	0.51	0.34	0.34	0.51	0.51	0.51	0.02	0.02	0.51
Uniform Del:	47.3	19.8	15.5	40.3	12.6	12.6	47.9	47.9	47.9	26.8	26.8	30.9
IncrcmntDel:	3.5	0.3	0.0	1.9	0.1	0.1	9.1	9.1	9.1	0.0	0.0	1.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	50.8	20.1	15.5	42.2	12.7	12.7	57.0	57.0	57.0	26.8	26.8	32.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	50.8	20.1	15.5	42.2	12.7	12.7	57.0	57.0	57.0	26.8	26.8	32.0
LOS by Move:	D	C	B	D	B	B	E	E	E	C	C	C
HCM2kAvgQ:	1	10	0	4	6	6	2	2	2	0	0	6

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #27 Millbrae Ave/Primrose Ave

Average Delay (sec/veh): 0.6 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:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	1! 0 0	0	0	1 0 0	0	0	1! 0 0	0	0	1! 0 0

Volume Module:

Base Vol:	0	0	1	0	1	0	1	139	3	4	199	2
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	1	0	1	0	1	139	3	4	199	2
Added Vol:	15	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	15	0	1	0	1	0	1	139	3	4	199	2
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	16	0	1	0	1	0	1	146	3	4	209	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	16	0	1	0	1	0	1	146	3	4	209	2

Critical Gap Module:

Critical Gp:	7.1	6.5	6.2	xxxxx	6.5	xxxxx	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	4.0	xxxxx	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	369	370	148	xxxx	371	xxxxx	212	xxxx	xxxxx	149	xxxx	xxxxx
Potent Cap.:	591	563	904	xxxx	562	xxxxx	1371	xxxx	xxxxx	1444	xxxx	xxxxx
Move Cap.:	588	561	904	xxxx	560	xxxxx	1371	xxxx	xxxxx	1444	xxxx	xxxxx
Volume/Cap:	0.03	0.00	0.00	xxxx	0.00	xxxx	0.00	xxxx	xxxx	0.00	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	0.0	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	11.4	xxxxx	7.6	xxxx	xxxxx	7.5	xxxx	xxxxx			
LOS by Move:	*	*	*	*	B	*	A	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	601	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	0.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	11.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	B	*	*	*	*	*	*	*	*	*	*			
ApproachDel:	11.2				11.4		xxxxxxx			xxxxxxx					
ApproachLOS:	B				B		*			*					

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #28 Millbrae Ave/Whistler Ave

Average Delay (sec/veh): 0.6 Worst Case Level Of Service: B[11.5]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	1	0	0	0	1	0	0	1	0	0	1

Volume Module:

Base Vol:	1	9	0	4	0	1	1	123	2	4	208	8
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	9	0	4	0	1	1	123	2	4	208	8
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1	9	0	4	0	1	1	123	2	4	208	8
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	1	9	0	4	0	1	1	129	2	4	219	8
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	1	9	0	4	0	1	1	129	2	4	219	8

Critical Gap Module:

Critical Gp:	7.1	6.5	xxxxx	7.1	6.5	6.2	4.1	xxxxx	xxxxx	4.1	xxxxx	xxxxx
FollowUpTim:	3.5	4.0	xxxxx	3.5	4.0	3.3	2.2	xxxxx	xxxxx	2.2	xxxxx	xxxxx

Capacity Module:

Cnflct Vol:	365	368	xxxxx	369	365	223	227	xxxxx	xxxxx	132	xxxxx	xxxxx
Potent Cap.:	595	564	xxxxx	591	566	821	1353	xxxxx	xxxxx	1466	xxxxx	xxxxx
Move Cap.:	593	562	xxxxx	582	564	821	1353	xxxxx	xxxxx	1466	xxxxx	xxxxx
Volume/Cap:	0.00	0.02	xxxxx	0.01	0.00	0.00	0.00	xxxxx	xxxxx	0.00	xxxxx	xxxxx

Level Of Service Module:

2Way95thQ:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	0.0	xxxxx	xxxxx
Control Del:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	7.7	xxxxx	xxxxx	7.5	xxxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	565	xxxxx	xxxxx	xxxxx	618	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
SharedQueue:	0.1	xxxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shrd ConDel:	11.5	xxxxx	xxxxx	xxxxx	10.9	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shared LOS:	B	*	*	*	B	*	*	*	*	*	*	*
ApproachDel:	11.5			10.9			xxxxxxx			xxxxxxx		
ApproachLOS:	B			B			*			*		

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #29 Millbrae Ave/Langner Ave

Average Delay (sec/veh): 0.4 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:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	1!	0	0	0	0	0	0	1	0	0

Volume Module:

Base Vol:	5	0	11	0	0	0	0	149	9	4	270	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:	5	0	11	0	0	0	0	149	9	4	270	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	5	0	11	0	0	0	0	149	9	4	270	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	5	0	12	0	0	0	0	157	9	4	284	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	5	0	12	0	0	0	0	157	9	4	284	0

Critical Gap Module:

Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	454	454	162	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	166	xxxx	xxxxx
Potent Cap.:	567	505	889	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1424	xxxx	xxxxx
Move Cap.:	566	503	889	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1424	xxxx	xxxxx
Volume/Cap:	0.01	0.00	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	754	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	0.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx			
Shrd ConDel:	xxxxx	9.9	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx			
Shared LOS:	*	A	*	*	*	*	*	*	*	A	*	*			
ApproachDel:	9.9			xxxxxxx			xxxxxxx			xxxxxxx					
ApproachLOS:	A			*			*			*					

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #30 Millbrae Ave/Labath Ave

Average Delay (sec/veh): 1.0 Worst Case Level Of Service: B[11.2]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	1!	0	0	0	0	0	0	1	0	0

Volume Module:

Base Vol:	25	0	8	0	0	0	0	155	9	11	250	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:	25	0	8	0	0	0	0	155	9	11	250	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	25	0	8	0	0	0	0	155	9	11	250	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	26	0	8	0	0	0	0	163	9	12	263	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	26	0	8	0	0	0	0	163	9	12	263	0

Critical Gap Module:

Critical Gp:	6.4	6.5	6.2	7.1	6.5	6.2	xxxxx	xxxxx	xxxxx	4.1	xxxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	xxxxx	xxxxx	xxxxx	2.2	xxxxx	xxxxx

Capacity Module:

Cnflict Vol:	454	454	168	458	459	263	xxxxx	xxxxx	xxxxx	173	xxxxx	xxxxx
Potent Cap.:	567	505	881	516	502	780	xxxxx	xxxxx	xxxxx	1416	xxxxx	xxxxx
Move Cap.:	564	501	881	508	498	780	xxxxx	xxxxx	xxxxx	1416	xxxxx	xxxxx
Volume/Cap:	0.05	0.00	0.01	0.00	0.00	0.00	xxxxx	xxxxx	xxxxx	0.01	xxxxx	xxxxx

Level Of Service Module:

2Way95thQ:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx			
Control Del:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	7.6	xxxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxxx	618	xxxxx	xxxxx	0	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
SharedQueue:	xxxxx	0.2	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shrd ConDel:	xxxxx	11.2	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	7.6	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shared LOS:	*	B	*	*	*	*	*	*	*	A	*	*	*	*	*
ApproachDel:	11.2			xxxxxxx			xxxxxxx			xxxxxxx					
ApproachLOS:	B			*			*			*					

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #31 Millbrae Ave/Dowdell Ave

Average Delay (sec/veh): 1.0 Worst Case Level Of Service: B[11.3]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 1 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 1 0 0

Volume Module:

Base Vol: 37 0 0 0 0 0 0 0 135 22 0 235 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: 37 0 0 0 0 0 0 0 135 22 0 235 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 37 0 0 0 0 0 0 0 135 22 0 235 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 39 0 0 0 0 0 0 0 142 23 0 247 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 39 0 0 0 0 0 0 0 142 23 0 247 0

Critical Gap Module:

Critical Gp: 6.4 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim: 3.5 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxxx xxxx xxxxx

Capacity Module:

Cnflict Vol: 401 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Potent Cap.: 609 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Move Cap.: 609 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Volume/Cap: 0.06 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx

Level Of Service Module:

2Way95thQ: 0.2 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Control Del: 11.3 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
LOS by Move: B * * * * * * * * * * * * * * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
SharedQueue:xxxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxxx xxxx xxxxx xxxxx
Shrd ConDel:xxxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxxx xxxx xxxxx xxxxx
Shared LOS: * * * * * * * * * * * * * * * *
ApproachDel: 11.3 xxxxxxx xxxxxxx xxxxxxx
ApproachLOS: B * * *

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #55 Golf Course Dr/Commerce Blvd & Roberts Lake Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.775

Loss Time (sec): 12 (Y+R=12.0 sec) Average Delay (sec/veh): 36.7

Optimal Cycle: 72 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	1	1	1	0	1	1	1	1

Volume Module:

Base Vol:	312	95	474	92	112	124	100	491	539	301	336	33
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:	312	95	474	92	112	124	100	491	539	301	336	33
Added Vol:	0	0	0	0	0	0	0	7	134	0	8	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	312	95	474	92	112	124	100	498	673	301	344	33
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	328	100	499	97	118	131	105	524	708	317	362	35
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	328	100	499	97	118	131	105	524	708	317	362	35
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	328	100	499	97	118	131	105	524	708	317	362	35

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.86	0.86	0.93	0.90	0.90	0.93	0.90	0.90	0.93	0.98	0.83
Lanes:	1.00	1.00	2.00	1.00	1.00	1.00	1.00	1.28	1.72	1.00	2.00	1.00
Final Sat.:	1769	1629	3259	1769	1715	1715	1769	2171	2934	1769	3724	1583

Capacity Analysis Module:

Vol/Sat:	0.19	0.06	0.15	0.05	0.07	0.08	0.06	0.24	0.24	0.18	0.10	0.02
Crit Moves:	****					****	****			****		
Green/Cycle:	0.24	0.25	0.25	0.09	0.10	0.10	0.21	0.31	0.31	0.23	0.34	0.34
Volume/Cap:	0.78	0.25	0.62	0.62	0.70	0.78	0.29	0.78	0.78	0.78	0.29	0.07
Uniform Del:	35.5	30.1	33.3	43.9	43.7	44.0	33.5	31.3	31.3	36.0	24.4	22.5
IncrcmntDel:	8.7	0.1	1.2	7.1	6.1	11.3	0.4	2.5	2.5	9.0	0.1	0.1
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	44.2	30.1	34.5	51.0	49.8	55.3	34.0	33.7	33.7	45.0	24.5	22.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	44.2	30.1	34.5	51.0	49.8	55.3	34.0	33.7	33.7	45.0	24.5	22.6
LOS by Move:	D	C	C	D	D	E	C	C	C	D	C	C
HCM2kAvgQ:	11	3	8	4	5	6	3	13	13	11	4	1

Note: Queue reported is the number of cars per lane.

**CUMULATIVE 2020 + ALTERNATIVE D
MITIGATED TRAFFIC CONDITIONS
(TRAFFIX)**

 Impact Analysis Report
 Level Of Service

Intersection	Base LOS	Base		Future LOS	Future		Change in
		Del/ Veh	V/ C		Del/ Veh	V/ C	
# 1 Wilfred Ave/Stony Point Rd	B	19.6	0.681	C	23.9	0.772	+ 4.334 D/V
# 2 Wilfred Ave/Primrose Ave	A	6.0	0.202	D	39.9	0.944	+33.919 D/V
# 3 Wilfred Ave/Whistler Ave	B	12.4	0.000	D	32.2	0.000	+19.743 D/V
# 4 Langner Ave/Wilfred Ave	B	12.4	0.000	D	32.2	0.000	+19.785 D/V
# 5 Wilfred Ave/Labath Ave	C	34.2	0.601	D	36.9	0.762	+ 2.648 D/V
# 6 Dowell Ave/Wilfred Ave	D	37.6	0.793	D	47.0	0.953	+ 9.413 D/V
# 7 Wilfred Ave/Redwood Dr	D	38.4	0.851	D	41.7	0.928	+ 3.280 D/V
# 9 Wilfred Ave/101 SB Ramp	C	30.7	0.724	D	38.6	0.883	+ 7.894 D/V
# 12 101 NB Ramps/Commerce Blvd	C	31.5	0.803	C	32.9	0.837	+ 1.307 D/V
# 13 New Driveway/Stony Point Rd	A	0.5	0.460	A	9.6	0.582	+ 9.091 D/V
# 15 Redwood Dr/Business Park Dr	C	16.5	0.000	C	16.5	0.000	+ 0.000 D/V
# 16 Rohnert Park Expwy/Stony Point	C	22.1	0.619	D	36.1	0.918	+14.076 D/V
# 17 Rohnert Park Expwy/Labath Ave	C	30.7	0.522	C	33.5	0.536	+ 2.793 D/V
# 18 Rohnert Park Expwy/Redwood Dr	C	33.1	0.707	C	33.7	0.742	+ 0.545 D/V
# 19 Rohnert Park Expwy/101 SB Ramp	C	24.5	0.710	C	24.8	0.721	+ 0.314 D/V
# 20 Rohnert Park Expwy/101 NB Ramp	B	17.1	0.449	F	OVRFL	0.603	+12440003173
# 21 Rohnert Park Expwy/Commerce Bl	C	34.9	0.802	C	34.9	0.804	+ 0.014 D/V
# 22 Gravenstein Hwy (SR 116)/ Ston	D	39.9	0.829	D	43.9	0.864	+ 3.971 D/V
# 23 Gravenstein Hwy (SR 116)/ Redw	C	34.1	0.892	D	36.7	0.913	+ 2.623 D/V
# 24 Gravenstein Hwy and SB 101 Ram	B	16.2	0.590	C	29.2	0.617	+13.045 D/V
# 25 Gravenstein Hwy and NB 101 Ram	B	18.7	0.767	C	25.4	0.877	+ 6.695 D/V
# 26 Millbrae Ave/Stony Point Rd	C	21.8	0.517	C	21.8	0.549	-0.015 D/V
# 27 Millbrae Ave/Primrose Ave	B	12.4	0.000	B	12.4	0.000	+ 0.000 D/V
# 28 Millbrae Ave/Whistler Ave	B	12.4	0.000	B	12.4	0.000	+ 0.000 D/V
# 29 Millbrae Ave/Langner Ave	B	11.2	0.000	B	11.2	0.000	+ 0.000 D/V

Intersection		Base		Future		Change in
		Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C	
# 30 Millbrae Ave/Labath Ave	B	13.5	0.000	B 13.5	0.000	+ 0.000 D/V
# 31 Millbrae Ave/Dowdell Ave	B	11.6	0.000	B 11.6	0.000	+ 0.000 D/V
# 55 Golf Course Dr/Commerce Blvd &	D	46.5	0.919	D 50.8	0.954	+ 4.222 D/V

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 Wilfred Ave/Stony Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.772
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 23.9
Optimal Cycle: 63 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic movements and 13 rows of volume-related metrics like Base Vol, Growth Adj, etc.

Saturation Flow Module: Table with 13 columns and 4 rows showing Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns and 13 rows showing Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, etc.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #2 Wilfred Ave/Primrose Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.944
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 39.9
Optimal Cycle: 128 Level Of Service: D

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Permitted), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns for different volume metrics (Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.) and 4 rows for North, South, East, and West bounds.

Saturation Flow Module: Table with 13 columns for saturation flow metrics (Sat/Lane, Adjustment, Lanes, Final Sat.) and 4 rows for North, South, East, and West bounds.

Capacity Analysis Module: Table with 13 columns for capacity analysis metrics (Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ) and 4 rows for North, South, East, and West bounds.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 Wilfred Ave/Whistler Ave

Average Delay (sec/veh): 1.5 Worst Case Level Of Service: D[32.2]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	1! 0 0	0	0	1! 0 0	0	0	1! 0 0	0	0	1! 0 0

Volume Module:

Base Vol:	10	10	10	10	10	10	10	170	10	9	280	9
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:	10	10	10	10	10	10	10	170	10	9	280	9
Added Vol:	0	0	0	0	0	0	0	476	0	0	335	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	10	10	10	10	10	10	646	10	9	615	9
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	11	11	11	11	11	11	680	11	9	647	9
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	11	11	11	11	11	11	11	680	11	9	647	9

Critical Gap Module:

Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	1388	1382	685	1388	1383	652	657	xxxx	xxxxx	691	xxxx	xxxxx
Potent Cap.:	121	145	451	121	145	471	940	xxxx	xxxxx	914	xxxx	xxxxx
Move Cap.:	110	142	451	110	142	471	940	xxxx	xxxxx	914	xxxx	xxxxx
Volume/Cap:	0.10	0.07	0.02	0.10	0.07	0.02	0.01	xxxx	xxxx	0.01	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.9	xxxx	xxxxx	9.0	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	164	xxxxx	xxxx	164	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	0.7	xxxxx	xxxxx	0.7	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	32.2	xxxxx	xxxxx	32.0	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	D	*	*	D	*	*	*	*	*	*	*			
ApproachDel:		32.2			32.0		xxxxxxx		xxxxxxx		xxxxxxx				
ApproachLOS:		D			D		*		*		*				

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Langner Ave/Wilfred Ave

Average Delay (sec/veh): 1.5 Worst Case Level Of Service: D[32.2]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	1! 0 0	0	0	1! 0 0	0	0	1! 0 0	1	0	1 0 1

Volume Module:

Base Vol:	10	10	10	10	10	10	10	170	10	9	280	9
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:	10	10	10	10	10	10	10	170	10	9	280	9
Added Vol:	0	0	0	0	0	0	0	476	0	0	335	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	10	10	10	10	10	10	646	10	9	615	9
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	11	11	11	11	11	11	680	11	9	647	9
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	11	11	11	11	11	11	11	680	11	9	647	9
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	1388	1382	685	1383	1378	647	657	xxxx	xxxxx	691	xxxx	xxxxx
Potent Cap.:	121	145	451	122	146	474	940	xxxx	xxxxx	914	xxxx	xxxxx
Move Cap.:	110	142	451	111	143	474	940	xxxx	xxxxx	914	xxxx	xxxxx
Volume/Cap:	0.10	0.07	0.02	0.09	0.07	0.02	0.01	xxxx	xxxx	0.01	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.9	xxxx	xxxxx	9.0	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	164	xxxxx	xxxx	165	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	0.7	xxxxx	xxxxx	0.7	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	32.2	xxxxx	xxxxx	31.8	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	D	*	*	D	*	*	*	*	*	*	*			
ApproachDel:	32.2			31.8			xxxxxxx			xxxxxxx					
ApproachLOS:	D			D			*			*					

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 Wilfred Ave/Labath Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.762
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 36.9
Optimal Cycle: 69 Level Of Service: D

Table with columns for Approach (North, South, East, West Bound) and Movement (L, T, R). Rows include Control, Rights, Min. Green, and Lanes.

Volume Module: Table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module: Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 Dowell Ave/Wilfred Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.953
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 47.0
Optimal Cycle: 141 Level Of Service: D

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns for different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns for different traffic movements. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns for different traffic movements. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 Wilfred Ave/Redwood Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.928
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 41.7
Optimal Cycle: 125 Level Of Service: D

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module:

Table with 13 columns representing different traffic metrics and 13 rows of data including Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module:

Table with 13 columns representing saturation flow metrics and 4 rows of data including Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with 13 columns representing capacity analysis metrics and 13 rows of data including Vol/Sat, Crit Moves, Green/Cycle, etc.

Note: Queue reported is the number of cars per lane.

 Level Of Service Computation Report
 2000 HCM Operations Method (Future Volume Alternative)

 Intersection #9 Wilfred Ave/101 SB Ramp

Cycle (sec): 145 Critical Vol./Cap.(X): 0.883
 Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 38.6
 Optimal Cycle: 108 Level Of Service: D

Street Name: US-101 SB Ramp Wilfred Avenue
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Permitted			Protected			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	1	0	1	0	0	2	0	2	0

Volume Module:

Base Vol:	0	0	0	355	288	482	0	1257	283	77	682	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:	0	0	0	355	288	482	0	1257	283	77	682	0
Added Vol:	0	0	0	0	0	151	0	141	328	0	176	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	355	288	633	0	1398	611	77	858	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	374	303	666	0	1472	643	81	903	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	374	303	666	0	1472	643	81	903	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	374	303	666	0	1472	643	81	903	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.83	0.88	0.88	1.00	0.98	0.83	0.93	0.98	1.00
Lanes:	0.00	0.00	0.00	1.00	1.00	1.00	0.00	2.00	1.00	2.00	2.00	0.00
Final Sat.:	0	0	0	1583	1670	1670	0	3724	1583	3538	3724	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.24	0.18	0.40	0.00	0.40	0.41	0.02	0.24	0.00
Crit Moves:						****			****	****		
Green/Cycle:	0.00	0.00	0.00	0.45	0.45	0.45	0.00	0.46	0.46	0.03	0.49	0.00
Volume/Cap:	0.00	0.00	0.00	0.52	0.40	0.88	0.00	0.86	0.88	0.88	0.50	0.00
Uniform Del:	0.0	0.0	0.0	28.5	26.6	36.2	0.0	34.9	35.6	70.4	25.3	0.0
IncrcmntDel:	0.0	0.0	0.0	0.7	0.1	8.6	0.0	4.6	12.3	58.0	0.2	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	0.0	0.0	0.0	29.2	26.7	44.9	0.0	39.5	47.9	128.4	25.5	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	29.2	26.7	44.9	0.0	39.5	47.9	128.4	25.5	0.0
LOS by Move:	A	A	A	C	C	D	A	D	D	F	C	A
HCM2kAvgQ:	0	0	0	12	9	30	0	31	29	4	13	0

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #12 101 NB Ramps/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.837
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 32.9
Optimal Cycle: 86 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic volumes and adjustment factors.

Saturation Flow Module: Table with 13 columns representing saturation flow rates and adjustment factors.

Capacity Analysis Module: Table with 13 columns representing capacity analysis metrics like Vol/Sat, Crit Moves, Green/Cycle, etc.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #13 New Driveway/Stony Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.582
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 9.6
Optimal Cycle: 32 Level Of Service: A

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Permitted, Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #15 Redwood Dr/Business Park Dr

Average Delay (sec/veh): 3.2 Worst Case Level Of Service: C[16.5]

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: 1 0 2 0 0 0 0 1 1 0 1 0 0 1 0 0 1 0 0 2

Volume Module:

Base Vol: 12 359 0 0 363 25 144 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: 12 359 0 0 363 25 144 0 31 0 0 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 12 359 0 0 363 25 144 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 13 378 0 0 382 26 152 0 33 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 13 378 0 0 382 26 152 0 33 0 0 0

Critical Gap Module:

Critical Gp: 4.1 xxxx xxxxx xxxxx xxxx xxxxx 6.8 6.5 6.9 7.5 6.5 6.9
FollowUpTim: 2.2 xxxx xxxxx xxxxx xxxx xxxxx 3.5 4.0 3.3 3.5 4.0 3.3

Capacity Module:

Cnflict Vol: 408 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 609 798 204 594 812 189
Potent Cap.: 1161 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 431 321 809 393 316 827
Move Cap.: 1161 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 428 318 809 374 312 827
Volume/Cap: 0.01 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 0.35 0.00 0.04 0.00 0.00 0.00

Level Of Service Module:

2Way95thQ: 0.0 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 1.6 xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Control Del: 8.1 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 18.0 xxxx xxxxx xxxxx xxxx xxxxx xxxxx
LOS by Move: A * * * * * C * * * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx 809 0 xxxx xxxxx
SharedQueue:xxxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx 0.1 xxxxx xxxx xxxxx
Shrd ConDel:xxxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx 9.6 xxxxx xxxx xxxxx
Shared LOS: * * * * * * * * * * A * * * *
ApproachDel: xxxxxxx xxxxxxx 16.5 xxxxxxx
ApproachLOS: * * * * * C *

Note: Queue reported is the number of cars per lane.

 Level Of Service Computation Report
 2000 HCM Operations Method (Future Volume Alternative)

 Intersection #16 Rohnert Park Expwy/Stony Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.918
 Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 36.1
 Optimal Cycle: 105 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Protected			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1	0	1	0	0	0	0	0	1	0

Volume Module:

Base Vol:	0	547	253	205	460	0	0	0	0	253	0	217
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	547	253	205	460	0	0	0	0	253	0	217
Added Vol:	0	168	0	43	148	0	0	0	0	0	0	251
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	715	253	248	608	0	0	0	0	253	0	468
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	753	266	261	640	0	0	0	0	266	0	493
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	753	266	261	640	0	0	0	0	266	0	493
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	753	266	261	640	0	0	0	0	266	0	493

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.98	0.83	0.93	0.98	1.00	1.00	1.00	1.00	0.93	1.00	0.83
Lanes:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	1862	1583	1769	1862	0	0	0	0	1769	0	1583

Capacity Analysis Module:

Vol/Sat:	0.00	0.40	0.17	0.15	0.34	0.00	0.00	0.00	0.00	0.15	0.00	0.31
Crit Moves:	****			****						****		
Green/Cycle:	0.00	0.44	0.44	0.16	0.60	0.00	0.00	0.00	0.00	0.34	0.00	0.34
Volume/Cap:	0.00	0.92	0.38	0.92	0.57	0.00	0.00	0.00	0.00	0.44	0.00	0.92
Uniform Del:	0.0	26.3	18.8	41.3	12.1	0.0	0.0	0.0	0.0	25.7	0.0	31.7
IncrcmntDel:	0.0	15.2	0.4	32.7	0.7	0.0	0.0	0.0	0.0	0.5	0.0	20.9
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Delay/Veh:	0.0	41.5	19.2	74.1	12.8	0.0	0.0	0.0	0.0	26.2	0.0	52.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	41.5	19.2	74.1	12.8	0.0	0.0	0.0	0.0	26.2	0.0	52.6
LOS by Move:	A	D	B	E	B	A	A	A	A	C	A	D
HCM2kAvgQ:	0	26	6	12	12	0	0	0	0	7	0	19

 Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #17 Rohnert Park Expwy/Labath Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.536

Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 33.5

Optimal Cycle: 43 Level Of Service: C

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 2 0 0 1 1 1 0 0 1 0 1 0 2 0 1 1 0 3 0 1

Volume Module:
Base Vol: 69 26 153 281 40 97 83 585 53 116 492 92
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: 69 26 153 281 40 97 83 585 53 116 492 92
Added Vol: 0 0 0 0 0 0 0 43 0 0 251 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 69 26 153 281 40 97 83 628 53 116 743 92
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 73 27 161 296 42 102 87 661 56 122 782 97
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 73 27 161 296 42 102 87 661 56 122 782 97
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 73 27 161 296 42 102 87 661 56 122 782 97

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.93 0.85 0.85 0.93 0.88 0.88 0.93 0.98 0.83 0.93 0.98 0.83
Lanes: 2.00 0.29 1.71 1.00 0.29 0.71 1.00 2.00 1.00 1.00 3.00 1.00
Final Sat.: 3538 472 2776 1769 486 1179 1769 3724 1583 1769 5586 1583

Capacity Analysis Module:
Vol/Sat: 0.02 0.06 0.06 0.17 0.09 0.09 0.05 0.18 0.04 0.07 0.14 0.06
Crit Moves: ****
Green/Cycle: 0.07 0.12 0.12 0.25 0.29 0.29 0.26 0.28 0.28 0.24 0.26 0.26
Volume/Cap: 0.29 0.48 0.48 0.67 0.30 0.30 0.19 0.63 0.13 0.29 0.54 0.24
Uniform Del: 44.2 41.1 41.1 33.8 27.6 27.6 28.8 31.5 26.9 31.0 31.8 29.2
IncrcmntDel: 0.7 0.9 0.9 3.9 0.3 0.3 0.2 1.3 0.1 0.4 0.4 0.3
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Delay/Veh: 44.8 42.1 42.1 37.7 27.9 27.9 29.0 32.8 27.0 31.4 32.2 29.5
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 44.8 42.1 42.1 37.7 27.9 27.9 29.0 32.8 27.0 31.4 32.2 29.5
LOS by Move: D D D D C C C C C C C
HCM2kAvgQ: 1 3 3 9 4 4 2 10 1 3 7 2

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #18 Rohnert Park Expwy/Redwood Dr

Cycle (sec): 90 Critical Vol./Cap.(X): 0.742
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 33.7
Optimal Cycle: 64 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

 Level Of Service Computation Report
 2000 HCM Operations Method (Future Volume Alternative)

 Intersection #19 Rohnert Park Expwy/101 SB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.721
 Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 24.8
 Optimal Cycle: 62 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1	0	0	0	1	0	0	2	1	0
	1	0	2	0	1	0	1	0	2	0	1	1

Volume Module:

Base Vol:	6	0	17	611	1	427	0	1252	297	68	862	255
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:	6	0	17	611	1	427	0	1252	297	68	862	255
Added Vol:	0	0	0	0	0	0	0	7	36	0	251	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	6	0	17	611	1	427	0	1259	333	68	1113	255
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00
PHF Volume:	6	0	18	643	1	449	0	1325	351	72	1172	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	6	0	18	643	1	449	0	1325	351	72	1172	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Final Vol.:	6	0	18	643	1	449	0	1325	351	72	1172	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.85	1.00	0.85	0.69	0.69	0.83	1.00	0.95	0.95	0.93	0.98	1.00
Lanes:	0.26	0.00	0.74	1.99	0.01	1.00	0.00	2.37	0.63	1.00	2.00	1.00
Final Sat.:	423	0	1198	2632	4	1583	0	4281	1132	1769	3724	1900

Capacity Analysis Module:

Vol/Sat:	0.01	0.00	0.01	0.24	0.24	0.28	0.00	0.31	0.31	0.04	0.31	0.00
Crit Moves:						****		****		****		
Green/Cycle:	0.39	0.00	0.39	0.39	0.39	0.39	0.00	0.43	0.43	0.06	0.49	0.00
Volume/Cap:	0.04	0.00	0.04	0.62	0.62	0.72	0.00	0.72	0.72	0.72	0.65	0.00
Uniform Del:	18.6	0.0	18.6	24.3	24.3	25.6	0.0	23.6	23.6	46.4	19.3	0.0
IncrcmntDel:	0.0	0.0	0.0	1.2	1.2	4.1	0.0	1.1	1.1	22.5	0.8	0.0
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	18.7	0.0	18.7	25.4	25.4	29.7	0.0	24.7	24.7	68.9	20.1	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	18.7	0.0	18.7	25.4	25.4	29.7	0.0	24.7	24.7	68.9	20.1	0.0
LOS by Move:	B	A	B	C	C	C	A	C	C	E	C	A
HCM2kAvgQ:	0	0	0	9	9	13	0	15	15	4	14	0

 Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #20 Rohnert Park Expwy/101 NB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.603

Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): OVERFLOW

Optimal Cycle: 33 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	0	1	0	4	0	3	0

Volume Module:

Base Vol:	339	0	345	14	0	3	21	1556	298	0	841	383
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:	339	0	345	14	0	3	21	1556	298	0	841	383
Added Vol:	243	0	0	0	0	0	0	7	0	0	8	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	582	0	345	14	0	3	21	1563	298	0	849	383
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00	0.95	0.95	0.00
PHF Volume:	613	0	363	15	0	3	22	1645	0	0	894	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	613	0	363	15	0	3	22	1645	0	0	894	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Final Vol.:	613	0	363	15	0	3	22	1645	0	0	894	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	1.00	0.83	0.93	1.00	0.83	0.23	0.98	1.00	1.00	0.98	1.00
Lanes:	1.00	0.00	2.00	1.00	0.00	1.00	1.00	4.00	1.00	0.00	3.00	1.00
Final Sat.:	1769	0	3165	1769	0	1583	436	7448	1900	0	5586	1900

Capacity Analysis Module:

Vol/Sat:	0.35	0.00	0.11	0.01	0.00	0.00	0.05	0.22	0.00	0.00	0.16	0.00
Crit Moves:	****			****			****					
Green/Cycle:	0.57	0.00	0.54	0.04	0.00	0.00	0.37	0.37	0.00	0.00	0.37	0.00
Volume/Cap:	0.60	0.00	0.21	0.21	0.00	xxxx	0.14	0.60	0.00	0.00	0.44	0.00
Uniform Del:	13.9	0.0	12.2	46.6	0.0	50.0	21.2	25.8	0.0	0.0	23.9	0.0
IncrcmntDel:	1.0	0.0	0.1	1.6	0.0	xxxxxx	0.4	0.4	0.0	0.0	0.2	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00
Delay/Veh:	14.9	0.0	12.3	48.1	0.0	xxxxxx	21.6	26.2	0.0	0.0	24.1	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	14.9	0.0	12.3	48.1	0.0	xxxxxx	21.6	26.2	0.0	0.0	24.1	0.0
LOS by Move:	B	A	B	D	A	F	C	C	A	A	C	A
HCM2kAvgQ:	13	0	3	1	0	1	1	11	0	0	7	0

Note: Queue reported is the number of cars per lane.

 Level Of Service Computation Report
 2000 HCM Operations Method (Future Volume Alternative)

 Intersection #21 Rohnert Park Expwy/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.804
 Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 34.9
 Optimal Cycle: 78 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound										
Movement:	L	T	R	L	T	R	L	T	R	L	T	R								
Control:	Split Phase			Split Phase			Protected			Protected										
Rights:	Include			Include			Include			Include										
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0								
Lanes:	1	1	1	0	1	1	1	1	0	1	2	0	2	0	1	1	0	2	1	0

Volume Module:

Base Vol:	384	293	241	179	354	152	235	1221	462	165	682	202
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:	384	293	241	179	354	152	235	1221	462	165	682	202
Added Vol:	0	0	0	0	0	0	0	7	0	0	8	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	384	293	241	179	354	152	235	1228	462	165	690	202
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	404	308	254	188	373	160	247	1293	486	174	726	213
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	404	308	254	188	373	160	247	1293	486	174	726	213
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	404	308	254	188	373	160	247	1293	486	174	726	213

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.83	0.96	0.96	0.83	0.93	0.98	0.83	0.93	0.95	0.95
Lanes:	1.70	1.30	1.00	1.01	1.99	1.00	2.00	2.00	1.00	1.00	2.32	0.68
Final Sat.:	3080	2350	1583	1844	3647	1583	3538	3724	1583	1769	4174	1222

Capacity Analysis Module:

Vol/Sat:	0.13	0.13	0.16	0.10	0.10	0.10	0.07	0.35	0.31	0.10	0.17	0.17
Crit Moves:	****			****			****			****		
Green/Cycle:	0.20	0.20	0.20	0.13	0.13	0.13	0.16	0.43	0.43	0.12	0.39	0.39
Volume/Cap:	0.66	0.66	0.80	0.80	0.80	0.80	0.44	0.80	0.71	0.80	0.44	0.44
Uniform Del:	36.9	36.9	38.2	42.4	42.4	42.4	38.0	24.7	23.3	42.7	22.2	22.2
IncrcmntDel:	1.5	1.5	13.9	6.8	6.8	19.4	0.6	3.1	3.5	19.3	0.1	0.1
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	38.4	38.4	52.1	49.2	49.2	61.8	38.6	27.8	26.9	62.0	22.3	22.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	38.4	38.4	52.1	49.2	49.2	61.8	38.6	27.8	26.9	62.0	22.3	22.3
LOS by Move:	D	D	D	D	D	E	D	C	C	E	C	C
HCM2kAvgQ:	8	8	10	8	8	7	4	19	13	7	7	7

 Note: Queue reported is the number of cars per lane.

 Level Of Service Computation Report
 2000 HCM Operations Method (Future Volume Alternative)

 Intersection #22 Gravenstein Hwy (SR 116)/ Stoney Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.864
 Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 43.9
 Optimal Cycle: 95 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound							
Movement:	L	T	R	L	T	R	L	T	R	L	T	R					
Control:	Protected			Protected			Protected			Protected							
Rights:	Include			Include			Include			Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0					
Lanes:	1	0	1	0	1	0	1	1	0	1	1	0	1	0	2	0	1

Volume Module:

Base Vol:	323	483	113	107	358	235	149	583	228	140	661	113
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:	323	483	113	107	358	235	149	583	228	140	661	113
Added Vol:	0	0	0	148	0	0	0	0	0	0	0	168
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	323	483	113	255	358	235	149	583	228	140	661	281
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	340	508	119	268	377	247	157	614	240	147	696	296
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	340	508	119	268	377	247	157	614	240	147	696	296
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	340	508	119	268	377	247	157	614	240	147	696	296

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.89	0.89	0.93	0.93	0.83
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.44	0.56	1.00	2.00	1.00
Final Sat.:	1769	1862	1583	1769	1862	1583	1769	2436	953	1769	3538	1583

Capacity Analysis Module:

Vol/Sat:	0.19	0.27	0.08	0.15	0.20	0.16	0.09	0.25	0.25	0.08	0.20	0.19
Crit Moves:	****			****			****			****		
Green/Cycle:	0.24	0.32	0.32	0.18	0.25	0.25	0.12	0.29	0.29	0.10	0.27	0.27
Volume/Cap:	0.80	0.86	0.24	0.86	0.80	0.62	0.74	0.86	0.86	0.86	0.74	0.70
Uniform Del:	35.8	32.2	25.3	40.1	35.0	33.1	42.4	33.5	33.5	44.5	33.4	33.0
IncrcmntDel:	10.5	12.6	0.2	21.3	9.6	3.0	12.5	8.0	8.0	33.7	3.0	5.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	46.3	44.7	25.5	61.3	44.6	36.1	54.9	41.5	41.5	78.2	36.4	38.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	46.3	44.7	25.5	61.3	44.6	36.1	54.9	41.5	41.5	78.2	36.4	38.1
LOS by Move:	D	D	C	E	D	D	D	D	D	E	D	D
HCM2kAvgQ:	12	18	3	11	13	8	6	16	16	7	12	9

 Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #23 Gravenstein Hwy (SR 116)/ Redwood Rd

Cycle (sec): 75 Critical Vol./Cap.(X): 0.913

Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 36.7

Optimal Cycle: 98 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	0	1	0	1	1	0	2

Volume Module:

Base Vol:	48	28	59	592	28	110	122	708	32	53	797	406
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	28	59	592	28	110	122	708	32	53	797	406
Added Vol:	0	0	0	0	0	0	0	148	0	0	168	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	48	28	59	592	28	110	122	856	32	53	965	406
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	51	29	62	623	29	116	128	901	34	56	1016	427
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	51	29	62	623	29	116	128	901	34	56	1016	427
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	51	29	62	623	29	116	128	901	34	56	1016	427

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.88	0.88	0.93	0.86	0.86	0.93	0.93	0.93	0.93	0.93	0.83
Lanes:	1.00	0.32	0.68	1.00	0.20	0.80	1.00	1.93	0.07	1.00	2.00	1.00
Final Sat.:	1769	538	1134	1769	332	1306	1769	3393	127	1769	3538	1583

Capacity Analysis Module:

Vol/Sat:	0.03	0.05	0.05	0.35	0.09	0.09	0.07	0.27	0.27	0.03	0.29	0.27
Crit Moves:	****			****			****			****		
Green/Cycle:	0.11	0.06	0.06	0.39	0.34	0.34	0.08	0.35	0.35	0.04	0.31	0.31
Volume/Cap:	0.26	0.91	0.91	0.91	0.26	0.26	0.91	0.75	0.75	0.75	0.91	0.86
Uniform Del:	30.7	35.1	35.1	21.8	18.1	18.1	34.3	21.4	21.4	35.5	24.7	24.1
IncrcmntDel:	0.7	62.4	62.4	16.7	0.3	0.3	50.4	2.7	2.7	34.9	11.3	13.9
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	31.4	97.5	97.5	38.5	18.3	18.3	84.7	24.1	24.1	70.4	36.0	38.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	31.4	97.5	97.5	38.5	18.3	18.3	84.7	24.1	24.1	70.4	36.0	38.1
LOS by Move:	C	F	F	D	B	B	F	C	C	E	D	D
HCM2kAvgQ:	1	5	5	18	3	3	6	12	12	3	16	12

Note: Queue reported is the number of cars per lane.

 Level Of Service Computation Report
 2000 HCM Operations Method (Future Volume Alternative)

 Intersection #24 Gravenstein Hwy and SB 101 Ramps

Cycle (sec): 75 Critical Vol./Cap.(X): 0.617
 Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 29.2
 Optimal Cycle: 107 Level Of Service: C

Street Name: SB 101 Ramps Gravenstein Hwy
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Permitted			Protected			Permitted			Protected		
Rights:	Include			Include			Ignore			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	2	0	1	0	0	1	1	0	0

Volume Module:

Base Vol:	0	0	0	640	0	258	0	953	412	66	998	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:	0	0	0	640	0	258	0	953	412	66	998	0
Added Vol:	0	0	0	0	0	0	0	0	148	0	168	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	640	0	258	0	953	560	66	1166	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00	0.95	0.95	0.95
PHF Volume:	0	0	0	674	0	272	0	1003	0	69	1227	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	674	0	272	0	1003	0	69	1227	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Final Vol.:	0	0	0	674	0	272	0	1003	0	69	1227	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.90	1.00	0.83	1.00	0.93	1.00	0.93	0.93	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	0.00	2.00	1.00	1.00	2.00	0.00
Final Sat.:	0	0	0	3432	0	1583	0	3538	1900	1769	3538	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.20	0.00	0.17	0.00	0.28	0.00	0.04	0.35	0.00
Crit Moves:				****							****	
Green/Cycle:	0.00	0.00	0.00	0.21	0.00	0.21	0.00	0.30	0.00	0.37	0.67	0.00
Volume/Cap:	0.00	0.00	0.00	0.94	0.00	0.82	0.00	0.94	0.00	0.11	0.52	0.00
Uniform Del:	0.0	0.0	0.0	29.2	0.0	28.3	0.0	25.5	0.0	15.5	6.2	0.0
IncrcmntDel:	0.0	0.0	0.0	20.3	0.0	15.1	0.0	15.2	0.0	0.1	0.2	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
Delay/Veh:	0.0	0.0	0.0	49.5	0.0	43.4	0.0	40.7	0.0	15.6	6.4	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	49.5	0.0	43.4	0.0	40.7	0.0	15.6	6.4	0.0
LOS by Move:	A	A	A	D	A	D	A	D	A	B	A	A
HCM2kAvgQ:	0	0	0	12	0	9	0	17	0	1	8	0

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #25 Gravenstein Hwy and NB 101 Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.877
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 25.4
Optimal Cycle: 92 Level Of Service: C

Street Name: NB 101 Ramps Gravenstein Hwy
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Permitted Permitted Permitted
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 0 0 1 0 0 0 0 0 0 2 0 0 0 0 2 0 0

Volume Module:
Base Vol: 375 0 273 0 0 0 0 1596 0 0 683 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: 375 0 273 0 0 0 0 1596 0 0 683 0
Added Vol: 168 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 543 0 273 0 0 0 0 1596 0 0 683 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 572 0 287 0 0 0 0 1680 0 0 719 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 572 0 287 0 0 0 0 1680 0 0 719 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 572 0 287 0 0 0 0 1680 0 0 719 0

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.93 1.00 0.83 1.00 1.00 1.00 1.00 0.93 1.00 1.00 0.93 1.00
Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 2.00 0.00 0.00 2.00 0.00
Final Sat.: 1769 0 1583 0 0 0 0 3538 0 0 3538 0

Capacity Analysis Module:
Vol/Sat: 0.32 0.00 0.18 0.00 0.00 0.00 0.00 0.47 0.00 0.00 0.20 0.00
Crit Moves: ****
Green/Cycle: 0.37 0.00 0.37 0.00 0.00 0.00 0.00 0.54 0.00 0.00 0.54 0.00
Volume/Cap: 0.88 0.00 0.49 0.00 0.00 0.00 0.00 0.88 0.00 0.00 0.38 0.00
Uniform Del: 29.5 0.0 24.4 0.0 0.0 0.0 0.0 20.0 0.0 0.0 13.2 0.0
IncrmntDel: 12.8 0.0 0.7 0.0 0.0 0.0 0.0 4.9 0.0 0.0 0.1 0.0
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 1.00 0.00 0.00 1.00 0.00
Delay/Veh: 42.3 0.0 25.0 0.0 0.0 0.0 0.0 25.0 0.0 0.0 13.3 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 42.3 0.0 25.0 0.0 0.0 0.0 0.0 25.0 0.0 0.0 13.3 0.0
LOS by Move: D A C A A A A C A A B A
HCM2kAvgQ: 20 0 7 0 0 0 0 27 0 0 7 0

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #26 Millbrae Ave/Stony Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.549
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 21.8
Optimal Cycle: 44 Level Of Service: C

Table with columns: Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Protected, Split Phase), Rights (Include), Min. Green, Lanes.

Volume Module: Table with columns for various volume metrics (Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.) across four approaches.

Saturation Flow Module: Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat. across four approaches.

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ across four approaches.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #27 Millbrae Ave/Primrose Ave

Average Delay (sec/veh): 0.6 Worst Case Level Of Service: B[12.4]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 1 0 0 0 0 1! 0 0 0 0 1! 0 0

Volume Module:

Base Vol: 1 0 2 0 1 0 1 161 5 7 265 2
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: 1 0 2 0 1 0 1 161 5 7 265 2
Added Vol: 15 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 16 0 2 0 1 0 1 161 5 7 265 2
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 17 0 2 0 1 0 1 169 5 7 279 2
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 17 0 2 0 1 0 1 169 5 7 279 2

Critical Gap Module:

Critical Gp: 7.1 6.5 6.2 xxxxx 6.5 xxxxx 4.1 xxxxx xxxxx 4.1 xxxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 xxxxx 4.0 xxxxx 2.2 xxxxx xxxxx 2.2 xxxxx xxxxx

Capacity Module:

Cnflict Vol: 469 470 172 xxxxx 472 xxxxx 281 xxxxx xxxxx 175 xxxxx xxxxx
Potent Cap.: 508 495 877 xxxxx 493 xxxxx 1293 xxxxx xxxxx 1414 xxxxx xxxxx
Move Cap.: 504 492 877 xxxxx 491 xxxxx 1293 xxxxx xxxxx 1414 xxxxx xxxxx
Volume/Cap: 0.03 0.00 0.00 xxxxx 0.00 xxxxx 0.00 xxxxx xxxxx 0.01 xxxxx xxxxx

Level Of Service Module:

2Way95thQ: xxxxx xxxxx xxxxx xxxxx 0.0 xxxxx 0.0 xxxxx xxxxx 0.0 xxxxx xxxxx
Control Del: xxxxx xxxxx xxxxx xxxxx 12.4 xxxxx 7.8 xxxxx xxxxx 7.6 xxxxx xxxxx
LOS by Move: * * * * B * A * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx 529 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue: xxxxx 0.1 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd ConDel: xxxxx 12.1 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: * B * * * * * * * * * *
ApproachDel: 12.1 12.4 xxxxxxx xxxxxxx
ApproachLOS: B B * *

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #28 Millbrae Ave/Whistler Ave

Average Delay (sec/veh): 0.5 Worst Case Level Of Service: B[12.4]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 1 0 0 0 0 0 1! 0 0 0 0 1! 0 0 0 0 1! 0 0

Volume Module:

Base Vol: 1 9 0 4 0 1 1 146 2 4 279 8
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 1 9 0 4 0 1 1 146 2 4 279 8
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 1 9 0 4 0 1 1 146 2 4 279 8
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 1 9 0 4 0 1 1 154 2 4 294 8
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 1 9 0 4 0 1 1 154 2 4 294 8

Critical Gap Module:

Critical Gp: 7.1 6.5 xxxxx 7.1 6.5 6.2 4.1 xxxxx xxxxx 4.1 xxxxx xxxxx
FollowUpTim: 3.5 4.0 xxxxx 3.5 4.0 3.3 2.2 xxxxx xxxxx 2.2 xxxxx xxxxx

Capacity Module:

Cnflict Vol: 464 467 xxxxx 468 464 298 302 xxxxx xxxxx 156 xxxxx xxxxx
Potent Cap.: 512 496 xxxxx 509 498 746 1270 xxxxx xxxxx 1437 xxxxx xxxxx
Move Cap.: 510 494 xxxxx 500 496 746 1270 xxxxx xxxxx 1437 xxxxx xxxxx
Volume/Cap: 0.00 0.02 xxxxx 0.01 0.00 0.00 0.00 xxxxx xxxxx 0.00 xxxxx xxxxx

Level Of Service Module:

2Way95thQ: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx 0.0 xxxxx xxxxx
Control Del: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 7.8 xxxxx xxxxx 7.5 xxxxx xxxxx
LOS by Move: * * * * * A * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: 496 xxxxx xxxxx xxxxx 535 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue: 0.1 xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd ConDel: 12.4 xxxxx xxxxx xxxxx 11.8 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: B * * * B * * * * *
ApproachDel: 12.4 11.8 xxxxxxx xxxxxxx
ApproachLOS: B B * *

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #29 Millbrae Ave/Langner Ave

Average Delay (sec/veh): 1.1 Worst Case Level Of Service: B[11.2]

Approach:	North Bound			South Bound			East Bound			West Bound										
Movement:	L	T	R	L	T	R	L	T	R	L	T	R								
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled										
Rights:	Include			Include			Include			Include										
Lanes:	0	0	1!	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0

Volume Module:

Base Vol:	27	0	25	0	0	0	0	154	27	7	331	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:	27	0	25	0	0	0	0	154	27	7	331	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	27	0	25	0	0	0	0	154	27	7	331	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	28	0	26	0	0	0	0	162	28	7	348	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	28	0	26	0	0	0	0	162	28	7	348	0

Critical Gap Module:

Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	539	539	176	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	191	xxxx	xxxxx
Potent Cap.:	507	452	872	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1395	xxxx	xxxxx
Move Cap.:	505	449	872	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1395	xxxx	xxxxx
Volume/Cap:	0.06	0.00	0.03	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.01	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	633	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	0.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx			
Shrd ConDel:	xxxxx	11.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx			
Shared LOS:	*	B	*	*	*	*	*	*	*	A	*	*			
ApproachDel:	11.2			xxxxxxx			xxxxxxx			xxxxxxx					
ApproachLOS:	B			*			*			*					

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #30 Millbrae Ave/Labath Ave

Average Delay (sec/veh): 3.7 Worst Case Level Of Service: B[13.5]

Approach:	North Bound			South Bound			East Bound			West Bound										
Movement:	L	T	R	L	T	R	L	T	R	L	T	R								
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled										
Rights:	Include			Include			Include			Include										
Lanes:	0	0	1!	0	0	0	0	1!	0	0	0	0	0	1	0	0	1	0	0	0

Volume Module:

Base Vol:	114	0	26	0	0	0	0	160	23	36	225	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:	114	0	26	0	0	0	0	160	23	36	225	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	114	0	26	0	0	0	0	160	23	36	225	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	120	0	27	0	0	0	0	168	24	38	237	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	120	0	27	0	0	0	0	168	24	38	237	0

Critical Gap Module:

Critical Gp:	6.4	6.5	6.2	7.1	6.5	6.2	xxxxx	xxxxx	xxxxx	4.1	xxxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	xxxxx	xxxxx	xxxxx	2.2	xxxxx	xxxxx

Capacity Module:

Cnflict Vol:	493	493	181	507	505	237	xxxxx	xxxxx	xxxxx	193	xxxxx	xxxxx
Potent Cap.:	539	480	867	479	472	807	xxxxx	xxxxx	xxxxx	1393	xxxxx	xxxxx
Move Cap.:	527	467	867	454	459	807	xxxxx	xxxxx	xxxxx	1393	xxxxx	xxxxx
Volume/Cap:	0.23	0.00	0.03	0.00	0.00	0.00	xxxxx	xxxxx	xxxxx	0.03	xxxxx	xxxxx

Level Of Service Module:

2Way95thQ:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.1	xxxxx	xxxxx			
Control Del:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	7.7	xxxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxxx	569	xxxxx	xxxxx	0	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
SharedQueue:	xxxxx	1.0	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.1	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shrd ConDel:	xxxxx	13.5	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	7.7	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shared LOS:	*	B	*	*	*	*	*	*	*	A	*	*	*	*	*
ApproachDel:	13.5			xxxxxxx			xxxxxxx			xxxxxxx					
ApproachLOS:	B			*			*			*					*

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #31 Millbrae Ave/Dowdell Ave

Average Delay (sec/veh): 1.4 Worst Case Level Of Service: B[11.6]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 1 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 1 0 0

Volume Module:

Base Vol: 55 0 0 0 0 0 0 0 131 51 0 235 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: 55 0 0 0 0 0 0 0 131 51 0 235 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 55 0 0 0 0 0 0 0 131 51 0 235 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 58 0 0 0 0 0 0 0 138 54 0 247 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 58 0 0 0 0 0 0 0 138 54 0 247 0

Critical Gap Module:

Critical Gp: 6.4 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim: 3.5 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxxx xxxx xxxxx

Capacity Module:

Cnflict Vol: 412 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Potent Cap.: 600 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Move Cap.: 600 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Volume/Cap: 0.10 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx

Level Of Service Module:

2Way95thQ: 0.3 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Control Del: 11.6 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxxx xxxx xxxxx 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 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
SharedQueue:xxxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxxx xxxx xxxxx
Shared LOS: * * * * * * * * * * * * * * * *
ApproachDel: 11.6 xxxxxxx xxxxxxx xxxxxxx
ApproachLOS: B * * *

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #55 Golf Course Dr/Commerce Blvd & Roberts Lake Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.954

Loss Time (sec): 12 (Y+R=12.0 sec) Average Delay (sec/veh): 50.8

Optimal Cycle: 142 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	1	1	1	0	1	1	1	1

Volume Module:

Base Vol:	319	57	514	102	54	49	80	679	854	445	410	64
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:	319	57	514	102	54	49	80	679	854	445	410	64
Added Vol:	0	0	0	0	0	0	0	7	134	0	8	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	319	57	514	102	54	49	80	686	988	445	418	64
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	336	60	541	107	57	52	84	722	1040	468	440	67
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	336	60	541	107	57	52	84	722	1040	468	440	67
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	336	60	541	107	57	52	84	722	1040	468	440	67

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.85	0.85	0.93	0.91	0.91	0.93	0.89	0.89	0.93	0.98	0.83
Lanes:	1.00	1.00	2.00	1.00	1.05	0.95	1.00	1.23	1.77	1.00	2.00	1.00
Final Sat.:	1769	1611	3221	1769	1814	1646	1769	2088	3007	1769	3724	1583

Capacity Analysis Module:

Vol/Sat:	0.19	0.04	0.17	0.06	0.03	0.03	0.05	0.35	0.35	0.26	0.12	0.04
Crit Moves:			****	****			****			****		
Green/Cycle:	0.21	0.18	0.18	0.06	0.03	0.03	0.18	0.36	0.36	0.28	0.46	0.46
Volume/Cap:	0.92	0.21	0.95	0.95	0.92	0.92	0.26	0.95	0.95	0.95	0.26	0.09
Uniform Del:	38.9	35.3	40.8	46.7	48.2	48.2	35.0	31.1	31.1	35.5	16.8	15.4
IncrcmntDel:	28.4	0.0	24.9	70.0	59.2	59.2	0.4	11.9	11.9	29.2	0.1	0.1
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	67.4	35.3	65.7	116.7	107	107.4	35.4	42.9	42.9	64.7	16.8	15.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	67.4	35.3	65.7	116.7	107	107.4	35.4	42.9	42.9	64.7	16.8	15.5
LOS by Move:	E	D	E	F	F	F	D	D	D	E	B	B
HCM2kAvgQ:	14	2	12	6	4	4	2	23	23	19	4	1

Note: Queue reported is the number of cars per lane.

**NEAR-TERM 2008 + ALTERNATIVE E
MITIGATED TRAFFIC CONDITIONS
(TRAFFIX)**

 Impact Analysis Report
 Level Of Service

Intersection	Base LOS	Base		Future LOS	Future		Change in	
		Del/ Veh	V/ C		Del/ Veh	V/ C		
# 1 Wilfred Ave/Stony Point Rd	B	15.6	0.662	B	16.6	0.696	+ 0.994	D/V
# 2 Wilfred Ave/Primrose Ave	B	11.3	0.000	C	17.1	0.000	+ 5.750	D/V
# 3 Wilfred Ave/Whistler Ave	B	11.3	0.000	C	16.1	0.000	+ 4.787	D/V
# 4 Langner Ave/Wilfred Ave	B	11.3	0.000	C	16.0	0.000	+ 4.716	D/V
# 5 Wilfred Ave/Labath Ave	B	18.0	0.491	B	17.9	0.576	-0.070	D/V
# 6 Dowell Ave/Wilfred Ave	C	20.2	0.704	C	24.4	0.845	+ 4.162	D/V
# 7 Wilfred Ave/Redwood Dr	C	33.6	0.751	D	47.8	0.967	+14.166	D/V
# 8 Redwood Dr/Commerce Blvd	C	26.6	0.286	C	26.6	0.287	-0.045	D/V
# 9 101 SB Ramp Split node	C	30.5	0.623	C	32.2	0.740	+ 1.748	D/V
# 12 101 NB Ramps/Commerce Blvd	C	28.8	0.700	C	29.8	0.732	+ 1.027	D/V
# 13 New Driveway/Stony Point Rd	A	0.5	0.495	A	6.8	0.568	+ 6.339	D/V
# 15 Redwood Dr/Business Park Dr	D	26.5	0.000	D	26.5	0.000	+ 0.000	D/V
# 16 Rohnert Park Expwy/Stony Point	C	23.8	0.655	C	26.8	0.741	+ 3.016	D/V
# 17 Rohnert Park Expwy/Labath Ave	C	29.6	0.568	C	33.5	0.590	+ 3.838	D/V
# 18 Rohnert Park Expwy/Redwood Dr	C	32.5	0.711	C	32.4	0.711	-0.106	D/V
# 19 Rohnert Park Expwy/101 SB Ramp	C	24.3	0.686	C	24.4	0.701	+ 0.068	D/V
# 20 Rohnert Park Expwy/101 NB Ramp	F	OVRFL	0.433	F	OVRFL	0.459	-7080549685	
# 21 Rohnert Park Expwy/Commerce Bl	C	33.9	0.815	C	34.0	0.815	+ 0.084	D/V
# 22 Gravenstein Hwy (SR 116)/Stone	D	37.1	0.766	D	38.0	0.766	+ 0.871	D/V
# 23 Gravenstein Hwy (SR 116)/Redwo	C	31.9	0.714	C	31.9	0.720	+ 0.011	D/V
# 24 Gravenstein Hwy (SR 116)/SB US	C	21.0	0.548	C	21.0	0.548	-0.009	D/V
# 25 Gravenstein Hwy (SR 116)/NB US	B	17.3	0.707	B	17.8	0.718	+ 0.490	D/V
# 26 Millbrae Ave/Stony Point Rd	C	21.2	0.483	C	21.3	0.503	+ 0.022	D/V
# 27 Millbrae Ave/Primrose Ave	B	11.4	0.000	B	11.4	0.000	+ 0.000	D/V
# 28 Millbrae Ave/Whistler Ave	B	11.5	0.000	B	11.5	0.000	+ 0.000	D/V

Intersection		Base		Future		Change in	
		Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C		
# 29 Millbrae Ave/Langner Ave	A	9.9	0.000	A 9.9	0.000	+ 0.000	D/V
# 30 Millbrae Ave/Labath Ave	B	11.2	0.000	B 11.2	0.000	+ 0.000	D/V
# 31 Millbrae Ave/Dowdell Ave	B	11.3	0.000	B 11.3	0.000	+ 0.000	D/V
# 55 Golf Course Dr/Commerce Blvd &	D	35.9	0.722	D 37.1	0.774	+ 1.194	D/V

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 Wilfred Ave/Stony Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.696
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 16.6
Optimal Cycle: 51 Level Of Service: B

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected, Permitted), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns for different volume metrics (Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.) and 4 rows of data.

Saturation Flow Module: Table with 13 columns for saturation flow metrics (Sat/Lane, Adjustment, Lanes, Final Sat.) and 4 rows of data.

Capacity Analysis Module: Table with 13 columns for capacity analysis metrics (Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ) and 13 rows of data.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Wilfred Ave/Primrose Ave

Average Delay (sec/veh): 6.9 Worst Case Level Of Service: C[17.1]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	1! 0 0	0	0	1! 0 0	0	0	1! 0 0	0	0	1! 0 0

Volume Module:

Base Vol:	10	10	10	10	10	10	10	131	10	10	201	10
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:	10	10	10	10	10	10	10	131	10	10	201	10
Added Vol:	0	9	302	0	0	0	0	0	16	78	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	19	312	10	10	10	10	131	26	88	201	10
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	20	328	11	11	11	11	138	27	93	212	11
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	11	20	328	11	11	11	11	138	27	93	212	11
Critical Gap Module:												
Critical Gp:	7.2	6.6	6.3	7.1	6.5	6.2	4.2	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.6	4.1	3.4	3.5	4.0	3.3	2.3	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	585	580	152	749	588	217	222	xxxx	xxxxx	165	xxxx	xxxxx
Potent Cap.:	412	416	877	331	424	828	1318	xxxx	xxxxx	1407	xxxx	xxxxx
Move Cap.:	375	384	877	187	391	828	1318	xxxx	xxxxx	1407	xxxx	xxxxx
Volume/Cap:	0.03	0.05	0.37	0.06	0.03	0.01	0.01	xxxx	xxxx	0.07	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.2	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.8	xxxx	xxxxx	7.7	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	789	xxxxx	xxxx	329	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	2.4	xxxxx	xxxxx	0.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	13.3	xxxxx	xxxxx	17.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	B	*	*	C	*	*	*	*	*	*	*			
ApproachDel:	13.3			17.1			xxxxxxx			xxxxxxx					
ApproachLOS:	B			C			*			*					

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 Wilfred Ave/Whistler Ave

Average Delay (sec/veh): 1.4 Worst Case Level Of Service: C[16.1]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	1! 0 0	0	0	1! 0 0	0	0	1! 0 0	0	0	1! 0 0

Volume Module:

Base Vol:	10	10	10	10	10	10	10	131	10	10	200	20
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:	10	10	10	10	10	10	10	131	10	10	200	20
Added Vol:	0	0	0	0	0	0	0	302	0	0	78	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	10	10	10	10	10	10	433	10	10	278	20
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	11	11	11	11	11	11	456	11	11	293	21
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	11	11	11	11	11	11	11	456	11	11	293	21
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.2	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.3	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	817	817	461	817	812	303	314	xxxx	xxxxx	466	xxxx	xxxxx
Potent Cap.:	298	313	605	298	316	741	1219	xxxx	xxxxx	1090	xxxx	xxxxx
Move Cap.:	282	308	605	281	310	741	1219	xxxx	xxxxx	1090	xxxx	xxxxx
Volume/Cap:	0.04	0.03	0.02	0.04	0.03	0.01	0.01	xxxx	xxxx	0.01	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.0	xxxx	xxxxx	8.3	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	355	xxxxx	xxxx	369	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	0.3	xxxxx	xxxxx	0.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	16.1	xxxxx	xxxxx	15.7	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	C	*	*	C	*	*	*	*	*	*	*			
ApproachDel:	16.1			15.7			xxxxxxx			xxxxxxx					
ApproachLOS:	C			C			*			*					

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Langner Ave/Wilfred Ave

Average Delay (sec/veh): 1.4 Worst Case Level Of Service: C[16.0]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 1! 0 0 0 0 1! 0 0

Volume Module:

Base Vol: 10 10 10 10 10 10 10 130 10 10 200 10
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: 10 10 10 10 10 10 10 130 10 10 200 10
Added Vol: 0 0 0 0 0 0 0 302 0 0 78 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 10 10 10 10 10 10 10 432 10 10 278 10
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 11 11 11 11 11 11 11 455 11 11 293 11
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 11 11 11 11 11 11 11 455 11 11 293 11

Critical Gap Module:

Critical Gp: 7.1 6.5 6.2 7.1 6.5 6.2 4.2 xxxx xxxxx 4.1 xxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 3.5 4.0 3.3 2.3 xxxx xxxxx 2.2 xxxx xxxxx

Capacity Module:

Cnflict Vol: 811 805 460 811 805 298 303 xxxx xxxxx 465 xxxx xxxxx
Potent Cap.: 301 318 605 301 318 746 1230 xxxx xxxxx 1091 xxxx xxxxx
Move Cap.: 285 312 605 284 312 746 1230 xxxx xxxxx 1091 xxxx xxxxx
Volume/Cap: 0.04 0.03 0.02 0.04 0.03 0.01 0.01 xxxx xxxx 0.01 xxxx xxxx

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx 0.0 xxxx xxxxx 0.0 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx 8.0 xxxx xxxxx 8.3 xxxx xxxxx
LOS by Move: * * * * * A * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx 359 xxxxx xxxx 372 xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
SharedQueue:xxxxx 0.3 xxxxx xxxxx 0.3 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 16.0 xxxxx xxxxx 15.6 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS: * C * * C * * * * * * * *
ApproachDel: 16.0 15.6 xxxxxxx xxxxxxx
ApproachLOS: C C * *

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 Wilfred Ave/Labath Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.576
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 17.9
Optimal Cycle: 31 Level Of Service: B

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Permitted), Rights (Include), Min. Green, and Lanes.

Volume Module:

Table with 13 columns representing different traffic volumes and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module:

Table with 13 columns for saturation flow metrics: Sat/Lane, Adjustment, Lanes, Final Sat., etc.

Capacity Analysis Module:

Table with 13 columns for capacity analysis metrics: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, etc.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 Dowell Ave/Wilfred Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.845
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 24.4
Optimal Cycle: 70 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Permitted), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 12 columns for different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 12 columns for different traffic movements. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns for different traffic movements. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 Wilfred Ave/Redwood Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.967
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 47.8
Optimal Cycle: 153 Level Of Service: D

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module:

Table with 13 columns representing different traffic volumes and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module:

Table with 13 columns for saturation flow metrics: Sat/Lane, Adjustment, Lanes, Final Sat., etc.

Capacity Analysis Module:

Table with 13 columns for capacity analysis metrics: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, etc.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 Redwood Dr/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.287
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 26.6
Optimal Cycle: 30 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic volumes and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 13 columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
 2000 HCM Operations Method (Future Volume Alternative)

Intersection #9 101 SB Ramp Split node

Cycle (sec): 145 Critical Vol./Cap.(X): 0.740
 Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 32.2
 Optimal Cycle: 61 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound							
Movement:	L	T	R	L	T	R	L	T	R	L	T	R					
Control:	Permitted			Protected			Permitted			Protected							
Rights:	Include			Include			Include			Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0					
Lanes:	0	0	0	1	0	1	1	0	0	1	1	0	2	0	2	0	0

Volume Module:

Base Vol:	0	0	0	328	324	459	0	737	219	89	476	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:	0	0	0	328	324	459	0	737	219	89	476	0
Added Vol:	0	0	0	0	0	30	0	135	162	0	47	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	328	324	489	0	872	381	89	523	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	345	341	515	0	918	401	94	551	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	345	341	515	0	918	401	94	551	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	345	341	515	0	918	401	94	551	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.84	0.90	0.90	1.00	0.94	0.94	0.94	0.99	1.00
Lanes:	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.39	0.61	2.00	2.00	0.00
Final Sat.:	0	0	0	1599	1712	1712	0	2498	1091	3574	3762	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.22	0.20	0.30	0.00	0.37	0.37	0.03	0.15	0.00
Crit Moves:						****		****		****		
Green/Cycle:	0.00	0.00	0.00	0.41	0.41	0.41	0.00	0.50	0.50	0.04	0.53	0.00
Volume/Cap:	0.00	0.00	0.00	0.53	0.49	0.74	0.00	0.74	0.74	0.74	0.28	0.00
Uniform Del:	0.0	0.0	0.0	32.6	31.9	36.6	0.0	29.1	29.1	69.3	18.6	0.0
IncrcmntDel:	0.0	0.0	0.0	0.8	0.2	2.6	0.0	1.7	1.7	20.6	0.1	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	0.0	0.0	0.0	33.5	32.1	39.1	0.0	30.8	30.8	89.9	18.7	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	33.5	32.1	39.1	0.0	30.8	30.8	89.9	18.7	0.0
LOS by Move:	A	A	A	C	C	D	A	C	C	F	B	A
HCM2kAvgQ:	0	0	0	12	11	20	0	24	24	3	6	0

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #12 101 NB Ramps/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.732

Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 29.8

Optimal Cycle: 64 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	0	1	1	1	0	0	1	0

Volume Module:

Base Vol:	514	489	2	7	435	512	387	3	40	8	3	5
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:	514	489	2	7	435	512	387	3	40	8	3	5
Added Vol:	0	0	0	0	0	88	31	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	514	489	2	7	435	600	418	3	40	8	3	5
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	541	515	2	7	458	632	440	3	42	8	3	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	541	515	2	7	458	632	440	3	42	8	3	5
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	541	515	2	7	458	632	440	3	42	8	3	5

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	1.00	0.94	0.90	0.90	0.94	0.94	0.84	0.94	0.94	0.94
Lanes:	1.00	1.99	0.01	1.00	1.26	1.74	1.99	0.01	1.00	0.50	0.19	0.31
Final Sat.:	1805	3781	15	1787	2165	2987	3560	26	1599	888	333	555

Capacity Analysis Module:

Vol/Sat:	0.30	0.14	0.14	0.00	0.21	0.21	0.12	0.12	0.03	0.01	0.01	0.01
Crit Moves:	****				****		****				****	
Green/Cycle:	0.41	0.68	0.68	0.02	0.29	0.29	0.17	0.17	0.17	0.01	0.01	0.01
Volume/Cap:	0.73	0.20	0.20	0.20	0.73	0.73	0.73	0.73	0.16	0.73	0.73	0.73
Uniform Del:	24.9	6.0	6.0	48.2	32.1	32.1	39.4	39.4	35.5	49.2	49.2	49.2
IncrcmntDel:	3.8	0.0	0.0	2.7	1.9	1.9	4.6	4.6	0.3	76.5	76.5	76.5
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	28.7	6.1	6.1	50.9	34.0	34.0	44.0	44.0	35.7	125.7	126	125.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	28.7	6.1	6.1	50.9	34.0	34.0	44.0	44.0	35.7	125.7	126	125.7
LOS by Move:	C	A	A	D	C	C	D	D	D	F	F	F
HCM2kAvgQ:	15	3	3	0	11	11	8	8	1	2	2	2

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #13 New Driveway/Stony Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.568
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 6.8
Optimal Cycle: 31 Level Of Service: A

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Permitted, Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different volume components and 13 rows for various adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 13 columns for saturation flow and 4 rows for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns for capacity analysis metrics and 13 rows for Vol/Sat, Crit Moves, Green/Cycle, etc.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #15 Redwood Dr/Business Park Dr

Average Delay (sec/veh): 5.6 Worst Case Level Of Service: D[26.5]

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: 1 0 2 0 0 0 0 1 1 0 1 0 0 1 0 0 1 0 0 2

Volume Module:

Base Vol: 33 464 0 0 489 41 172 0 89 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: 33 464 0 0 489 41 172 0 89 0 0 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 33 464 0 0 489 41 172 0 89 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 35 488 0 0 515 43 181 0 94 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 35 488 0 0 515 43 181 0 94 0 0 0

Critical Gap Module:

Critical Gp: 4.1 xxxx xxxxx xxxxx xxxx xxxxx 6.8 6.5 6.9 7.5 6.5 6.9
FollowUpTim: 2.2 xxxx xxxxx xxxxx xxxx xxxxx 3.5 4.0 3.3 3.5 4.0 3.3

Capacity Module:

Cnflict Vol: 558 xxxx xxxxx xxxx xxxx xxxxx 850 1094 279 815 1116 244
Potent Cap.: 1023 xxxx xxxxx xxxx xxxx xxxxx 303 216 724 273 209 762
Move Cap.: 1023 xxxx xxxxx xxxx xxxx xxxxx 296 208 724 231 202 762
Volume/Cap: 0.03 xxxx xxxxx xxxx xxxx xxxxx 0.61 0.00 0.13 0.00 0.00 0.00

Level Of Service Module:

2Way95thQ: 0.1 xxxx xxxxx xxxx xxxx xxxxx 3.8 xxxx xxxxx xxxx xxxx xxxxx
Control Del: 8.6 xxxx xxxxx xxxxx xxxx xxxxx 34.7 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move: A * * * * * D * * * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx 724 0 xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx 0.4 xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx 10.7 xxxxx xxxx xxxxx
Shared LOS: * * * * * * * * * * B * * *
ApproachDel: xxxxxx xxxxxx 26.5 xxxxxx
ApproachLOS: * * * * * D *

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #16 Rohnert Park Expwy/Stony Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.741
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 26.8
Optimal Cycle: 47 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Permitted, Protected), Rights (Include), Min. Green, and Lanes.

Volume Module:

Table with 13 columns representing different volume and adjustment factors. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module:

Table with 13 columns representing saturation flow and adjustment factors. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with 13 columns representing capacity analysis metrics. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #17 Rohnert Park Expwy/Labath Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.590

Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 33.5

Optimal Cycle: 47 Level Of Service: C

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 2 0 0 1 1 1 0 0 1 0 1 0 2 0 1 1 0 3 0 1

Volume Module:

Base Vol: 64 19 154 270 43 99 50 600 36 202 575 154
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: 64 19 154 270 43 99 50 600 36 202 575 154
Added Vol: 0 0 0 0 0 0 0 70 0 0 47 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 64 19 154 270 43 99 50 670 36 202 622 154
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 67 20 162 284 45 104 53 705 38 213 655 162
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 67 20 162 284 45 104 53 705 38 213 655 162
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 67 20 162 284 45 104 53 705 38 213 655 162

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 0.87 0.87 0.95 0.90 0.90 0.94 0.99 0.84 0.94 0.99 0.84
Lanes: 2.00 0.22 1.78 1.00 0.30 0.70 1.00 2.00 1.00 1.00 3.00 1.00
Final Sat.: 3610 362 2933 1805 515 1186 1787 3762 1599 1787 5643 1599

Capacity Analysis Module:

Vol/Sat: 0.02 0.06 0.06 0.16 0.09 0.09 0.03 0.19 0.02 0.12 0.12 0.10
Crit Moves: ****
Green/Cycle: 0.07 0.12 0.12 0.25 0.29 0.29 0.26 0.28 0.28 0.24 0.26 0.26
Volume/Cap: 0.27 0.46 0.46 0.63 0.30 0.30 0.11 0.67 0.08 0.50 0.45 0.39
Uniform Del: 44.1 41.0 41.0 33.4 27.6 27.6 28.2 31.9 26.5 32.8 31.0 30.5
IncrcmntDel: 0.6 0.9 0.9 2.9 0.3 0.3 0.1 1.7 0.1 0.9 0.2 0.6
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Delay/Veh: 44.6 41.8 41.8 36.2 28.0 28.0 28.3 33.6 26.6 33.7 31.2 31.1
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 44.6 41.8 41.8 36.2 28.0 28.0 28.3 33.6 26.6 33.7 31.2 31.1
LOS by Move: D D D D C C C C C C C
HCM2kAvgQ: 1 3 3 9 4 4 1 11 1 6 6 4

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #18 Rohnert Park Expwy/Redwood Dr

Cycle (sec): 90 Critical Vol./Cap.(X): 0.711
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 32.4
Optimal Cycle: 59 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module:

Table with 13 columns representing different traffic metrics and 13 rows of data including Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module:

Table with 13 columns representing saturation flow metrics and 4 rows of data including Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with 13 columns representing capacity analysis metrics and 13 rows of data including Vol/Sat, Crit Moves, Green/Cycle, etc.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #19 Rohnert Park Expwy/101 SB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.701
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 24.4
Optimal Cycle: 59 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Permitted, Protected), Rights (Include, Ignore), Min. Green, and Lanes.

Volume Module: Table with 13 columns for different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #20 Rohnert Park Expwy/101 NB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.459
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): OVERFLOW
Optimal Cycle: 25 Level Of Service: F

Table with columns for Approach (North, South, East, West Bound) and Movement (L, T, R). Rows include Control, Rights, Min. Green, and Lanes.

Volume Module: Table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module: Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #21 Rohnert Park Expwy/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.815
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 34.0
Optimal Cycle: 81 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Split Phase, Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #22 Gravenstein Hwy (SR 116)/Stoney Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.766

Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 38.0

Optimal Cycle: 70 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	0	1	0	1	0	1	1	0	2

Volume Module:

Base Vol:	321	494	108	96	342	219	133	484	202	128	589	103
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	321	494	108	96	342	219	133	484	202	128	589	103
Added Vol:	0	0	0	46	0	0	0	0	0	0	0	16
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	321	494	108	142	342	219	133	484	202	128	589	119
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	338	520	114	149	360	231	140	509	213	135	620	125
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	338	520	114	149	360	231	140	509	213	135	620	125
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	338	520	114	149	360	231	140	509	213	135	620	125

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.89	0.89	0.93	0.93	0.83
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.41	0.59	1.00	2.00	1.00
Final Sat.:	1769	1862	1583	1769	1862	1583	1769	2386	996	1769	3538	1583

Capacity Analysis Module:

Vol/Sat:	0.19	0.28	0.07	0.08	0.19	0.15	0.08	0.21	0.21	0.08	0.18	0.08
Crit Moves:	****				****			****		****		
Green/Cycle:	0.25	0.39	0.39	0.12	0.25	0.25	0.12	0.28	0.28	0.10	0.26	0.26
Volume/Cap:	0.77	0.72	0.19	0.72	0.77	0.58	0.67	0.77	0.77	0.77	0.67	0.30
Uniform Del:	34.8	26.2	20.4	42.6	34.6	32.7	42.3	33.1	33.1	43.9	33.2	29.7
IncrcmntDel:	7.9	3.7	0.1	12.1	7.4	2.1	8.3	3.8	3.8	18.1	2.0	0.4
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	42.7	29.9	20.5	54.7	42.0	34.8	50.6	36.9	36.9	62.0	35.1	30.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	42.7	29.9	20.5	54.7	42.0	34.8	50.6	36.9	36.9	62.0	35.1	30.1
LOS by Move:	D	C	C	D	D	C	D	D	D	E	D	C
HCM2kAvgQ:	11	15	2	6	12	7	5	12	12	6	10	3

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #23 Gravenstein Hwy (SR 116)/Redwood Rd

Cycle (sec): 95 Critical Vol./Cap.(X): 0.720

Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 31.9

Optimal Cycle: 61 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	0	1	0	1	1	0	2

Volume Module:

Base Vol:	48	24	63	485	29	96	102	625	32	53	738	333
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	24	63	485	29	96	102	625	32	53	738	333
Added Vol:	0	0	0	0	0	0	0	46	0	0	16	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	48	24	63	485	29	96	102	671	32	53	754	333
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	51	25	66	511	31	101	107	706	34	56	794	351
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	51	25	66	511	31	101	107	706	34	56	794	351
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	51	25	66	511	31	101	107	706	34	56	794	351

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.87	0.87	0.93	0.87	0.87	0.93	0.92	0.92	0.93	0.93	0.83
Lanes:	1.00	0.28	0.72	1.00	0.23	0.77	1.00	1.91	0.09	1.00	2.00	1.00
Final Sat.:	1769	458	1201	1769	382	1266	1769	3353	160	1769	3538	1583

Capacity Analysis Module:

Vol/Sat:	0.03	0.06	0.06	0.29	0.08	0.08	0.06	0.21	0.21	0.03	0.22	0.22
Crit Moves:	****			****			****			****		
Green/Cycle:	0.13	0.08	0.08	0.40	0.35	0.35	0.08	0.34	0.34	0.05	0.31	0.31
Volume/Cap:	0.23	0.72	0.72	0.72	0.23	0.23	0.72	0.61	0.61	0.61	0.72	0.71
Uniform Del:	37.4	42.9	42.9	24.0	21.7	21.7	42.4	25.9	25.9	44.1	29.0	28.9
IncrcmntDel:	0.5	18.0	18.0	3.6	0.2	0.2	15.7	0.9	0.9	11.6	2.3	4.8
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	37.9	60.9	60.9	27.6	21.9	21.9	58.1	26.8	26.8	55.7	31.4	33.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	37.9	60.9	60.9	27.6	21.9	21.9	58.1	26.8	26.8	55.7	31.4	33.7
LOS by Move:	D	E	E	C	C	C	E	C	C	E	C	C
HCM2kAvgQ:	1	4	4	14	3	3	5	10	10	3	12	10

Note: Queue reported is the number of cars per lane.

 Level Of Service Computation Report
 2000 HCM Operations Method (Future Volume Alternative)

 Intersection #24 Gravenstein Hwy (SR 116)/SB US Ramps101

Cycle (sec): 100 Critical Vol./Cap.(X): 0.548
 Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 21.0
 Optimal Cycle: 37 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound						
Movement:	L	T	R	L	T	R	L	T	R	L	T	R				
Control:	Permitted			Protected			Permitted			Protected						
Rights:	Include			Include			Ignore			Include						
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0				
Lanes:	0	0	0	2	0	1	0	0	2	0	1	1	0	2	0	0

Volume Module:

Base Vol:	0	0	0	639	0	212	0	819	361	99	900	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:	0	0	0	639	0	212	0	819	361	99	900	0
Added Vol:	0	0	0	0	0	0	0	0	46	0	16	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	639	0	212	0	819	407	99	916	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00	0.95	0.95	0.95
PHF Volume:	0	0	0	673	0	223	0	862	0	104	964	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	673	0	223	0	862	0	104	964	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Final Vol.:	0	0	0	673	0	223	0	862	0	104	964	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.90	1.00	0.83	1.00	0.93	1.00	0.93	0.93	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	0.00	2.00	1.00	1.00	2.00	0.00
Final Sat.:	0	0	0	3432	0	1583	0	3538	1900	1769	3538	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.20	0.00	0.14	0.00	0.24	0.00	0.06	0.27	0.00
Crit Moves:				****				****			****	
Green/Cycle:	0.00	0.00	0.00	0.36	0.00	0.36	0.00	0.44	0.00	0.11	0.55	0.00
Volume/Cap:	0.00	0.00	0.00	0.55	0.00	0.39	0.00	0.55	0.00	0.55	0.49	0.00
Uniform Del:	0.0	0.0	0.0	25.7	0.0	24.0	0.0	20.4	0.0	42.3	13.8	0.0
IncrcmntDel:	0.0	0.0	0.0	0.5	0.0	0.5	0.0	0.4	0.0	3.4	0.2	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
Delay/Veh:	0.0	0.0	0.0	26.2	0.0	24.5	0.0	20.8	0.0	45.7	14.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	26.2	0.0	24.5	0.0	20.8	0.0	45.7	14.0	0.0
LOS by Move:	A	A	A	C	A	C	A	C	A	D	B	A
HCM2kAvgQ:	0	0	0	9	0	5	0	10	0	4	10	0

 Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #25 Gravenstein Hwy (SR 116)/NB US 101 Off Ramp

Cycle (sec): 100 Critical Vol./Cap.(X): 0.718
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 17.8
Optimal Cycle: 54 Level Of Service: B

Table with columns for Approach (North, South, East, West Bound) and Movement (L, T, R). Rows include Control, Rights, Min. Green, and Lanes.

Volume Module: Table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module: Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #26 Millbrae Ave/Stony Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.503

Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 21.3

Optimal Cycle: 41 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	2	0	1	1	0	0	1	0	1	0

Volume Module:

Base Vol:	19	715	20	116	546	4	7	6	11	2	7	194
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:	19	715	20	116	546	4	7	6	11	2	7	194
Added Vol:	0	37	0	0	16	0	0	0	0	0	0	9
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	19	752	20	116	562	4	7	6	11	2	7	203
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	20	792	21	122	592	4	7	6	12	2	7	214
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	20	792	21	122	592	4	7	6	12	2	7	214
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	20	792	21	122	592	4	7	6	12	2	7	214

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.83	0.93	0.93	0.93	0.91	0.91	0.91	0.97	0.97	0.83
Lanes:	1.00	2.00	1.00	1.00	1.99	0.01	0.29	0.25	0.46	0.22	0.78	1.00
Final Sat.:	1769	3538	1583	1769	3509	25	502	431	789	409	1432	1583

Capacity Analysis Module:

Vol/Sat:	0.01	0.22	0.01	0.07	0.17	0.17	0.01	0.01	0.01	0.01	0.01	0.14
Crit Moves:	****			****			****			****		
Green/Cycle:	0.04	0.45	0.45	0.14	0.55	0.55	0.03	0.03	0.03	0.27	0.27	0.27
Volume/Cap:	0.31	0.50	0.03	0.50	0.31	0.31	0.50	0.50	0.50	0.02	0.02	0.50
Uniform Del:	46.9	19.8	15.6	40.0	12.4	12.4	47.8	47.8	47.8	26.9	26.9	30.9
IncrcmntDel:	2.7	0.3	0.0	1.7	0.1	0.1	7.9	7.9	7.9	0.0	0.0	1.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	49.6	20.1	15.6	41.6	12.5	12.5	55.7	55.7	55.7	26.9	26.9	31.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	49.6	20.1	15.6	41.6	12.5	12.5	55.7	55.7	55.7	26.9	26.9	31.9
LOS by Move:	D	C	B	D	B	B	E	E	E	C	C	C
HCM2kAvgQ:	1	9	0	4	5	5	1	1	1	0	0	6

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #27 Millbrae Ave/Primrose Ave

Average Delay (sec/veh): 0.4 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: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 1 0 0 0 0 1! 0 0 0 0 1! 0 0

Volume Module:

Base Vol: 0 0 1 0 1 0 1 139 3 4 199 2
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 1 0 1 0 1 139 3 4 199 2
Added Vol: 9 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 9 0 1 0 1 0 1 139 3 4 199 2
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 9 0 1 0 1 0 1 146 3 4 209 2
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 9 0 1 0 1 0 1 146 3 4 209 2

Critical Gap Module:

Critical Gp: 7.1 6.5 6.2 xxxxx 6.5 xxxxx 4.1 xxxxx xxxxx 4.1 xxxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 xxxxx 4.0 xxxxx 2.2 xxxxx xxxxx 2.2 xxxxx xxxxx

Capacity Module:

Cnflict Vol: 369 370 148 xxxxx 371 xxxxx 212 xxxxx xxxxx 149 xxxxx xxxxx
Potent Cap.: 591 563 904 xxxxx 562 xxxxx 1371 xxxxx xxxxx 1444 xxxxx xxxxx
Move Cap.: 588 561 904 xxxxx 560 xxxxx 1371 xxxxx xxxxx 1444 xxxxx xxxxx
Volume/Cap: 0.02 0.00 0.00 xxxxx 0.00 xxxxx 0.00 xxxxx xxxxx 0.00 xxxxx xxxxx

Level Of Service Module:

2Way95thQ: xxxxx xxxxx xxxxx xxxxx 0.0 xxxxx 0.0 xxxxx xxxxx 0.0 xxxxx xxxxx
Control Del: xxxxx xxxxx xxxxx xxxxx 11.4 xxxxx 7.6 xxxxx xxxxx 7.5 xxxxx xxxxx
LOS by Move: * * * * B * A * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx 610 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue: xxxxx 0.1 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd ConDel: xxxxx 11.0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: * B * * * * * * * * * *
ApproachDel: 11.0 11.4 xxxxxxx xxxxxxx
ApproachLOS: B B * *

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #28 Millbrae Ave/Whistler Ave

Average Delay (sec/veh): 0.6 Worst Case Level Of Service: B[11.5]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	1	0	0	0	1	0	0	1	0	0	1

Volume Module:

Base Vol:	1	9	0	4	0	1	1	123	2	4	208	8
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	9	0	4	0	1	1	123	2	4	208	8
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1	9	0	4	0	1	1	123	2	4	208	8
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	1	9	0	4	0	1	1	129	2	4	219	8
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	1	9	0	4	0	1	1	129	2	4	219	8

Critical Gap Module:

Critical Gp:	7.1	6.5	xxxxx	7.1	6.5	6.2	4.1	xxxxx	xxxxx	4.1	xxxxx	xxxxx
FollowUpTim:	3.5	4.0	xxxxx	3.5	4.0	3.3	2.2	xxxxx	xxxxx	2.2	xxxxx	xxxxx

Capacity Module:

Cnflct Vol:	365	368	xxxxx	369	365	223	227	xxxxx	xxxxx	132	xxxxx	xxxxx
Potent Cap.:	595	564	xxxxx	591	566	821	1353	xxxxx	xxxxx	1466	xxxxx	xxxxx
Move Cap.:	593	562	xxxxx	582	564	821	1353	xxxxx	xxxxx	1466	xxxxx	xxxxx
Volume/Cap:	0.00	0.02	xxxxx	0.01	0.00	0.00	0.00	xxxxx	xxxxx	0.00	xxxxx	xxxxx

Level Of Service Module:

2Way95thQ:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	0.0	xxxxx	xxxxx
Control Del:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	7.7	xxxxx	xxxxx	7.5	xxxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	565	xxxxx	xxxxx	xxxxx	618	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
SharedQueue:	0.1	xxxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shrd ConDel:	11.5	xxxxx	xxxxx	xxxxx	10.9	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shared LOS:	B	*	*	*	B	*	*	*	*	*	*	*
ApproachDel:	11.5			10.9			xxxxxxx			xxxxxxx		
ApproachLOS:	B			B			*			*		

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #29 Millbrae Ave/Langner Ave

Average Delay (sec/veh): 0.4 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:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled										
Rights:	Include			Include			Include			Include										
Lanes:	0	0	1!	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0

Volume Module:

Base Vol:	5	0	11	0	0	0	0	149	9	4	270	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:	5	0	11	0	0	0	0	149	9	4	270	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	5	0	11	0	0	0	0	149	9	4	270	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	5	0	12	0	0	0	0	157	9	4	284	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	5	0	12	0	0	0	0	157	9	4	284	0

Critical Gap Module:

Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	454	454	162	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	166	xxxx	xxxxx
Potent Cap.:	567	505	889	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1424	xxxx	xxxxx
Move Cap.:	566	503	889	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1424	xxxx	xxxxx
Volume/Cap:	0.01	0.00	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	754	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	0.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx			
Shrd ConDel:	xxxxx	9.9	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx			
Shared LOS:	*	A	*	*	*	*	*	*	*	A	*	*			
ApproachDel:	9.9			xxxxxxx			xxxxxxx			xxxxxxx					
ApproachLOS:	A			*			*			*					

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #30 Millbrae Ave/Labath Ave

Average Delay (sec/veh): 1.0 Worst Case Level Of Service: B[11.2]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	1! 0 0	0	0	1! 0 0	0	0	0 1 0	0	1	0 0 0

Volume Module:

Base Vol:	25	0	8	0	0	0	0	155	9	11	250	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:	25	0	8	0	0	0	0	155	9	11	250	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	25	0	8	0	0	0	0	155	9	11	250	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	26	0	8	0	0	0	0	163	9	12	263	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	26	0	8	0	0	0	0	163	9	12	263	0

Critical Gap Module:

Critical Gp:	6.4	6.5	6.2	7.1	6.5	6.2	xxxxx	xxxxx	xxxxx	4.1	xxxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	xxxxx	xxxxx	xxxxx	2.2	xxxxx	xxxxx

Capacity Module:

Cnflict Vol:	454	454	168	458	459	263	xxxxx	xxxxx	xxxxx	173	xxxxx	xxxxx
Potent Cap.:	567	505	881	516	502	780	xxxxx	xxxxx	xxxxx	1416	xxxxx	xxxxx
Move Cap.:	564	501	881	508	498	780	xxxxx	xxxxx	xxxxx	1416	xxxxx	xxxxx
Volume/Cap:	0.05	0.00	0.01	0.00	0.00	0.00	xxxxx	xxxxx	xxxxx	0.01	xxxxx	xxxxx

Level Of Service Module:

2Way95thQ:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx			
Control Del:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	7.6	xxxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxxx	618	xxxxx	xxxxx	0	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
SharedQueue:	xxxxx	0.2	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shrd ConDel:	xxxxx	11.2	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	7.6	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shared LOS:	*	B	*	*	*	*	*	*	*	A	*	*	*	*	*
ApproachDel:	11.2			xxxxxxx			xxxxxxx			xxxxxxx					
ApproachLOS:	B			*			*			*					

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #31 Millbrae Ave/Dowdell Ave

Average Delay (sec/veh): 1.0 Worst Case Level Of Service: B[11.3]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 1 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 1 0 0

Volume Module:

Base Vol: 37 0 0 0 0 0 0 0 135 22 0 235 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: 37 0 0 0 0 0 0 0 135 22 0 235 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 37 0 0 0 0 0 0 0 135 22 0 235 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 39 0 0 0 0 0 0 0 142 23 0 247 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 39 0 0 0 0 0 0 0 142 23 0 247 0

Critical Gap Module:

Critical Gp: 6.4 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim: 3.5 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxxx xxxx xxxxx

Capacity Module:

Cnflict Vol: 401 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Potent Cap.: 609 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Move Cap.: 609 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Volume/Cap: 0.06 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx

Level Of Service Module:

2Way95thQ: 0.2 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Control Del: 11.3 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
LOS by Move: B *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
SharedQueue:xxxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxxx xxxx xxxxx xxxxx
Shrd ConDel:xxxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxxx xxxx xxxxx xxxxx
Shared LOS: *
ApproachDel: 11.3 xxxxxxx xxxxxxx xxxxxxx
ApproachLOS: B * * *

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #55 Golf Course Dr/Commerce Blvd & Roberts Lake Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.774
Loss Time (sec): 12 (Y+R=12.0 sec) Average Delay (sec/veh): 37.1
Optimal Cycle: 72 Level Of Service: D

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module:

Table with 13 columns representing different volume metrics and 13 rows of data.

Saturation Flow Module:

Table with 13 columns representing saturation flow metrics and 4 rows of data.

Capacity Analysis Module:

Table with 13 columns representing capacity analysis metrics and 13 rows of data.

Note: Queue reported is the number of cars per lane.

**CUMULATIVE 2020 + ALTERNATIVE E
MITIGATED TRAFFIC CONDITIONS
(TRAFFIX)**

 Impact Analysis Report
 Level Of Service

Intersection	Base LOS	Base		Future LOS	Future		Change in
		Del/ Veh	V/ C		Del/ Veh	V/ C	
# 1 Wilfred Ave/Stony Point Rd	B	19.5	0.678	C	20.5	0.710	+ 0.942 D/V
# 2 Wilfred Ave/Primrose Ave	A	6.0	0.203	B	18.2	0.510	+12.226 D/V
# 3 Wilfred Ave/Whistler Ave	B	12.5	0.000	C	18.1	0.000	+ 5.661 D/V
# 4 Langer Ave/Wilfred Ave	B	12.4	0.000	C	18.1	0.000	+ 5.710 D/V
# 5 Wilfred Ave/Labath Ave	C	34.0	0.595	D	35.5	0.701	+ 1.570 D/V
# 6 Wilfred Ave/Dowell Ave	D	35.1	0.768	D	39.1	0.870	+ 4.021 D/V
# 7 Wilfred Ave/Redwood Dr	D	47.1	0.949	D	51.3	0.971	+ 4.204 D/V
# 9 Wilfred Ave/101 SB Ramp	C	32.9	0.814	D	38.9	0.931	+ 6.010 D/V
# 12 101 NB Ramps/Commerce Blvd	C	31.0	0.791	C	31.7	0.813	+ 0.715 D/V
# 13 New Driveway/Stony Point Rd	A	0.5	0.455	A	6.8	0.528	+ 6.377 D/V
# 15 Redwood Dr/Business Park Dr	C	16.5	0.000	C	16.5	0.000	+ 0.000 D/V
# 16 Rohnert Park Expwy/Stony Point	C	21.9	0.609	C	24.5	0.689	+ 2.601 D/V
# 17 Rohnert Park Expwy/Labath Ave	C	30.6	0.514	C	33.3	0.537	+ 2.678 D/V
# 18 Rohnert Park Expwy/Redwood Dr	C	32.8	0.697	C	32.8	0.697	-0.026 D/V
# 19 Rohnert Park Expwy/101 SB Ramp	C	24.3	0.703	C	24.4	0.719	+ 0.085 D/V
# 20 Rohnert Park Expwy/101 NB Ramp	B	17.0	0.444	F	OVRFL	0.470	+25893865822
# 21 Rohnert Park Expwy/Commerce Bl	C	33.2	0.802	C	33.5	0.817	+ 0.328 D/V
# 22 Gravenstein Hwy (SR 116)/Stone	D	39.9	0.829	D	40.8	0.829	+ 0.886 D/V
# 23 Gravenstein Hwy (SR 116)/Redwo	D	37.8	0.852	D	38.0	0.852	+ 0.201 D/V
# 24 Gravenstein Hwy (SR 116)/SB US	C	20.1	0.570	C	20.2	0.570	+ 0.004 D/V
# 25 Gravenstein Hwy (SR 116)/NB US	B	18.7	0.767	B	19.3	0.778	+ 0.519 D/V
# 26 Millbrae Ave/Stony Point Rd	C	21.8	0.517	C	21.9	0.537	+ 0.104 D/V
# 27 Millbrae Ave/Primrose Ave	B	12.4	0.000	B	12.4	0.000	+ 0.000 D/V
# 28 Millbrae Ave/Whistler Ave	B	12.4	0.000	B	12.4	0.000	+ 0.000 D/V
# 29 Millbrae Ave/Langner Ave	B	11.2	0.000	B	11.2	0.000	+ 0.000 D/V

Intersection		Base		Future		Change in	
		Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C		
# 30 Millbrae Ave/Labath Ave	B	13.5	0.000	B 13.5	0.000	+ 0.000	D/V
# 31 Millbrae Ave/Dowdell Ave	B	11.6	0.000	B 11.6	0.000	+ 0.000	D/V
# 55 Golf Course Dr/Commerce Blvd &	D	44.9	0.906	D 48.1	0.938	+ 3.196	D/V

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 Wilfred Ave/Stony Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.710
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 20.5
Optimal Cycle: 53 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Protected/Permitted), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns for different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #2 Wilfred Ave/Primrose Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.510
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 18.2
Optimal Cycle: 28 Level Of Service: B

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Permitted), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns for different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns for different traffic movements. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns for different traffic movements. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 Wilfred Ave/Whistler Ave

Average Delay (sec/veh): 1.3 Worst Case Level Of Service: C[18.1]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	1! 0 0	0	0	1! 0 0	0	0	1! 0 0	0	0	1! 0 0

Volume Module:

Base Vol:	10	10	10	10	10	10	10	170	10	9	280	9
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:	10	10	10	10	10	10	10	170	10	9	280	9
Added Vol:	0	0	0	0	0	0	0	302	0	0	78	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	10	10	10	10	10	10	472	10	9	358	9
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	11	11	11	11	11	11	497	11	9	377	9
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	11	11	11	11	11	11	11	497	11	9	377	9
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.2	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.3	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	934	928	502	934	929	382	386	xxxx	xxxxx	507	xxxx	xxxxx
Potent Cap.:	248	270	573	248	270	670	1151	xxxx	xxxxx	1057	xxxx	xxxxx
Move Cap.:	233	265	573	233	265	670	1151	xxxx	xxxxx	1057	xxxx	xxxxx
Volume/Cap:	0.05	0.04	0.02	0.05	0.04	0.02	0.01	xxxx	xxxx	0.01	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.2	xxxx	xxxxx	8.4	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	306	xxxxx	xxxx	314	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	0.3	xxxxx	xxxxx	0.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	18.1	xxxxx	xxxxx	17.8	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	C	*	*	C	*	*	*	*	*	*	*			
ApproachDel:	18.1			17.8			xxxxxxx			xxxxxxx					
ApproachLOS:	C			C			*			*					

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Langer Ave/Wilfred Ave

Average Delay (sec/veh): 1.3 Worst Case Level Of Service: C[18.1]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	1! 0 0	0	0	1! 0 0	0	0	1! 0 0	1	0	1 0 1

Volume Module:

Base Vol:	10	10	10	10	10	10	10	170	10	9	280	9
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:	10	10	10	10	10	10	10	170	10	9	280	9
Added Vol:	0	0	0	0	0	0	0	302	0	0	78	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	10	10	10	10	10	10	472	10	9	358	9
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	11	11	11	11	11	11	497	11	9	377	9
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	11	11	11	11	11	11	11	497	11	9	377	9

Critical Gap Module:

Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.2	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.3	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	934	928	502	929	924	377	386	xxxx	xxxxx	507	xxxx	xxxxx
Potent Cap.:	248	270	573	250	271	674	1151	xxxx	xxxxx	1057	xxxx	xxxxx
Move Cap.:	234	265	573	235	266	674	1151	xxxx	xxxxx	1057	xxxx	xxxxx
Volume/Cap:	0.05	0.04	0.02	0.04	0.04	0.02	0.01	xxxx	xxxx	0.01	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.2	xxxx	xxxxx	8.4	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	306	xxxxx	xxxx	316	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	0.3	xxxxx	xxxxx	0.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	18.1	xxxxx	xxxxx	17.7	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	C	*	*	C	*	*	*	*	*	*	*			
ApproachDel:	18.1			17.7			xxxxxx			xxxxxx					
ApproachLOS:	C			C			*			*					

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 Wilfred Ave/Labath Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.701
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 35.5
Optimal Cycle: 59 Level Of Service: D

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Permitted, Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 Wilfred Ave/Dowell Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.870

Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 39.1

Optimal Cycle: 89 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound					
Movement:	L	T	R	L	T	R	L	T	R	L	T	R			
Control:	Permitted			Protected			Protected			Protected					
Rights:	Include			Include			Include			Include					
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0			
Lanes:	0	1	0	0	2	1	0	0	1	0	1	0	1	1	0

Volume Module:

Base Vol:	143	105	559	217	41	119	53	359	273	509	360	273
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:	143	105	559	217	41	119	53	359	273	509	360	273
Added Vol:	0	0	0	0	0	0	0	302	0	0	78	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	143	105	559	217	41	119	53	661	273	509	438	273
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	151	111	588	228	43	125	56	696	287	536	461	287
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	151	111	588	228	43	125	56	696	287	536	461	287
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	151	111	588	228	43	125	56	696	287	536	461	287

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.97	0.97	0.75	0.95	0.89	0.89	0.90	0.86	0.86	0.90	0.88	0.88
Lanes:	0.58	0.42	2.00	1.00	0.26	0.74	1.00	1.42	0.58	2.00	1.23	0.77
Final Sat.:	1066	783	2842	1805	432	1255	1702	2303	951	3432	2053	1280

Capacity Analysis Module:

Vol/Sat:	0.14	0.14	0.21	0.13	0.10	0.10	0.03	0.30	0.30	0.16	0.22	0.22
Crit Moves:			****	****			****			****		
Green/Cycle:	0.24	0.24	0.24	0.14	0.39	0.39	0.07	0.34	0.34	0.18	0.46	0.46
Volume/Cap:	0.58	0.58	0.85	0.88	0.26	0.26	0.49	0.88	0.88	0.88	0.49	0.49
Uniform Del:	33.4	33.4	36.1	41.9	20.9	20.9	45.0	30.8	30.8	40.0	19.1	19.1
IncrcmntDel:	1.9	1.9	10.0	26.7	0.2	0.2	3.3	8.0	8.0	13.5	0.3	0.3
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	35.3	35.3	46.1	68.6	21.1	21.1	48.4	38.8	38.8	53.5	19.3	19.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	35.3	35.3	46.1	68.6	21.1	21.1	48.4	38.8	38.8	53.5	19.3	19.3
LOS by Move:	D	D	D	E	C	C	D	D	D	D	B	B
HCM2kAvgQ:	8	8	13	10	1	3	2	18	18	11	9	9

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
 2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 Wilfred Ave/Redwood Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.971
 Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 51.3
 Optimal Cycle: 156 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	2	0	1	1	1	0	1	1	1	2

Volume Module:

Base Vol:	556	103	350	453	70	222	146	734	255	73	364	730
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:	556	103	350	453	70	222	146	734	255	73	364	730
Added Vol:	0	0	0	0	0	2	5	297	0	0	77	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	556	103	350	453	70	224	151	1031	255	73	441	730
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	585	108	368	477	74	236	159	1085	268	77	464	768
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	585	108	368	477	74	236	159	1085	268	77	464	768
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	585	108	368	477	74	236	159	1085	268	77	464	768

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	0.95	0.89	0.89	0.92	0.94	0.94	0.94	0.99	0.84
Lanes:	1.00	2.00	1.00	2.00	0.24	0.76	1.00	2.00	1.00	1.00	2.00	2.00
Final Sat.:	1805	3800	1615	3610	401	1283	1753	3579	1790	1787	3762	3198

Capacity Analysis Module:

Vol/Sat:	0.32	0.03	0.23	0.13	0.18	0.18	0.09	0.30	0.15	0.04	0.12	0.24
Crit Moves:	****			****			****			****		
Green/Cycle:	0.33	0.33	0.33	0.19	0.19	0.19	0.10	0.31	0.31	0.04	0.26	0.26
Volume/Cap:	0.97	0.09	0.69	0.69	0.97	0.97	0.93	0.97	0.48	0.97	0.48	0.93
Uniform Del:	32.8	23.0	29.0	37.6	40.3	40.3	44.8	33.9	27.8	47.7	31.3	36.1
IncrcmntDel:	29.3	0.0	3.8	2.9	42.4	42.4	48.2	17.5	0.1	91.0	0.4	16.5
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	62.1	23.0	32.7	40.5	82.6	82.6	93.0	51.5	27.9	138.7	31.7	52.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	62.1	23.0	32.7	40.5	82.6	82.6	93.0	51.5	27.9	138.7	31.7	52.6
LOS by Move:	E	C	C	D	F	F	F	D	C	F	C	D
HCM2kAvgQ:	24	1	11	8	14	14	8	22	7	5	6	16

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #9 Wilfred Ave/101 SB Ramp

Cycle (sec): 145 Critical Vol./Cap.(X): 0.931
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 38.9
Optimal Cycle: 146 Level Of Service: D

Street Name: US-101 SB Ramp Wilfred Avenue
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Permitted Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 0 0 0 1 0 1 1 0 0 0 1 1 0 2 0 2 0 0

Volume Module:
Base Vol: 0 0 0 355 288 482 0 1257 283 77 682 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: 0 0 0 355 288 482 0 1257 283 77 682 0
Added Vol: 0 0 0 0 0 30 0 135 162 0 47 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 355 288 512 0 1392 445 77 729 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 0 0 0 374 303 539 0 1465 468 81 767 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 0 0 374 303 539 0 1465 468 81 767 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 0 0 0 374 303 539 0 1465 468 81 767 0

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 1.00 1.00 1.00 0.84 0.89 0.89 1.00 0.95 0.95 0.94 0.99 1.00
Lanes: 0.00 0.00 0.00 1.00 1.00 1.00 0.00 1.52 0.48 2.00 2.00 0.00
Final Sat.: 0 0 0 1599 1700 1700 0 2748 879 3574 3762 0

Capacity Analysis Module:
Vol/Sat: 0.00 0.00 0.00 0.23 0.18 0.32 0.00 0.53 0.53 0.02 0.20 0.00
Crit Moves: ****
Green/Cycle: 0.00 0.00 0.00 0.34 0.34 0.34 0.00 0.57 0.57 0.02 0.60 0.00
Volume/Cap: 0.00 0.00 0.00 0.69 0.52 0.93 0.00 0.93 0.93 0.93 0.34 0.00
Uniform Del: 0.0 0.0 0.0 41.1 38.4 46.2 0.0 28.3 28.3 70.6 14.8 0.0
IncrcmntDel: 0.0 0.0 0.0 3.6 0.3 15.8 0.0 8.2 8.2 73.1 0.1 0.0
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 0.00 0.00 0.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 0.00
Delay/Veh: 0.0 0.0 0.0 44.8 38.7 61.9 0.0 36.5 36.5 143.7 14.9 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 0.0 0.0 44.8 38.7 61.9 0.0 36.5 36.5 143.7 14.9 0.0
LOS by Move: A A A D D E A D D F B A
HCM2kAvgQ: 0 0 0 15 11 27 0 43 43 4 8 0

Level Of Service Computation Report
 2000 HCM Operations Method (Future Volume Alternative)

Intersection #12 101 NB Ramps/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.813
 Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 31.7
 Optimal Cycle: 80 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound						
Movement:	L	T	R	L	T	R	L	T	R	L	T	R				
Control:	Protected			Protected			Split Phase			Split Phase						
Rights:	Include			Include			Include			Include						
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0				
Lanes:	1	0	1	1	0	1	1	1	0	0	1	0	0	1	0	0

Volume Module:

Base Vol:	552	413	2	7	616	732	307	3	47	8	3	5
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:	552	413	2	7	616	732	307	3	47	8	3	5
Added Vol:	0	0	0	0	0	88	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	552	413	2	7	616	820	307	3	47	8	3	5
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	581	435	2	7	648	863	323	3	49	8	3	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	581	435	2	7	648	863	323	3	49	8	3	5
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	581	435	2	7	648	863	323	3	49	8	3	5

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	1.00	0.94	0.90	0.90	0.94	0.94	0.84	0.94	0.94	0.94
Lanes:	1.00	1.99	0.01	1.00	1.29	1.71	1.98	0.02	1.00	0.50	0.19	0.31
Final Sat.:	1805	3778	18	1787	2212	2945	3550	35	1599	888	333	555

Capacity Analysis Module:

Vol/Sat:	0.32	0.12	0.12	0.00	0.29	0.29	0.09	0.09	0.03	0.01	0.01	0.01
Crit Moves:	****				****		****				****	
Green/Cycle:	0.40	0.73	0.73	0.03	0.36	0.36	0.11	0.11	0.11	0.01	0.01	0.01
Volume/Cap:	0.81	0.16	0.16	0.16	0.81	0.81	0.81	0.81	0.28	0.81	0.81	0.81
Uniform Del:	26.9	4.1	4.1	47.6	28.9	28.9	43.4	43.4	40.7	49.3	49.3	49.3
IncrcmntDel:	7.1	0.0	0.0	1.6	2.9	2.9	12.0	12.0	0.8	113.0	113	113.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	34.0	4.1	4.1	49.2	31.8	31.8	55.3	55.3	41.5	162.3	162	162.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	34.0	4.1	4.1	49.2	31.8	31.8	55.3	55.3	41.5	162.3	162	162.3
LOS by Move:	C	A	A	D	C	C	E	E	D	F	F	F
HCM2kAvgQ:	18	2	2	0	16	16	7	7	2	2	2	2

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #13 New Driveway/Stony Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.528
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 6.8
Optimal Cycle: 29 Level Of Service: A

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Permitted, Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns for different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns for different traffic movements. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns for different traffic movements. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #15 Redwood Dr/Business Park Dr

Average Delay (sec/veh): 3.2 Worst Case Level Of Service: C[16.5]

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:	1	0	2	0	0	1	1	0	0	0	1	0

Volume Module:

Base Vol:	12	359	0	0	363	25	144	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:	12	359	0	0	363	25	144	0	31	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	12	359	0	0	363	25	144	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	13	378	0	0	382	26	152	0	33	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	13	378	0	0	382	26	152	0	33	0	0	0

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.8	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflict Vol:	408	xxxx	xxxxx	xxxxx	xxxx	xxxxx	609	798	204	594	812	189
Potent Cap.:	1161	xxxx	xxxxx	xxxxx	xxxx	xxxxx	431	321	809	393	316	827
Move Cap.:	1161	xxxx	xxxxx	xxxxx	xxxx	xxxxx	428	318	809	374	312	827
Volume/Cap:	0.01	xxxx	xxxx	xxxxx	xxxx	xxxxx	0.35	0.00	0.04	0.00	0.00	0.00

Level Of Service Module:

2Way95thQ:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	1.6	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	8.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	18.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	*	*	*	C	*	*	*	*	*
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxx	xxxx	809	0	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	0.1	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	9.6	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	A	*	*	*
ApproachDel:	xxxxxxx			xxxxxxx			16.5			xxxxxxx		
ApproachLOS:	*			*			C			*		

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #16 Rohnert Park Expwy/Stony Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.689
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 24.5
Optimal Cycle: 41 Level Of Service: C

Table with columns: Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Permitted, Protected), Rights (Include), Min. Green, Lanes.

Volume Module: Table with columns for various volume adjustments (Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.) and values.

Saturation Flow Module: Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat. and values.

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ and values.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #17 Rohnert Park Expwy/Labath Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.537
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 33.3
Optimal Cycle: 43 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module:

Table with 13 columns representing different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module:

Table with 13 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with 13 columns. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #18 Rohnert Park Expwy/Redwood Dr

Cycle (sec): 90 Critical Vol./Cap.(X): 0.697
 Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 32.8
 Optimal Cycle: 58 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	1	1	2	0	1	0	1	1

Volume Module:

Base Vol:	173	326	510	339	301	236	216	700	163	377	603	318
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:	173	326	510	339	301	236	216	700	163	377	603	318
Added Vol:	0	0	0	0	0	0	0	70	0	0	47	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	173	326	510	339	301	236	216	770	163	377	650	318
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	182	343	537	357	317	248	227	811	172	397	684	335
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	182	343	537	357	317	248	227	811	172	397	684	335
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	182	343	537	357	317	248	227	811	172	397	684	335

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.91	0.91	0.95	1.00	0.85	0.94	0.99	0.84	0.94	0.99	0.84
Lanes:	1.00	1.17	1.83	2.00	1.00	1.00	1.00	3.00	1.00	2.00	2.00	1.00
Final Sat.:	1805	2020	3161	3610	1900	1615	1787	5643	1599	3574	3762	1599

Capacity Analysis Module:

Vol/Sat:	0.10	0.17	0.17	0.10	0.17	0.15	0.13	0.14	0.11	0.11	0.18	0.21
Crit Moves:	****				****		****					****
Green/Cycle:	0.14	0.24	0.24	0.14	0.24	0.24	0.18	0.27	0.27	0.21	0.30	0.30
Volume/Cap:	0.70	0.70	0.70	0.70	0.70	0.64	0.70	0.53	0.39	0.53	0.61	0.70
Uniform Del:	36.6	31.1	31.1	36.8	31.3	30.8	34.5	27.8	26.7	31.6	26.9	27.9
IncrcmntDel:	8.0	1.8	1.8	4.3	4.7	3.7	6.5	0.3	0.6	0.7	0.9	4.5
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	44.6	32.9	32.9	41.1	36.0	34.5	41.0	28.2	27.3	32.3	27.9	32.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	44.6	32.9	32.9	41.1	36.0	34.5	41.0	28.2	27.3	32.3	27.9	32.3
LOS by Move:	D	C	C	D	D	C	D	C	C	C	C	C
HCM2kAvgQ:	6	9	9	6	9	7	7	7	4	5	9	9

 Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #19 Rohnert Park Expwy/101 SB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.719
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 24.4
Optimal Cycle: 62 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Permitted, Protected), Rights (Include, Ignore), Min. Green, and Lanes.

Volume Module: Table with 13 columns for different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #20 Rohnert Park Expwy/101 NB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.470
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): OVERFLOW
Optimal Cycle: 26 Level Of Service: F

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected, Permitted), Rights (Include, Ignore), Min. Green, and Lanes.

Volume Module: Table with 13 columns for different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns for different traffic movements. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns for different traffic movements. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueuDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #21 Rohnert Park Expwy/Commerce Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.817

Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 33.5

Optimal Cycle: 81 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound										
Movement:	L	T	R	L	T	R	L	T	R	L	T	R								
Control:	Split Phase			Split Phase			Protected			Protected										
Rights:	Include			Include			Ovl			Include										
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0								
Lanes:	1	1	1	0	1	1	1	1	0	1	2	0	2	0	1	1	0	2	1	0

Volume Module:

Base Vol:	384	293	241	179	354	152	235	1221	462	165	682	202
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:	384	293	241	179	354	152	235	1221	462	165	682	202
Added Vol:	0	0	0	0	0	0	0	46	0	0	16	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	384	293	241	179	354	152	235	1267	462	165	698	202
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	404	308	254	188	373	160	247	1334	486	174	735	213
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	404	308	254	188	373	160	247	1334	486	174	735	213
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	404	308	254	188	373	160	247	1334	486	174	735	213

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.83	0.96	0.96	0.83	0.93	0.98	0.83	0.93	0.95	0.95
Lanes:	1.70	1.30	1.00	1.01	1.99	1.00	2.00	2.00	1.00	1.00	2.33	0.67
Final Sat.:	3080	2350	1583	1844	3647	1583	3538	3724	1583	1769	4185	1211

Capacity Analysis Module:

Vol/Sat:	0.13	0.13	0.16	0.10	0.10	0.10	0.07	0.36	0.31	0.10	0.18	0.18
Crit Moves:	****			****			****			****		
Green/Cycle:	0.20	0.20	0.20	0.13	0.13	0.13	0.16	0.44	0.63	0.12	0.40	0.40
Volume/Cap:	0.67	0.67	0.82	0.82	0.82	0.81	0.44	0.82	0.48	0.82	0.44	0.44
Uniform Del:	37.2	37.2	38.5	42.6	42.6	42.6	38.0	24.6	9.6	42.9	21.9	21.9
IncrcmntDel:	1.7	1.7	15.4	7.6	7.6	21.3	0.6	3.3	0.4	21.2	0.1	0.1
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	38.8	38.8	53.9	50.2	50.2	63.9	38.6	27.9	10.0	64.1	22.0	22.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	38.8	38.8	53.9	50.2	50.2	63.9	38.6	27.9	10.0	64.1	22.0	22.0
LOS by Move:	D	D	D	D	D	E	D	C	B	E	C	C
HCM2kAvgQ:	8	8	10	8	8	7	4	20	8	8	7	7

Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)
*****
Intersection #22 Gravenstein Hwy (SR 116)/Stoney Point Rd
*****
Cycle (sec):          100          Critical Vol./Cap.(X):          0.829
Loss Time (sec):      12 (Y+R=4.0 sec) Average Delay (sec/veh):          40.8
Optimal Cycle:        84          Level Of Service:          D
*****
Approach:      North Bound      South Bound      East Bound      West Bound
Movement:      L - T - R      L - T - R      L - T - R      L - T - R
-----|-----|-----|-----|
Control:        Protected      Protected      Protected      Protected
Rights:         Include      Include      Include      Include
Min. Green:     0 0 0 0      0 0 0 0      0 0 0 0      0 0 0 0
Lanes:          1 0 1 0 1      1 0 1 0 1      1 0 1 1 0      1 0 2 0 1
-----|-----|-----|-----|
Volume Module:
Base Vol:       323 483 113 107 358 235 149 583 228 140 661 113
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:   323 483 113 107 358 235 149 583 228 140 661 113
Added Vol:     0 0 0 46 0 0 0 0 0 0 0 16
PasserByVol:  0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut:   323 483 113 153 358 235 149 583 228 140 661 129
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:       0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume:    340 508 119 161 377 247 157 614 240 147 696 136
Reduct Vol:    0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol:   340 508 119 161 377 247 157 614 240 147 696 136
PCE Adj:       1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj:       1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.:    340 508 119 161 377 247 157 614 240 147 696 136
-----|-----|-----|-----|
Saturation Flow Module:
Sat/Lane:      1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment:    0.93 0.98 0.83 0.93 0.98 0.83 0.93 0.89 0.89 0.93 0.93 0.83
Lanes:         1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.44 0.56 1.00 2.00 1.00
Final Sat.:    1769 1862 1583 1769 1862 1583 1769 2436 953 1769 3538 1583
-----|-----|-----|-----|
Capacity Analysis Module:
Vol/Sat:       0.19 0.27 0.08 0.09 0.20 0.16 0.09 0.25 0.25 0.08 0.20 0.09
Crit Moves:    ****          ****          ****
Green/Cycle:   0.23 0.36 0.36 0.12 0.24 0.24 0.13 0.30 0.30 0.10 0.28 0.28
Volume/Cap:    0.83 0.77 0.21 0.77 0.83 0.64 0.71 0.83 0.83 0.83 0.71 0.31
Uniform Del:   36.5 28.5 22.4 42.7 35.8 33.9 41.9 32.4 32.4 44.1 32.4 28.5
IncrcmntDel:   13.2 5.3 0.2 15.4 12.1 3.6 9.9 5.7 5.7 26.6 2.4 0.4
InitQueuDel:   0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj:     1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Delay/Veh:     49.8 33.8 22.6 58.1 47.9 37.5 51.9 38.1 38.1 70.7 34.8 28.9
User DelAdj:   1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh:    49.8 33.8 22.6 58.1 47.9 37.5 51.9 38.1 38.1 70.7 34.8 28.9
LOS by Move:   D C C E D D D D E C C
HCM2kAvgQ:     12 15 3 7 13 8 6 15 15 7 11 3
*****

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Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #23 Gravenstein Hwy (SR 116)/Redwood Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.852

Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 38.0

Optimal Cycle: 91 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	0	1	0	1	1	0	1

Volume Module:

Base Vol:	48	28	59	592	28	110	122	708	32	53	797	406
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	28	59	592	28	110	122	708	32	53	797	406
Added Vol:	0	0	0	0	0	0	0	46	0	0	16	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	48	28	59	592	28	110	122	754	32	53	813	406
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	51	29	62	623	29	116	128	794	34	56	856	427
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	51	29	62	623	29	116	128	794	34	56	856	427
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	51	29	62	623	29	116	128	794	34	56	856	427

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.88	0.88	0.93	0.86	0.86	0.93	0.93	0.93	0.93	0.93	0.83
Lanes:	1.00	0.32	0.68	1.00	0.20	0.80	1.00	1.92	0.08	1.00	2.00	1.00
Final Sat.:	1769	538	1134	1769	332	1306	1769	3373	143	1769	3538	1583

Capacity Analysis Module:

Vol/Sat:	0.03	0.05	0.05	0.35	0.09	0.09	0.07	0.24	0.24	0.03	0.24	0.27
Crit Moves:	****			****			****			****		
Green/Cycle:	0.12	0.06	0.06	0.41	0.36	0.36	0.09	0.35	0.35	0.05	0.32	0.32
Volume/Cap:	0.25	0.85	0.85	0.85	0.25	0.25	0.85	0.66	0.66	0.66	0.76	0.85
Uniform Del:	40.2	46.3	46.3	26.6	22.4	22.4	45.1	27.2	27.2	46.8	30.8	32.0
IncrcmntDel:	0.6	44.2	44.2	9.5	0.2	0.2	34.5	1.4	1.4	18.1	3.2	13.2
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	40.8	90.5	90.5	36.0	22.6	22.6	79.6	28.6	28.6	65.0	33.9	45.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	40.8	90.5	90.5	36.0	22.6	22.6	79.6	28.6	28.6	65.0	33.9	45.1
LOS by Move:	D	F	F	D	C	C	E	C	C	E	C	D
HCM2kAvgQ:	2	5	5	20	3	3	6	12	12	3	14	15

Note: Queue reported is the number of cars per lane.

 Level Of Service Computation Report
 2000 HCM Operations Method (Future Volume Alternative)

 Intersection #24 Gravenstein Hwy (SR 116)/SB US 101 Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.570
 Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 20.2
 Optimal Cycle: 39 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Protected			Permitted			Protected		
Rights:	Include			Include			Ignore			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	2	0	1	0	2	1	1	0	2

Volume Module:

Base Vol:	0	0	0	640	0	258	0	953	412	66	998	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:	0	0	0	640	0	258	0	953	412	66	998	0
Added Vol:	0	0	0	0	0	0	0	0	46	0	16	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	640	0	258	0	953	458	66	1014	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00	0.95	0.95	0.95
PHF Volume:	0	0	0	674	0	272	0	1003	0	69	1067	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	674	0	272	0	1003	0	69	1067	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Final Vol.:	0	0	0	674	0	272	0	1003	0	69	1067	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.90	1.00	0.83	1.00	0.93	1.00	0.93	0.93	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	0.00	2.00	1.00	1.00	2.00	0.00
Final Sat.:	0	0	0	3432	0	1583	0	3538	1900	1769	3538	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.20	0.00	0.17	0.00	0.28	0.00	0.04	0.30	0.00
Crit Moves:				****				****				
Green/Cycle:	0.00	0.00	0.00	0.34	0.00	0.34	0.00	0.50	0.00	0.07	0.57	0.00
Volume/Cap:	0.00	0.00	0.00	0.57	0.00	0.50	0.00	0.57	0.00	0.57	0.53	0.00
Uniform Del:	0.0	0.0	0.0	26.8	0.0	26.0	0.0	17.7	0.0	45.1	13.5	0.0
IncrcmntDel:	0.0	0.0	0.0	0.7	0.0	0.7	0.0	0.5	0.0	6.4	0.3	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
Delay/Veh:	0.0	0.0	0.0	27.4	0.0	26.7	0.0	18.1	0.0	51.5	13.8	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	27.4	0.0	26.7	0.0	18.1	0.0	51.5	13.8	0.0
LOS by Move:	A	A	A	C	A	C	A	B	A	D	B	A
HCM2kAvgQ:	0	0	0	9	0	7	0	12	0	3	11	0

 Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #25 Gravenstein Hwy (SR 116)/NB US 101 Off-Ramp

Cycle (sec): 100 Critical Vol./Cap.(X): 0.778

Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 19.3

Optimal Cycle: 64 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Control:	Protected			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	0	0	0	0	0	2	0	0	0

Volume Module:

Base Vol:	375	0	273	0	0	0	0	1596	0	0	683	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:	375	0	273	0	0	0	0	1596	0	0	683	0
Added Vol:	16	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	391	0	273	0	0	0	0	1596	0	0	683	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	412	0	287	0	0	0	0	1680	0	0	719	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	412	0	287	0	0	0	0	1680	0	0	719	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	412	0	287	0	0	0	0	1680	0	0	719	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	1.00	0.83	1.00	1.00	1.00	1.00	0.93	1.00	1.00	0.93	1.00
Lanes:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
Final Sat.:	1769	0	1583	0	0	0	0	3538	0	0	3538	0

Capacity Analysis Module:

Vol/Sat:	0.23	0.00	0.18	0.00	0.00	0.00	0.00	0.47	0.00	0.00	0.20	0.00
Crit Moves:	****			****								
Green/Cycle:	0.30	0.00	0.30	0.00	0.00	0.00	0.00	0.61	0.00	0.00	0.61	0.00
Volume/Cap:	0.78	0.00	0.61	0.00	0.00	0.00	0.00	0.78	0.00	0.00	0.33	0.00
Uniform Del:	32.0	0.0	30.0	0.0	0.0	0.0	0.0	14.4	0.0	0.0	9.5	0.0
IncrcmntDel:	7.2	0.0	2.3	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.1	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00
Delay/Veh:	39.2	0.0	32.3	0.0	0.0	0.0	0.0	16.3	0.0	0.0	9.6	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	39.2	0.0	32.3	0.0	0.0	0.0	0.0	16.3	0.0	0.0	9.6	0.0
LOS by Move:	D	A	C	A	A	A	A	B	A	A	A	A
HCM2kAvgQ:	13	0	8	0	0	0	0	21	0	0	6	0

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #26 Millbrae Ave/Stony Point Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.537
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 21.9
Optimal Cycle: 43 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 13 columns for different traffic movements and 13 rows for various volume and adjustment factors.

Saturation Flow Module: Table with 13 columns for different traffic movements and 4 rows for saturation flow and adjustment factors.

Capacity Analysis Module: Table with 13 columns for different traffic movements and 13 rows for capacity analysis metrics.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #27 Millbrae Ave/Primrose Ave

Average Delay (sec/veh): 0.5 Worst Case Level Of Service: B[12.4]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	1! 0 0	0	0	1 0 0	0	0	1! 0 0	0	0	1! 0 0

Volume Module:

Base Vol:	1	0	2	0	1	0	1	161	5	7	265	2
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:	1	0	2	0	1	0	1	161	5	7	265	2
Added Vol:	9	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	0	2	0	1	0	1	161	5	7	265	2
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	0	2	0	1	0	1	169	5	7	279	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	11	0	2	0	1	0	1	169	5	7	279	2

Critical Gap Module:

Critical Gp:	7.1	6.5	6.2	xxxxx	6.5	xxxxx	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	4.0	xxxxx	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	469	470	172	xxxx	472	xxxxx	281	xxxx	xxxxx	175	xxxx	xxxxx
Potent Cap.:	508	495	877	xxxx	493	xxxxx	1293	xxxx	xxxxx	1414	xxxx	xxxxx
Move Cap.:	504	492	877	xxxx	491	xxxxx	1293	xxxx	xxxxx	1414	xxxx	xxxxx
Volume/Cap:	0.02	0.00	0.00	xxxx	0.00	xxxx	0.00	xxxx	xxxx	0.01	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	0.0	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	12.4	xxxxx	7.8	xxxx	xxxxx	7.6	xxxx	xxxxx			
LOS by Move:	*	*	*	*	B	*	A	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	543	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	0.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	11.8	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	B	*	*	*	*	*	*	*	*	*	*			
ApproachDel:	11.8			12.4			xxxxxxx			xxxxxxx					
ApproachLOS:	B			B			*			*					

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #28 Millbrae Ave/Whistler Ave

Average Delay (sec/veh): 0.5 Worst Case Level Of Service: B[12.4]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	1	0	0	0	1	0	0	1	0	0	1

Volume Module:

Base Vol:	1	9	0	4	0	1	1	146	2	4	279	8
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	9	0	4	0	1	1	146	2	4	279	8
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1	9	0	4	0	1	1	146	2	4	279	8
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	1	9	0	4	0	1	1	154	2	4	294	8
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	1	9	0	4	0	1	1	154	2	4	294	8

Critical Gap Module:

Critical Gp:	7.1	6.5	xxxxx	7.1	6.5	6.2	4.1	xxxxx	xxxxx	4.1	xxxxx	xxxxx
FollowUpTim:	3.5	4.0	xxxxx	3.5	4.0	3.3	2.2	xxxxx	xxxxx	2.2	xxxxx	xxxxx

Capacity Module:

Cnflict Vol:	464	467	xxxxx	468	464	298	302	xxxxx	xxxxx	156	xxxxx	xxxxx
Potent Cap.:	512	496	xxxxx	509	498	746	1270	xxxxx	xxxxx	1437	xxxxx	xxxxx
Move Cap.:	510	494	xxxxx	500	496	746	1270	xxxxx	xxxxx	1437	xxxxx	xxxxx
Volume/Cap:	0.00	0.02	xxxxx	0.01	0.00	0.00	0.00	xxxxx	xxxxx	0.00	xxxxx	xxxxx

Level Of Service Module:

2Way95thQ:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	0.0	xxxxx	xxxxx			
Control Del:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	7.8	xxxxx	xxxxx	7.5	xxxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	496	xxxxx	xxxxx	xxxxx	535	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
SharedQueue:	0.1	xxxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shrd ConDel:	12.4	xxxxx	xxxxx	xxxxx	11.8	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shared LOS:	B	*	*	*	B	*	*	*	*	*	*	*	*	*	*
ApproachDel:	12.4			11.8			xxxxxxx			xxxxxxx					
ApproachLOS:	B			B			*			*					

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #29 Millbrae Ave/Langner Ave

Average Delay (sec/veh): 1.1 Worst Case Level Of Service: B[11.2]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	1! 0 0	0	0	0 0 0	0	0	0 1 0	0	1	0 0 0

Volume Module:

Base Vol:	27	0	25	0	0	0	0	154	27	7	331	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:	27	0	25	0	0	0	0	154	27	7	331	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	27	0	25	0	0	0	0	154	27	7	331	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	28	0	26	0	0	0	0	162	28	7	348	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	28	0	26	0	0	0	0	162	28	7	348	0

Critical Gap Module:

Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	539	539	176	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	191	xxxx	xxxxx
Potent Cap.:	507	452	872	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1395	xxxx	xxxxx
Move Cap.:	505	449	872	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1395	xxxx	xxxxx
Volume/Cap:	0.06	0.00	0.03	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.01	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	633	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	0.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx			
Shrd ConDel:	xxxxx	11.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx			
Shared LOS:	*	B	*	*	*	*	*	*	*	A	*	*			
ApproachDel:	11.2			xxxxxxx			xxxxxxx			xxxxxxx					
ApproachLOS:	B			*			*			*					

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #30 Millbrae Ave/Labath Ave

Average Delay (sec/veh): 3.7 Worst Case Level Of Service: B[13.5]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 1! 0 0 0 0 0 1 0 0 0 0

Volume Module:

Base Vol: 114 0 26 0 0 0 0 160 23 36 225 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: 114 0 26 0 0 0 0 160 23 36 225 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 114 0 26 0 0 0 0 160 23 36 225 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 120 0 27 0 0 0 0 168 24 38 237 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 120 0 27 0 0 0 0 168 24 38 237 0

Critical Gap Module:

Critical Gp: 6.4 6.5 6.2 7.1 6.5 6.2 xxxxx xxxxx xxxxx 4.1 xxxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 3.5 4.0 3.3 xxxxx xxxxx xxxxx 2.2 xxxxx xxxxx

Capacity Module:

Cnflict Vol: 493 493 181 507 505 237 xxxxx xxxxx xxxxx 193 xxxxx xxxxx
Potent Cap.: 539 480 867 479 472 807 xxxxx xxxxx xxxxx 1393 xxxxx xxxxx
Move Cap.: 527 467 867 454 459 807 xxxxx xxxxx xxxxx 1393 xxxxx xxxxx
Volume/Cap: 0.23 0.00 0.03 0.00 0.00 0.00 xxxxx xxxxx xxxxx 0.03 xxxxx xxxxx

Level Of Service Module:

2Way95thQ: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.1 xxxxx xxxxx
Control Del: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 7.7 xxxxx xxxxx
LOS by Move: * * * * * * * * * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx 569 xxxxx xxxxx 0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue: xxxxx 1.0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.1 xxxxx xxxxx
Shrd ConDel: xxxxx 13.5 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 7.7 xxxxx xxxxx
Shared LOS: * B * * * * * * * * * A * *
ApproachDel: 13.5 xxxxxxx xxxxxxx xxxxxxx
ApproachLOS: B * * *

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #31 Millbrae Ave/Dowdell Ave

Average Delay (sec/veh): 1.4 Worst Case Level Of Service: B[11.6]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 1 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 1 0 0

Volume Module:

Base Vol: 55 0 0 0 0 0 0 0 131 51 0 235 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: 55 0 0 0 0 0 0 0 131 51 0 235 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 55 0 0 0 0 0 0 0 131 51 0 235 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 58 0 0 0 0 0 0 0 138 54 0 247 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 58 0 0 0 0 0 0 0 138 54 0 247 0

Critical Gap Module:

Critical Gp: 6.4 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim: 3.5 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxxx xxxx xxxxx

Capacity Module:

Cnflict Vol: 412 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Potent Cap.: 600 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Move Cap.: 600 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Volume/Cap: 0.10 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx

Level Of Service Module:

2Way95thQ: 0.3 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Control Del: 11.6 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxxx xxxx xxxxx 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 xxxx xxxxx xxxx xxxx xxxxx
SharedQueue:xxxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxxx xxxx xxxxx xxxxx
Shrd ConDel:xxxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxxx xxxx xxxxx xxxxx
Shared LOS: *
ApproachDel: 11.6 xxxxxxx xxxxxxx xxxxxxx
ApproachLOS: B * * *

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #55 Golf Course Dr/Commerce Blvd & Roberts Lake Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.938

Loss Time (sec): 12 (Y+R=12.0 sec) Average Delay (sec/veh): 48.1

Optimal Cycle: 130 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	1	1	1	0	1	1	1	1

Volume Module:

Base Vol:	319	57	514	102	54	49	80	679	854	445	410	64
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:	319	57	514	102	54	49	80	679	854	445	410	64
Added Vol:	0	0	0	0	0	0	0	46	88	0	16	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	319	57	514	102	54	49	80	725	942	445	426	64
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	336	60	541	107	57	52	84	763	992	468	448	67
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	336	60	541	107	57	52	84	763	992	468	448	67
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	336	60	541	107	57	52	84	763	992	468	448	67

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.86	0.86	0.95	0.93	0.93	0.94	0.91	0.91	0.95	1.00	0.85
Lanes:	1.00	1.00	2.00	1.00	1.05	0.95	1.00	1.30	1.70	1.00	2.00	1.00
Final Sat.:	1787	1627	3254	1805	1851	1679	1787	2246	2918	1805	3800	1615

Capacity Analysis Module:

Vol/Sat:	0.19	0.04	0.17	0.06	0.03	0.03	0.05	0.34	0.34	0.26	0.12	0.04
Crit Moves:			****	****				****		****		
Green/Cycle:	0.21	0.18	0.18	0.06	0.03	0.03	0.18	0.36	0.36	0.28	0.46	0.46
Volume/Cap:	0.91	0.21	0.94	0.94	0.91	0.91	0.26	0.94	0.94	0.94	0.26	0.09
Uniform Del:	38.7	35.1	40.6	46.6	48.2	48.2	35.1	30.8	30.8	35.3	16.7	15.4
IncrcmntDel:	25.4	0.0	21.5	64.5	54.7	54.7	0.4	9.7	9.7	25.5	0.1	0.1
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	64.1	35.2	62.1	111.1	103	102.8	35.5	40.5	40.5	60.8	16.8	15.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	64.1	35.2	62.1	111.1	103	102.8	35.5	40.5	40.5	60.8	16.8	15.4
LOS by Move:	E	D	E	F	F	F	D	D	D	E	B	B
HCM2kAvgQ:	14	2	12	6	4	4	2	22	22	19	4	1

Note: Queue reported is the number of cars per lane.

Revised Draft Traffic Impact Study

**GRATON RANCHERIA
CASINO AND HOTEL -
ALTERNATIVE F
SONOMA COUNTY, CA**

20 February 2007

Prepared for:

Graton Rancheria California
and SC Sonoma Management LLC

Prepared by:

Kimley-Horn and Associates, Inc.

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EXECUTIVE SUMMARY

Kimley-Horn and Associates, Inc. (KHA) was retained by Graton Rancheria California, also known as The Federated Indians of Graton Rancheria and The Indians of the Graton Rancheria of California, to prepare a traffic impact study for a casino and hotel proposed to be located west of Rohnert Park, California. There were eight alternatives evaluated. Two alternatives were evaluated at a separate site located near the junction of State Route 37 and Lakeville Highway, they included:

- No Action Alternative (at Lakeville Highway)
- Lakeville Highway Alternative

The other six alternatives – No Action Alternative, Wilfred Avenue Alternative, Northwest Stony Point Alternative, Northeast Stony Point Alternative, Reduced Intensity Alternative, and Business Park Alternative were evaluated at a location in Rohnert Park

The proposed Lakeville Highway Alternative casino would be 450,000 square feet with a 300 room hotel. If completed, the casino and hotel development would generate roughly 18,261 daily trips. During the peak hours of the weekday, approximately 1,384 AM peak hour trips and 2,287 PM peak hour trips would enter or exit the casino/hotel and affect nearby intersections and roadway segments.

There are extensive mitigations as a result of the proposed project.

INTRODUCTION

Kimley-Horn and Associates, Inc was retained by Graton Rancheria California, also know as The Federated Indians of Graton Rancheria and The Indians of the Graton Rancheria of California, to prepare a traffic impact study for a casino and hotel proposed to be located west of Rohnert Park, California.

As an alternative to the preferred site near Rohnert Park, a location near SR-37 in Sonoma County was identified. The proposed alternative site (also know as Alternative F) is located north of SR-37 and immediately west of Lakeville Highway. Like the preferred location, the alternative site for the casino and hotel is anticipated to be completed by the year 2008.

It should be noted that other site alternatives have also been developed for the project. The layouts and their respective access options are discussed in another report.

The purpose of this study is to address the traffic and transportation effects of the proposed casino and hotel development at the Alternative F location. This traffic study was prepared based on criteria set forth by the County of Sonoma, the California Department of Transportation (Caltrans), and nearby City of Vallejo.

Study Methodology

This traffic study was based on planning conditions assumed in the Sonoma County General Plan (adopted 1989), as well as information provided by Caltrans, Sonoma County Regional Transportation Authority, and City of Vallejo. Because none of the agencies' planning and project programming documents anticipated a casino and hotel development or its potential impacts, this study evaluated the addition of a casino and hotel near SR-37.

Development Conditions

The traffic study was based on the following development conditions:

- Existing Conditions – evaluates current traffic counts, existing roadway geometry, and existing development conditions.
- 2008 Conditions – evaluates existing traffic volumes with the addition of planned projects anticipated to be completed by 2008.
- 2008 Conditions Plus Project – evaluates effects of traffic from Alternative F on 2008 traffic operations.
- 2020 Cumulative Conditions – analysis of build-out conditions in the area projected for 2020 using forecasts from the City of Vallejo and Sonoma County travel forecasting models.

- 2020 Cumulative Plus Project Conditions – evaluates effects of traffic from Alternative F on 2020 Cumulative traffic operations.

Operating Conditions and Criteria

Operating conditions experienced by drivers are described in terms of Level of Service (LOS), which is a qualitative measure of factors such as delay, speed, travel time, freedom to maneuver, and driving comfort and convenience. Levels of service are represented by a letter scale from LOS A to LOS F, with LOS A representing the best performance and LOS F representing the poorest performance.

Table 1 relates the operational characteristics associated with each level of service category for both signalized and unsignalized intersections. **Table 2** summarizes the local level of service standards. LOS F (with delay reported as OVRFL) indicates that the intersection is in a state of overflow such that the analysis software is unable to calculate an average delay.

Table 1 – Intersection Level of Service Definitions

Level of Service	Description	Signalized (Avg. control delay per vehicle sec/veh)	Unsignalized (Avg. control delay per vehicle sec/veh.)
A	Free flow with no delays. Users are virtually unaffected by others in the traffic stream	[10	[10
B	Stable traffic. Traffic flows smoothly with few delays.	∃ 10 – 20	∃ 10 – 15
C	Stable flow but the operation of individual users becomes affected by other vehicles. Modest delays.	∃ 20 – 35	∃ 15 – 25
D	Approaching unstable flow. Operation of individual users becomes significantly affected by other vehicles. Delays may be more than one cycle during peak hours.	∃ 35 – 55	∃ 25 – 35
E	Unstable flow with operating conditions at or near the capacity level. Long delays and vehicle queuing.	∃ 55 – 80	∃ 35 – 50
F	Forced or breakdown flow that causes reduced capacity. Stop and go traffic conditions. Excessive long delays and vehicle queuing.	∃ 80	∃ 50

Source: Transportation Research Board, *Highway Capacity Manual 2000*, National Research Council, 2000.

Table 2 – Local Level Of Service Criteria

Jurisdiction	Satisfactory Criteria	Significance Criteria
Sonoma County	D	Project causes LOS to fall below D or adds > 5 seconds to intersection already operating at LOS D or worse
Vallejo	D	Project causes LOS to fall below D.
Caltrans	C - signalized intersections and highways	Project causes LOS to fall below C at intersections and highways If LOS already below criteria, the existing LOS and related measure of effectiveness (MOE) are to be maintained.

Traffic analysis was completed using Traffix software at signalized intersections and unsignalized intersections. Traffix software is based on the methodology of the *Highway Capacity Manual*. Evaluation of highway segments and ramp merge and diverge areas was completed using Highway Capacity Software (HCS) which is also based on the methodology of the *Highway Capacity Manual*.

Intersections Included in Analysis

The proposed project will generate new vehicular trips that will increase traffic volumes on the nearby street network. To assess changes in traffic conditions associated with the project, the following intersections, illustrated in **Figure 1**, were evaluated in this traffic study:

1. Atherton Avenue / Harbor Drive & SR-37 EB Off-Ramp
2. Atherton Avenue / Glen Lane & SR-37 WB Ramps
3. Lakeville Highway / SR-37
4. Lakeville Highway / Main Project Access
5. Lakeville Highway / SR-116
6. SR-121 / SR-116
7. SR-121 / SR-37
8. Walnut Avenue / SR-37 EB Ramps
9. Mare Island / SR-37 WB Ramps
10. Wilson Avenue / SR-37 EB Ramps
11. Wilson Avenue / SR-37 WB Off-Ramp
12. SR-29 / SR-37 EB Off-Ramp

13. SR-29 / SR-37 WB Off-Ramp

Study intersections are located in Sonoma County as well as in the City of Vallejo which is located in Solano County.

Highway Segments and Ramps Included in Analysis

The following highway segments and ramps were evaluated in this traffic study.

Segments

- Eastbound SR-37 between Atherton Avenue and Lakeville Highway
- Northbound Lakeville Highway between SR-37 and SR-116
- Eastbound SR-37 between Lakeville Highway and SR-121
- Northbound SR-121 between SR-37 and SR-116
- Southbound SR-121 between SR-116 and SR-37
- Westbound SR-37 between SR-121 and Lakeville Highway
- Southbound Lakeville Highway between SR-116 and SR-37
- Westbound SR-37 between Lakeville Highway and Atherton Avenue

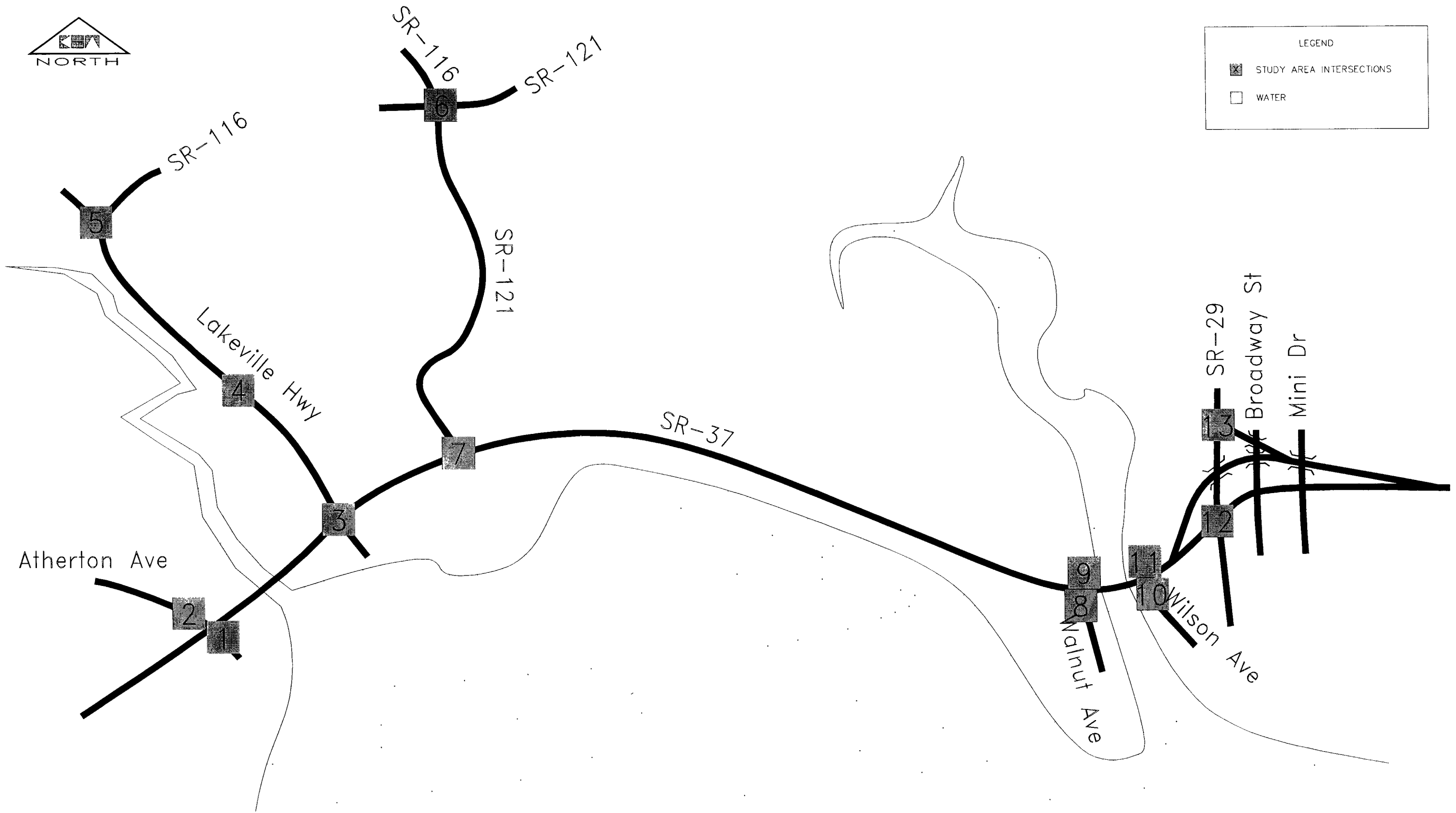
Ramps

- Eastbound Atherton Avenue off-ramp
- Eastbound Walnut Avenue off-ramp
- Eastbound Walnut Avenue on-ramp
- Eastbound Wilson Avenue off-ramp
- Eastbound Wilson Avenue on-ramp
- Eastbound SR-29 off-ramp
- Westbound SR-29 off-ramp
- Westbound SR-29 loop on-ramp
- Westbound SR-29 on-ramp
- Westbound Wilson Avenue off-ramp
- Westbound Wilson Avenue on-ramp
- Westbound Walnut Avenue off-ramp
- Westbound Walnut Avenue on-ramp
- Westbound Atherton Avenue off-ramp
- Westbound Atherton Avenue on-ramp



LEGEND

- ☒ STUDY AREA INTERSECTIONS
- ☐ WATER



Graton Rancheria No Action - Sonoma County, CA

PROJECT STUDY INTERSECTIONS

FIGURE 1



EXISTING CONDITIONS

Existing Site Uses

The casino and hotel site is generally level and currently used for agricultural purposes.

Existing Uses in Vicinity of Site

Land areas surrounding the site are currently used for rural agricultural purposes and are not expected to change in the next 20 years.

Existing Roadway Facilities

Below is a description of the principal roadway facilities near the project site:

Atherton Avenue

Atherton Avenue is a two-lane roadway with turn lanes at some intersections. Atherton Avenue provides access to SR-37 in the east and to Novato to the west.

Lakeville Highway

Lakeville Highway is a two-lane rural roadway with open roadside ditches, narrow shoulders, and left turn bays at some intersections. The road is classified as a primary arterial in the Sonoma County General Plan and is planned to be widened to 4 lanes in the next 20 years.

SR-29

State Route 29 is a four-lane divided roadway in the City of Vallejo with at-grade intersections and turn bays at some intersections providing access between Vallejo and destinations to the north.

SR-37

State Route 37 near Lakeville Highway is a four-lane highway with at-grade intersections at Lakeville Highway and at SR-121. West of Lakeville Highway, SR-37 becomes a grade separated facility. East of SR-121, SR-37 narrows to a two-lane highway until reaching Vallejo where it expands back to 4 lanes. The highway is classified in the Sonoma County General Plan as a primary arterial.

SR-116

State Route 116 is a two-lane rural roadway with open roadside ditches, narrow shoulders, and left turn bays at some intersections. SR-116 near Lakeville Highway is classified as a major collector but further to the east near SR-121 it is classified as a secondary arterial.

SR-121

State Route 121 is a two-lane rural roadway with turn bays at some intersections. SR-121 provides access from SR-37 to the north and connects with SR-116 in the north of the project area.

Walnut Avenue

Walnut Avenue is a four-lane roadway providing access between Mare Island and SR-37.

Wilson Avenue

Wilson Avenue is a two-lane roadway with turn lanes at some intersections. The roadway provides direct access to SR-37 and downtown Vallejo.

Existing Lane Configurations and Traffic Control

Existing intersection lane configurations and traffic control at study intersections are illustrated in **Figure 2**. Traffic signals are located at some of the study intersection along SR-37, including at Lakeville Highway and SR-121, and at some intersections in Vallejo. The figure also shows the length of the right and left turn bays when present.

Existing Traffic Turning Movement Volumes

Weekday intersection turning movement volumes were collected at project study area intersections in June 2003. They were more recently counted in February – March 2006 for use in this study (following completion of the SR-37 bypass through Vallejo) and are shown in **Figure 3**. Volumes were collected during the AM and PM peak periods of the day.

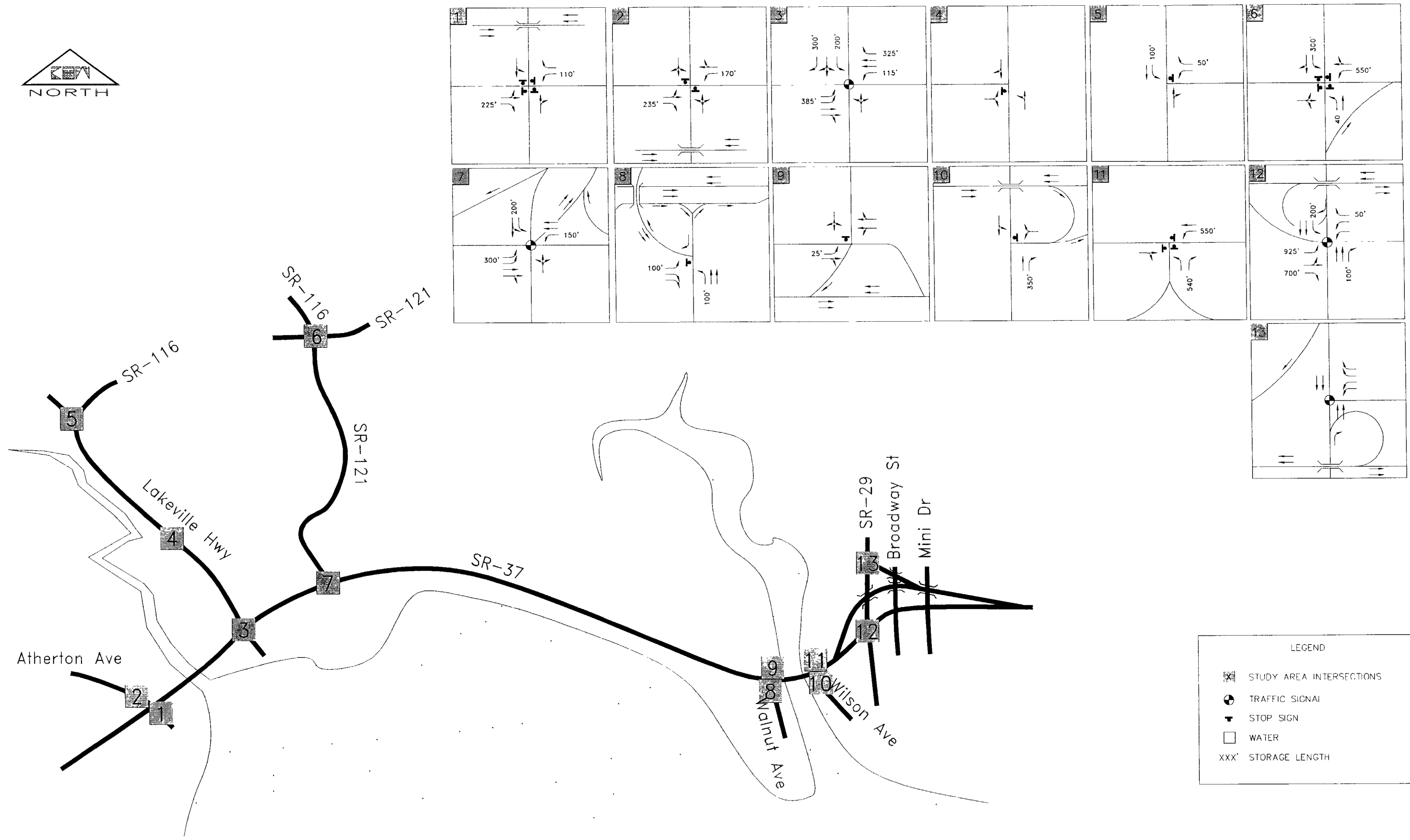
In addition to the turning movement counts, 24-hour highway volumes were collected in May 2003. Volumes were collected on SR-37, SR-121, and Lakeville Highway in the vicinity of the project site. Traffic volume data sheets are available in the **Appendix**.

Existing Pedestrian and Bicycle Facilities

Lakeville Highway near the project site does not have designated bikeway facilities but SR-37 has wide shoulders for cyclist to ride. In the future, when Lakeville Highway is widened, it is assumed that the project will include wide shoulders to accommodate bicyclists.

Existing Transit Service

Currently Sonoma County Transit does not provide service near the site and has no plans or desire to provide service. Serving the casino and hotel site would require a large route deviation or a new route and would impact the transit agency's ability to timely manage their current service area.

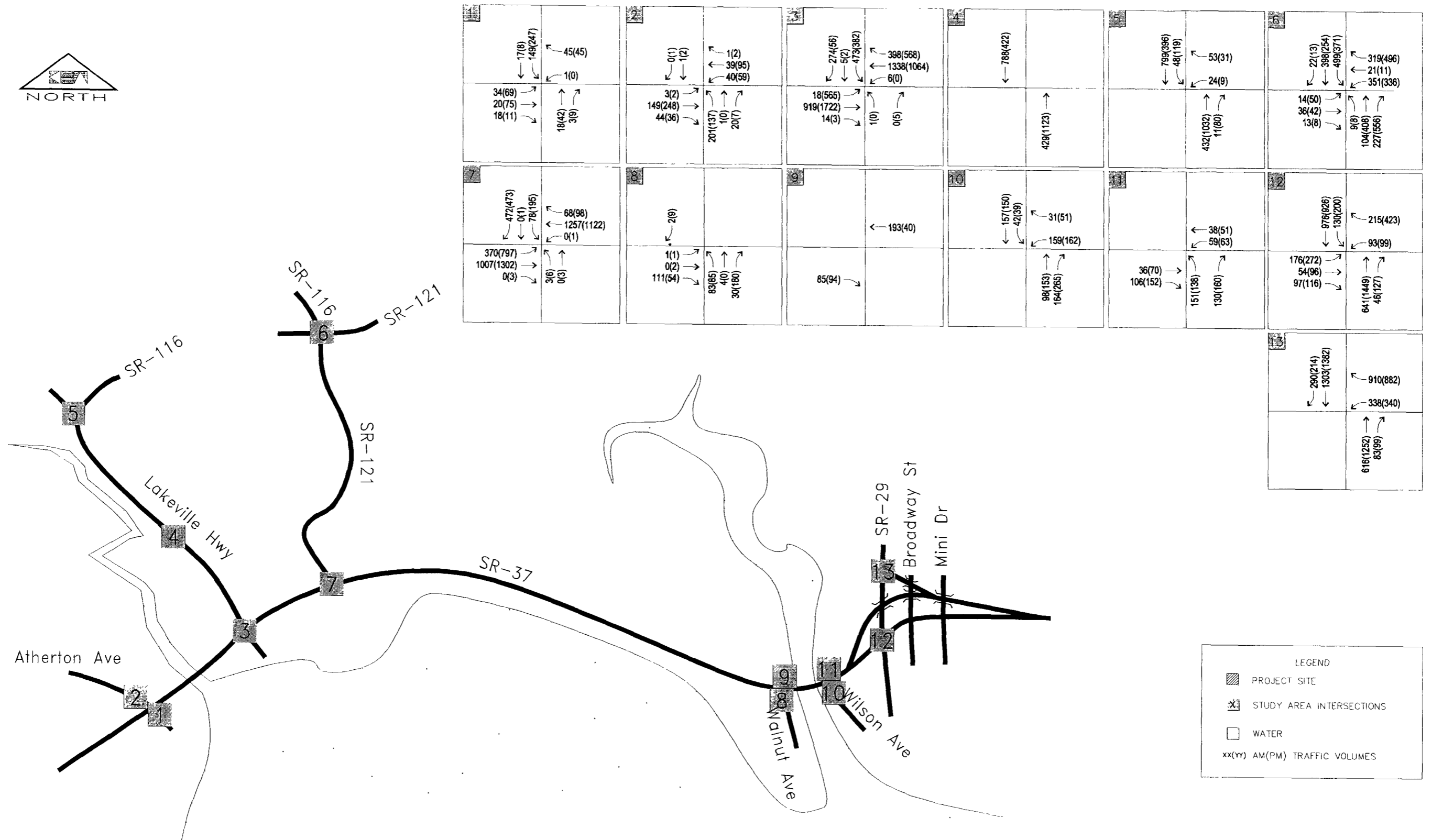


Graton Rancheria No Action - Sonoma County, CA

EXISTING LANE GEOMETRY AND TRAFFIC CONTROL

FIGURE 2





LEGEND

- PROJECT SITE
- STUDY AREA INTERSECTIONS
- WATER
- xx(yy) AM(PM) TRAFFIC VOLUMES

Graton Rancheria No Action - Sonoma County, CA
 EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES

FIGURE 3



Existing Collision History

Accident data was requested from Caltrans but not available at the time this report was written. Kimley-Horn obtained collision history from the Freeway Performance Measurement System (PeMS) database for accidents that occurred between 2003 and 2005 at the study intersections as well as on the highway segments in the study area. The database provided information including the direction of travel and the time of day of each incident, which included collisions, and several other events such as debris on the roadway, stalled vehicles, malfunctioning traffic signals, etc. Kimley-Horn eliminated non-collision events from this evaluation. Unfortunately the remaining collision data provided by PeMS does not specify the type of collision (e.g. rear-end, right angle, etc.) so is not helpful in determining any trends that may exist in the traffic accidents that have occurred over the three-year study period. However, the data does indicate the total collisions at specific intersections or along highway segments.

It should be noted that sections of SR-37 through Vallejo was reconstructed and the intersection of SR-37/SR-29 was grade separated as a result of the SR-37 bypass. Therefore, the number of future collisions along the bypass and associated intersections is expected to be lower in the future.

Study Intersections

Atherton Avenue/Harbor Drive & SR-37 EB Off-Ramp.

<u>Accident Type</u>	<u>Number of Accidents</u>
Vehicle/Vehicle	<u>1</u>

Atherton Avenue/Glen Lane & SR-37 WB Ramps.

<u>Accident Type</u>	<u>Number of Accidents</u>
Vehicle/Vehicle	<u>4</u>

Lakeville Highway/SR-37.

<u>Accident Type</u>	<u>Number of Accidents</u>
Vehicle/Vehicle	<u>85</u>

Lakeville Highway/Main Project Access.

<u>Accident Type</u>	<u>Number of Accidents</u>
----------------------	----------------------------

Vehicle/Vehicle 0

Lakeville Highway/SR-116.

<u>Accident Type</u>	<u>Number of Accidents</u>
Vehicle/Vehicle	<u>31</u>

SR-121/SR-116.

<u>Accident Type</u>	<u>Number of Accidents</u>
Vehicle/Vehicle	<u>29</u>

SR-121/SR-37.

<u>Accident Type</u>	<u>Number of Accidents</u>
Vehicle/Vehicle	<u>112</u>

Walnut Avenue/SR-37 EB Ramps.

<u>Accident Type</u>	<u>Number of Accidents</u>
Vehicle/Vehicle	<u>24</u>

Mare Island/SR-37 WB Ramps.

<u>Accident Type</u>	<u>Number of Accidents</u>
Vehicle/Vehicle	<u>6</u>

Wilson Avenue/SR-37 EB Ramps.

<u>Accident Type</u>	<u>Number of Accidents</u>
Vehicle/Vehicle	<u>11</u>

Wilson Avenue/SR-37 WB Off-Ramp.

<u>Accident Type</u>	<u>Number of Accidents</u>
Vehicle/Vehicle	<u>5</u>

Highway Segments**SR-37 west of Atherton Avenue.**

<u>Accident Type</u>	<u>Number of Accidents</u>
Vehicle/Vehicle	<u>18</u>

SR-37 between Atherton Avenue and Lakeville Highway.

<u>Accident Type</u>	<u>Number of Accidents</u>
Vehicle/Vehicle	<u>107</u>

Lakeville Highway between SR-37 and SR-116.

<u>Accident Type</u>	<u>Number of Accidents</u>
Vehicle/Vehicle	<u>90</u>

SR-37 between Lakeville Highway and SR-121.

<u>Accident Type</u>	<u>Number of Accidents</u>
Vehicle/Vehicle	<u>83</u>

SR-121 between SR-37 and SR-116.

<u>Accident Type</u>	<u>Number of Accidents</u>
Vehicle/Vehicle	<u>87</u>

SR-37 between SR-121 and Walnut Avenue.

<u>Accident Type</u>	<u>Number of Accidents</u>
Vehicle/Vehicle	<u>187</u>

SR-37 between Walnut Avenue and SR-29.

<u>Accident Type</u>	<u>Number of Accidents</u>
Vehicle/Vehicle	<u>63</u>

SR-37 east of SR-29.

<u>Accident Type</u>	<u>Number of Accidents</u>
Vehicle/Vehicle	<u>15</u>

Existing Levels of Service at Study Intersections

Traffic operations were evaluated under existing traffic conditions.

As noted previously, LOS D or better is the criteria for satisfactory operation at intersections within the county. Impacts are considered to be significant if a project causes LOS to fall below D. Furthermore, project intersections currently operating below the county standard are considered to be significantly impacted if the average delay per vehicle increases by 5 seconds or more.¹

LOS C or better is used by Caltrans as the criteria for satisfactory operation at intersections and highways. Impacts are considered to be significant if the project causes LOS to fall below C. In addition, intersections currently operating less than LOS C are expected to maintain the existing measure of effectiveness.²

LOS D or better is used as the criteria in Vallejo for satisfactory operation at intersections. Impacts are considered to be significant if the project causes LOS to fall below D.

Results of the analysis are presented in **Table 3**, along with the jurisdictional standard. (Results shown as bold in the table do not meet operational standards.) The signal control is listed as TS for a signalized intersection, AWSC for an all-way stop-controlled intersection and TWSC for a two-way stop-controlled intersection. Two-way stop-controlled (TWSC) intersections maybe operate acceptably overall but only the worst approach is reported in the table. The overall level of service is reported for signalized and all-way stop-controlled intersections. The worst approach is reported because as stated in the *Highway Capacity Manual*, "the LOS criteria for two-way stop-controlled (TWSC) intersections are different from the criteria for signalized intersections primarily because different transportation facilities create different driver perceptions. The expectation is that a signalized intersection is designed to carry higher traffic volumes

¹ County of Sonoma, Guidelines for Traffic Studies.

² Caltrans, Guide for the Preparation of Traffic Impact Studies, December 2002.

and experience greater delay than an unsignalized intersection. LOS for a TWSC intersection is determined by the computed or measured control delay and is defined for each minor movement. LOS is not defined for the intersection as a whole. At TWSC intersections the critical movement may control the overall performance of the intersection." Additional detail is provided in the **Appendix**. Results of the analysis indicate some existing study area intersections currently operate at unacceptable levels of service based on established significance criteria. Intersections and approaches currently not meeting standards include the following:

- Lakeville Highway / SR-116
- SR-121 / SR-116
- SR-29 / SR-37 EB Off-Ramp

SR-121 / SR-116 is unsignalized, thus side street traffic experiences long delays while waiting to enter the major street traffic flow.

Table 3 – Existing Levels of Service

Existing							
	Intersection	Criteria	Signal Control	2006			
				AM		PM	
				LOS	Delay	LOS	Delay
1	Atherton Avenue / Harbor Drive & SR-37 EB Off-Ramp	C	AWSC	A	8.6	B	10.3
2	Atherton Avenue / Glen Lane & SR-37 WB Ramps	C	TWSC	B	13.4	C	16.1
3	Lakeville Highway / SR-37	C	TS	B	19.5	C	22.4
4	Lakeville Highway / Main Project Access	D	TWSC	A	0.0	A	0.0
5	Lakeville Highway / SR-116	C	TWSC	C	18.6	D	30.4
6	SR-121 / SR-116	C	AWSC	E	49.8	F	69.6
7	SR-121 / SR-37	C	TS	B	12.5	C	20.1
8	Walnut Avenue / SR-37 EB Ramps	C	TWSC	A	9.6	A	9.3
9	Mare Island / SR-37 WB Ramps	C	TWSC	A	9.0	A	9.0
10	Wilson Avenue / SR-37 EB Ramps	C	TWSC	B	12.8	B	13.6
11	Wilson Avenue / SR-37 WB Off-Ramp	C	AWSC	A	9.2	A	10.0
12	SR-29 / SR-37 EB Off-Ramp	C	TS	C	26.4	E	65.7
13	SR-29 / SR-37 WB Off-Ramp	C	TS	C	23.0	C	23.6

Other warrants such as for minimum vehicle volumes, interruption of continuous traffic, and traffic progression were not evaluated because they generally require higher traffic volumes to be satisfied. Accident history and school areas were also not evaluated based on the results of field observations, which noted that neither of these warrant thresholds was likely to be met. A copy of the analysis summary for Warrant #3 is included in the **Appendix**.

Existing Levels of Service on Highway Segments and Ramps

Traffic analyses were completed to evaluate the existing weekday operation of the study segments and ramps. Results of the analyses are presented in **Table 4**. (Results shown as bold in the table do not meet operational standards.)

LOS D or better is used by Caltrans as the criteria for satisfactory operation on highway segments and ramps. Impacts are considered to be significant if the project causes LOS to fall below D. In addition, intersections currently operating less than the LOS D are expected to maintain the existing measure of effectiveness.



Table 5 – Existing Highway Levels of Service

Highway Section/Ramp	Criteria	Existing	
	LOS	LOS	MOE*
Eastbound / Northbound			
Atherton Avenue EB Off-Ramp	C	C	23.1
SR-37 between Atherton Avenue and Lakeville Highway (EB)	C	C	22.2
Lakeville Highway between SR-37 and SR-116 (NB)	C	E	90.8% 40.0
SR-37 between Lakeville Highway and SR-121 (EB)	C	C	20.5
SR-121 between SR-37 and SR-116 (NB)	C	E	88.2% 40.5
Walnut Avenue EB Off-Ramp	C	B	15.1
Walnut Avenue EB On-Ramp	C	B	14.1
Wilson Avenue EB Off-Ramp	C	B	14.0
Wilson Avenue EB On-Ramp	C	B	15.9
SR-29 EB Off-Ramp	C	B	10.9
Westbound / Southbound			
SR-29 WB Off-Ramp	C	A	-4.9
SR-29 WB On-Ramp (loop)	C	B	11.1
SR-29 WB On-Ramp	C	B	12.2
Wilson Avenue WB Off-Ramp	C	B	10.2
Wilson Avenue WB On-Ramp	C	B	13.8
Walnut Avenue WB Off-Ramp	C	A	3.7
Walnut Avenue WB On-Ramp	C	B	15.0
SR-121 between SR-116 and SR-37 (SB)	C	E	87.5% 40.7
SR-37 between SR-121 and Lakeville Highway (WB)	C	B	15.8
Lakeville Highway between SR-116 and SR-37 (SB)	C	E	86.0% 40.6
SR-37 between Lakeville Highway and Atherton Avenue (WB)	C	A	10.9
Atherton Avenue WB Off-Ramp	C	B	13.4
Atherton Avenue WB On-Ramp	C	B	12.9

*MOE for two lane highways = percent time following & average travel speed (mi/hr)
MOE for multi-lane highways & ramps = density (pc/mi/ln)

Results indicate that the highway does not meet standards in the existing condition on Lakeville Highway and SR-121.

NO ACTION ALTERNATIVE

The No Action Alternative represents the evaluation of traffic conditions without the construction of the proposed casino and hotel. The alternative includes evaluation of traffic during two horizon years. The first horizon, in year 2008, corresponds with the year of the proposed opening of the casino and hotel. The second horizon, in year 2020, corresponds to the same buildout year used for the other project alternatives.

Proposed Roadway Projects in Vicinity of Site

Some major projects are planned in the next 20 years that could affect traffic access to the project site.

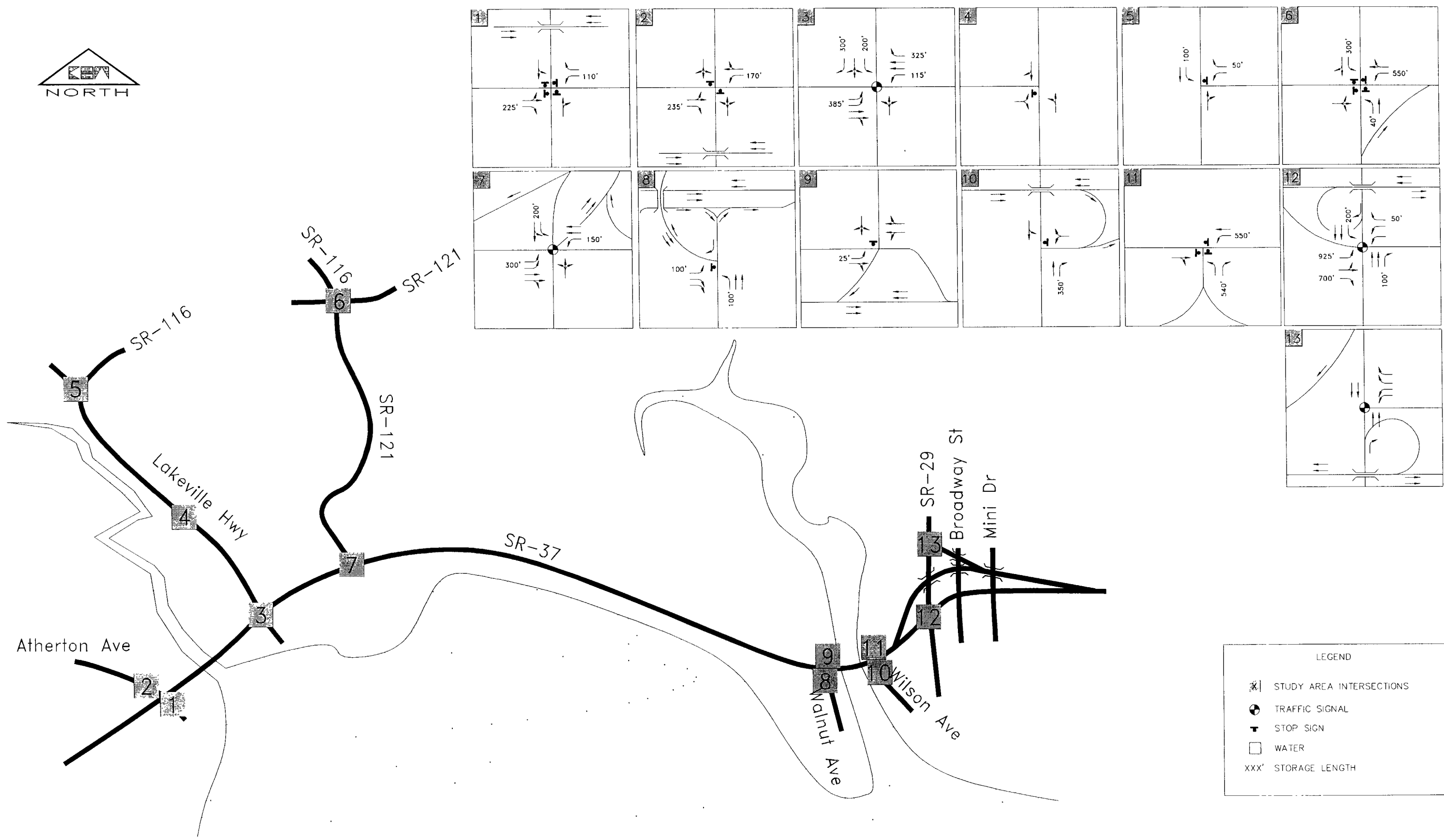
The Sonoma County General Plan identifies a project to widen Lakeville Highway to four lanes between SR-37 and SR-116. Another project is to reconstruct the SR-116/SR-121 intersection which is currently controlled by stop signs. No specific description of the improvement project is contained in the General Plan but is assumed that the project will include a traffic signal as well as geometric changes.

Near-Term Lane Configurations and Traffic Control

As discussed above, roadway improvements are planned for the study intersections. Some improvements are anticipated to be in place before or at approximately the same time as the proposed opening year of the casino and hotel. **Figure 4** illustrates the roadway geometry and traffic control expected to be in place in 2008 regardless of the casino and hotel.

Near-Term Traffic Volumes (No Action)

To reflect the traffic levels anticipated to occur in the year 2008, annual growth rates were determined for study intersections based on year 2020 forecasts obtained from the City of Vallejo and Sonoma County. These rates were applied to the existing traffic volumes to increase the turning movement counts between the time they were collected and the year 2008. **Figure 5** shows the assumed increase in background traffic at the study intersections. These volumes represent anticipated traffic levels in the year 2008, regardless of the proposed casino and hotel.



LEGEND

- STUDY AREA INTERSECTIONS
- TRAFFIC SIGNAL
- STOP SIGN
- WATER
- XXX' STORAGE LENGTH

Graton Rancheria No Action - Sonoma County, CA

NEAR-TERM LANE GEOMETRY AND TRAFFIC CONTROL

FIGURE 4



Long-Term Lane Configurations and Traffic Control

Additional roadway improvements are expected within the project study area by the year 2020 including the widening of Lakeville Highway. **Figure 6** illustrates the intersection geometry and traffic control assumed in the long-term analysis.

Long-Term Cumulative Forecast (No Action)

Few if any development projects in the vicinity of the site are expected to be completed by the year 2020. However, background growth will continue to occur as a result of other development projects farther from the site with the greatest development occurring in the City of Vallejo. This growth will contribute to a cumulative increase in background traffic regardless of the casino and hotel. To reflect the traffic levels anticipated to occur in the year 2020, incremental increases in traffic volumes were determined for study intersections based on year 2020 forecasts obtained from the City of Vallejo and Sonoma County. These volumes were applied to the existing traffic volumes to increase the turning movement counts between the time they were collected and the year 2020. **Figure 7** shows the long-term cumulative traffic volumes assumed in this study.

No Action LOS Conditions and Impacts

Traffic operations were evaluated under the following development conditions:

- Near-term conditions (year 2008) without project
- Long-term conditions (year 2020) without project

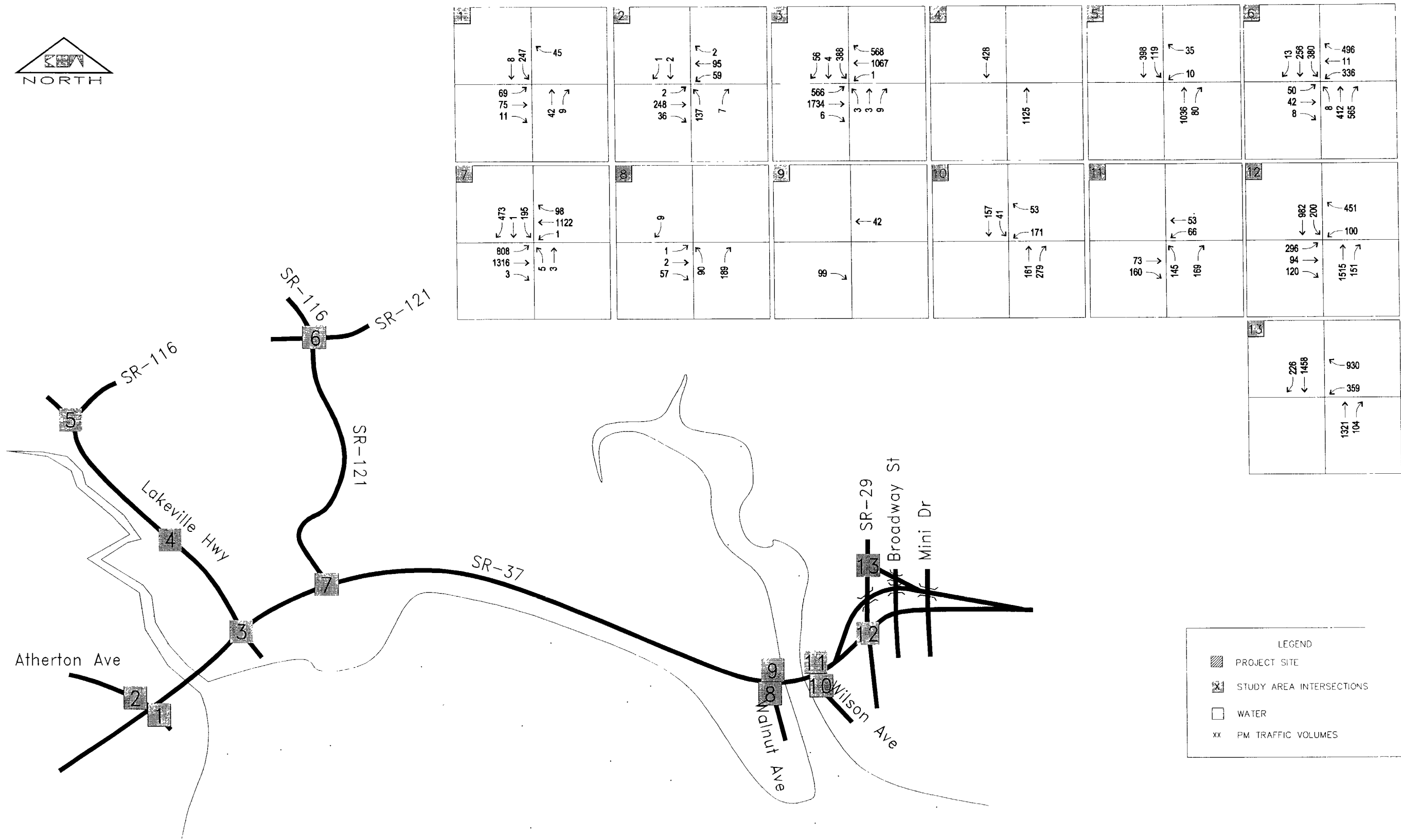
Results of the analysis are presented in **Table 5**. (Results shown as bold in the table do not meet operational standards.) The signal control is listed as TS for a signalized intersection, AWSC for an all-way stop-controlled intersection and TWSC for a two-way stop-controlled intersection. Two-way stop-controlled (TWSC) intersections maybe operate acceptably overall but only the worst approach is reported in the table. The overall level of service is reported for signalized and all-way stop-controlled intersections. Additional detail is provided in the **Appendix**. As seen in the results, the following intersections and approaches will fail to meet acceptable level of service thresholds based on established significance criteria, regardless of the casino and hotel project:

2008 Results

- Lakeville Highway / SR-116
- SR-121 / SR-116
- SR-29 / SR-37 EB Off-Ramp

2020 Results

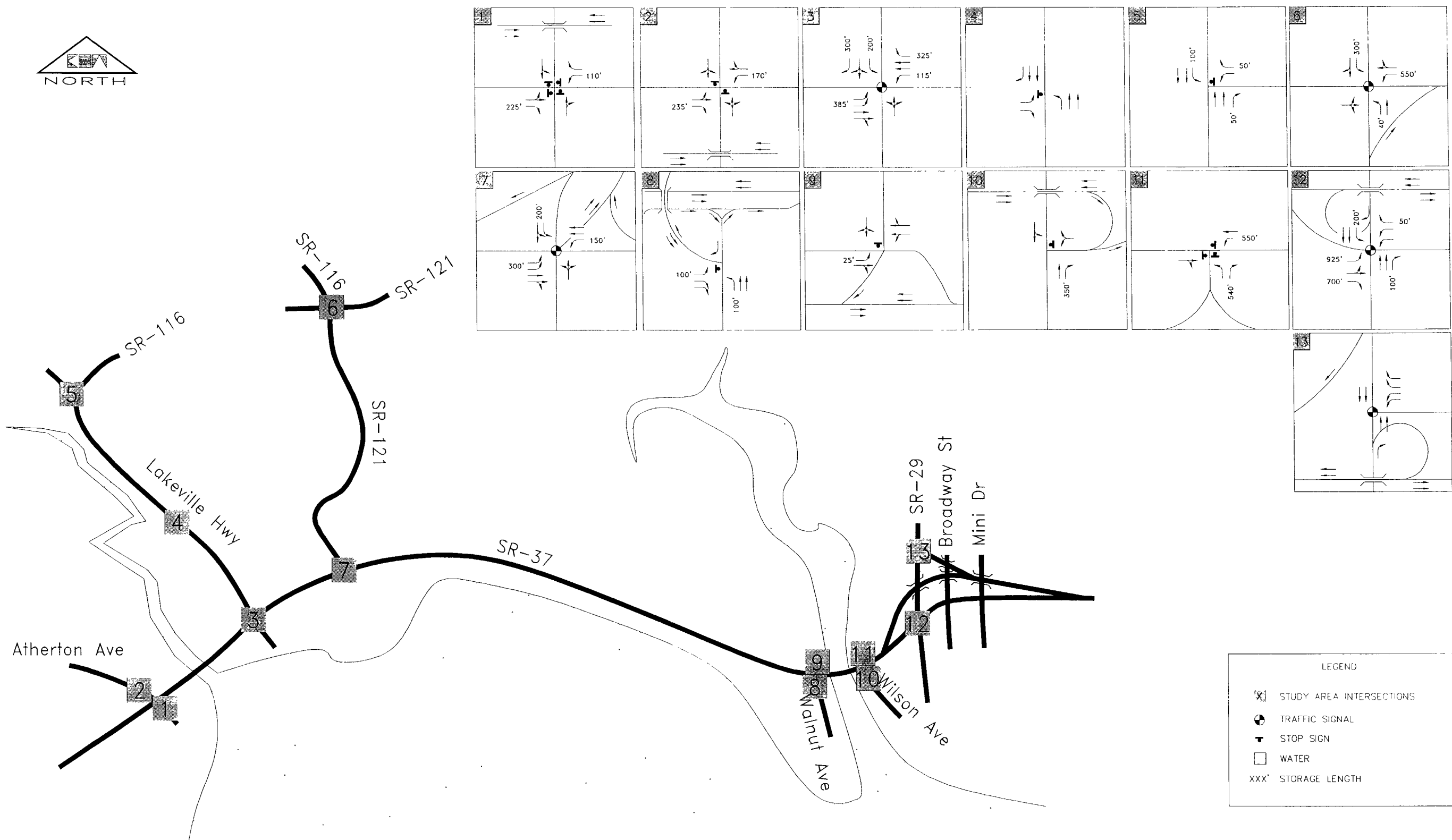
- Lakeville Highway / SR-116
- SR-121 / SR-116
- Walnut Avenue / SR-37 EB Ramps
- Wilson Avenue / SR-37 EB Ramps
- Wilson Avenue / SR-37 WB Off-Ramp
- SR-29 / SR-37 EB Off-Ramp
- SR-29 / SR-37 WB Off-Ramp



Graton Rancheria No Action - Sonoma County, CA

NEAR-TERM PM TRAFFIC VOLUMES

FIGURE 5



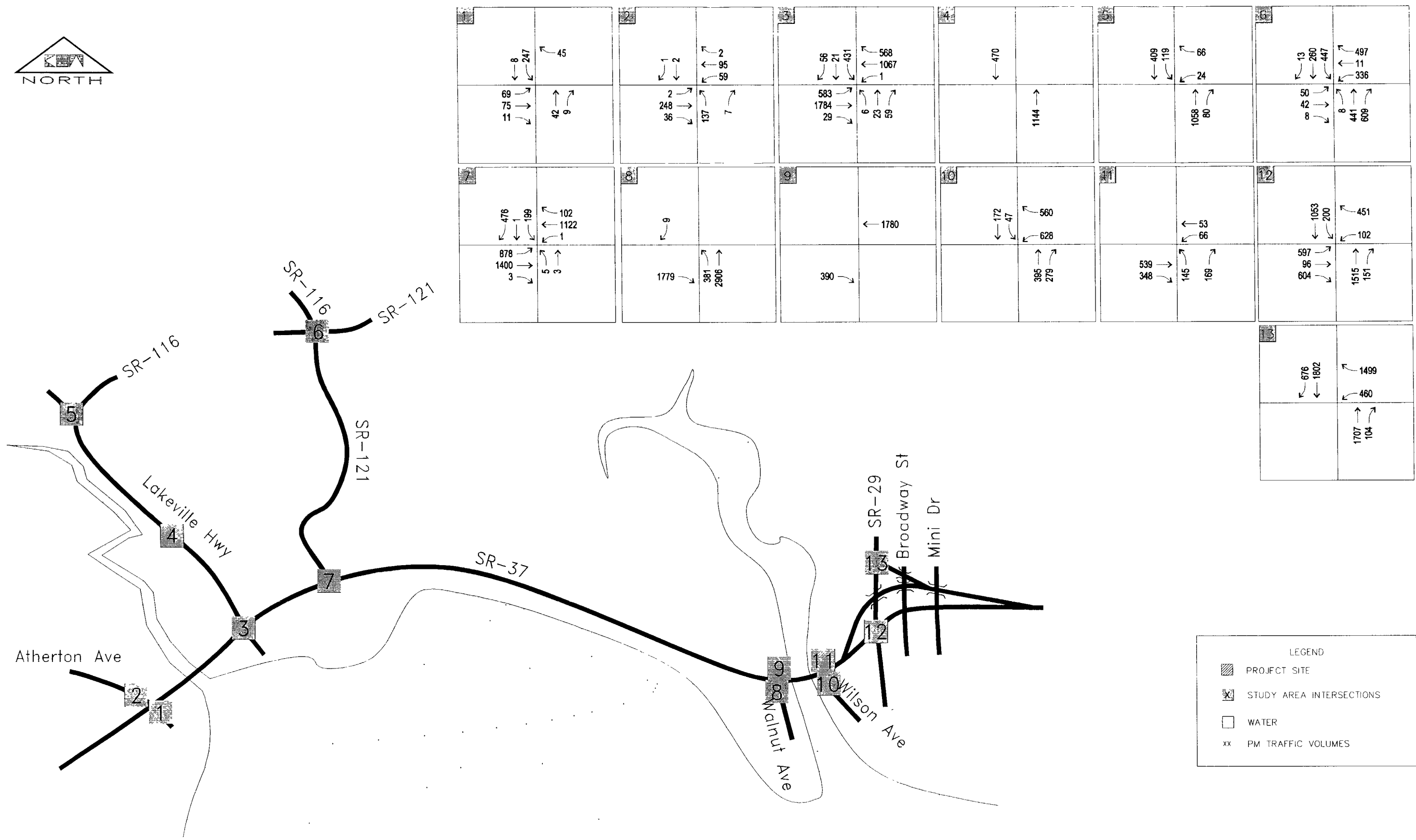
Graton Rancheria No Action - Sonoma County, CA

LONG-TERM LANE GEOMETRY AND TRAFFIC CONTROL

FIGURE 6



Kimley-Horn
and Associates, Inc.



Graton Rancheria No Action - Sonoma County, CA

LONG-TERM CUMULATIVE PM TRAFFIC VOLUMES

FIGURE 7

Table 6 – No Action Levels of Service

No Action									
	Intersection	Criteria	Signal Control	2006		2008		2020	
				Existing		Base (w/o Proj.)		Base (w/o Proj.)	
				LOS	Delay	LOS	Delay	LOS	Delay
1	Atherton Avenue / Harbor Drive & SR-37 EB Off-Ramp	C	AWSC	B	10.3	B	10.3	B	10.3
2	Atherton Avenue / Glen Lane & SR-37 WB Ramps	C	TWSC	C	16.1	C	16.1	C	16.1
3	Lakeville Highway / SR-37	C	TS	C	22.4	C	23.4	C	30.7
4	Lakeville Highway / Main Project Access	D	TWSC	A	0.0	A	0.0	A	0.0
5	Lakeville Highway / SR-116	C	TWSC	D	30.4	D	31.0	D	27.8 +
6	SR-121 / SR-116	C	AWSC TS	F	69.6	F	71.9	F	71.6 +
7	SR-121 / SR-37	C	TS	C	20.1	C	20.1	C	20.7
8	Walnut Avenue / SR-37 EB Ramps	C	TWSC	A	9.3	A	9.4	F	502.9
9	Mare Island / SR-37 WB Ramps	C	TWSC	A	9.0	A	9.0	A	9.0
10	Wilson Avenue / SR-37 EB Ramps	C	TWSC	B	13.6	B	14.3	F	753.9
11	Wilson Avenue / SR-37 WB Off-Ramp	C	AWSC	A	10.0	B	10.3	F	186.6
12	SR-29 / SR-37 EB Off-Ramp	C	TS	E	65.7	E	77.6	F	157.0
13	SR-29 / SR-37 WB Off-Ramp	C	TS	C	23.6	C	25.2	F	100.5

As noted in **Table 5**, significant delays are expected, regardless of the proposed casino and hotel project. Table results denoted by a plus sign indicate level of service improves at the intersection in the long-term because of improvements assumed to be in place at that time. Poor levels of service in Vallejo are connected with high levels of near-term and long-term traffic volumes (without the project) at unsignalized study intersections were compared against the peak hour warrant in the *2003 Manual on Uniform Traffic Control Devices (MUTCD)* and the *California Supplement*.

Results of the analysis showed that the following intersections will satisfy traffic signal Warrant #3 by the year 2008 and 2020, regardless of the proposed project.

- SR-121 / SR-116 (2008 only)
- Walnut Avenue / SR-37 EB Ramps (2020 only)
- Wilson Avenue / SR-37 EB Ramps (2020 only)

SR-121 / SR-116 will be signalized in the year 2020.

Other warrants such as for minimum vehicle volumes, interruption of continuous traffic, and traffic progression were not evaluated because they generally require higher traffic volumes to be satisfied. Accident history and school areas were also not evaluated based on the results of field observations, which noted that neither of these warrant thresholds was likely to be met. A copy of the analysis summary for Warrant #3 is included in the **Appendix**.

No Action LOS Conditions and Impacts on Highway Segments and Ramps

Traffic analyses were completed to evaluate the operation of the study highway segments and ramps in the year 2008 and 2020.

Results of the analyses are presented in **Table 6**. As shown in the table, all of the highway segments and on/off ramps are expected to operate at acceptable levels of service based on established significance criteria in the near-term except on Lakeville Highway and SR-121. In the cumulative condition there are additional ramps that operate at unacceptable levels of service. (Results shown as bold in the table do not meet operational standards.)

Table 8 – No Action Highway Levels of Service

Highway Section/Ramp	Criteria		Existing		2008		2020	
	LOS	LOS	MOE*	LOS	MOE*	LOS	MOE*	
Eastbound / Northbound								
Atherton Avenue EB Off-Ramp	C	C	23.1	C	23.1	C	24.1	
SR-37 between Atherton Avenue and Lakeville Highway (EB)	C	C	22.2	C	22.3	C	23.2	
Lakeville Highway between SR-37 and SR-116 (NB)	C	E	90.8% 40.0	E	90.9% 39.9	B	11.4	
SR-37 between Lakeville Highway and SR-121 (EB)	C	C	20.5	C	20.7	C	22.1	
SR-121 between SR-37 and SR-116 (NB)	C	E	88.2% 40.5	E	88.3% 40.4	E	89.1% 39.8	
Walnut Avenue EB Off-Ramp	C	B	15.1	B	15.5	B	16.3	
Walnut Avenue EB On-Ramp	C	B	14.1	B	15.0	F	65.2	
Wilson Avenue EB Off-Ramp	C	B	14.0	B	14.9	F	45.1	
Wilson Avenue EB On-Ramp	C	B	15.9	B	16.9	E	37.3	
SR-29 EB Off-Ramp	C	B	10.9	B	11.7	D	34.2	
Westbound / Southbound								
SR-29 WB Off-Ramp	C	A	-4.9	A	-4.0	B	15.5	
SR-29 WB On-Ramp (loop)	C	B	11.1	B	11.7	B	18.1	
SR-29 WB On-Ramp	C	B	12.2	B	13.0	F	26.7	
Wilson Avenue WB Off-Ramp	C	B	10.2	B	10.9	C	22.1	
Wilson Avenue WB On-Ramp	C	B	13.8	B	14.6	D	31.2	
Walnut Avenue WB Off-Ramp	C	A	3.7	A	4.5	C	21.2	
Walnut Avenue WB On-Ramp	C	B	15.0	B	15.1	B	17.4	
SR-121 between SR-116 and SR-37 (SB)	C	E	87.5% 40.7	E	87.5% 40.6	E	87.8% 39.9	
SR-37 between SR-121 and Lakeville Highway (WB)	C	B	15.8	B	15.9	B	15.9	
Lakeville Highway between SR-116 and SR-37 (SB)	C	E	86.0% 40.6	E	86.1% 40.6	A	4.9	
SR-37 between Lakeville Highway and Atherton Avenue (WB)	C	A	10.9	A	10.9	A	10.9	
Atherton Avenue WB Off-Ramp	C	B	13.4	B	13.4	B	13.4	
Atherton Avenue WB On-Ramp	C	B	12.9	B	12.9	B	12.9	

*MOE for two lane highways = percent time following & average travel speed (mi/hr)

MOE for multi-lane highways & ramps = density (pc/mi/ln)

Results indicate that some highway segments and ramps will not meet standards regardless of the project at several locations. It should be noted that the level of service improves on Lakeville Highway in the year 2020 due to the planned improvement to widen of the roadway. The poor levels of service on the Walnut Avenue and Wilson Avenue ramps in the eastbound direction are due to a large development assumed in the City of Vallejo model at the shipyard on Mare Island.

ALTERNATIVE F – LAKEVILLE SITE

Alternative F represents the evaluation of traffic conditions with the construction of the proposed casino and hotel on Lakeville Highway near SR-37. The alternative includes evaluation of traffic during two horizon years. The first horizon, in year 2008, corresponds with the year of the proposed opening of the casino and hotel. The second horizon, in year 2020, corresponds to the same buildout year used for the other project alternatives. **Figure F1** illustrates the location of the project in relation to the major street network.

Proposed Site Uses

Figure F2 shows the proposed layout of the casino and hotel for Alternative F. The site layout includes a main building of approximately 450,000 square feet for a casino, restaurants, food court, event center, banquet facilities, lobby, pool, and other ancillary functions. In addition the project is planned to include up to 300 hotel rooms, primarily for casino guests. A breakdown of square footage is below:

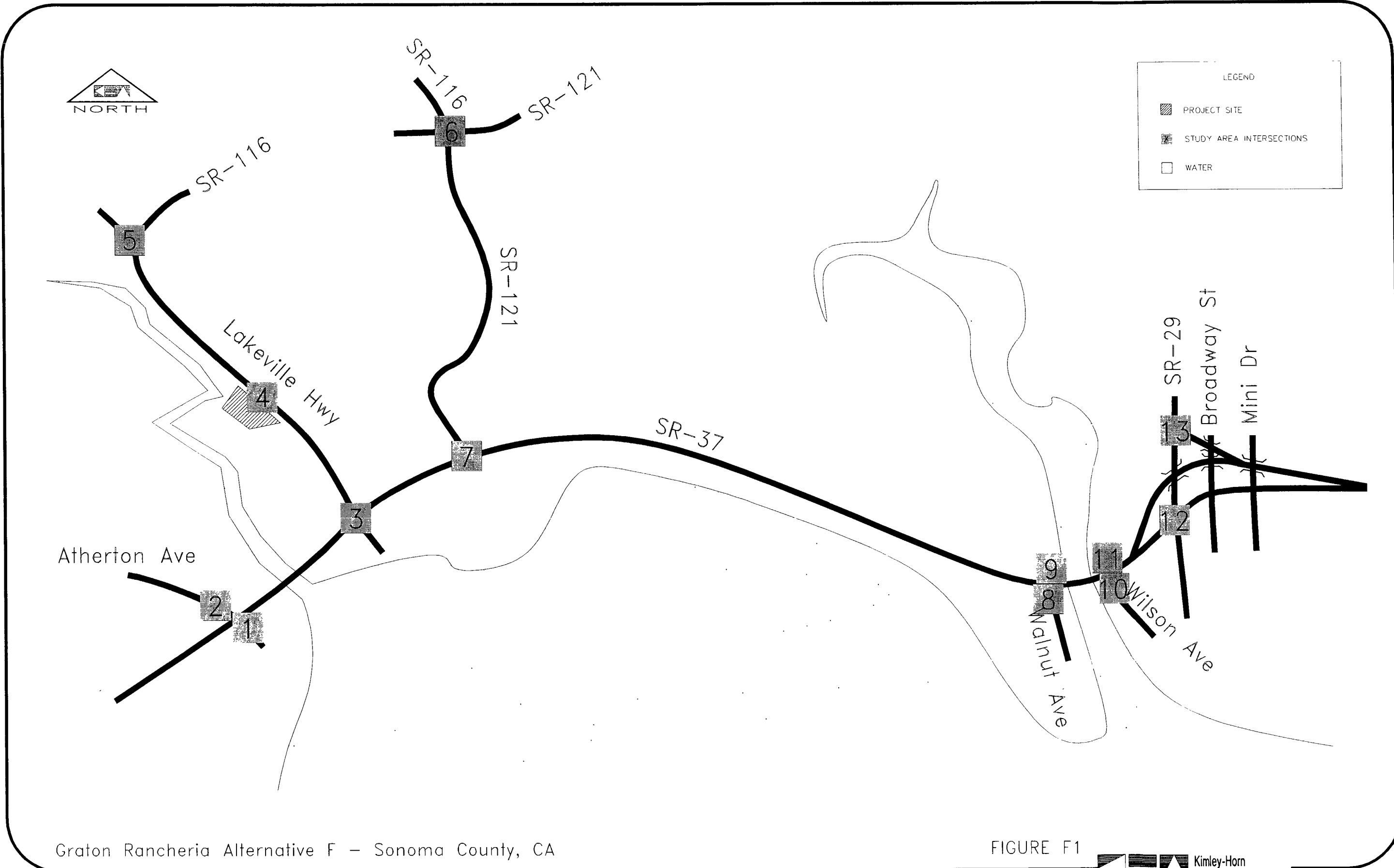
- Casino and Entertainment areas – 408,150 s.f.
- Lobby/Bar/Back of House/Sundries – 14,750 s.f.
- Pool and Spa – 27,100 s.f.
450,000 s.f.

- Hotel Rooms – 291,000 s.f.

The site plan also shows supporting uses such as parking lots, a parking structure, and wastewater treatment facilities.

Site Access

Alternative F site has two existing accesses from Lakeville Highway. The main driveway is in front of the casino and hotel approximately one mile north of the Lakeville Highway / SR-37 intersection. The driveway provides direct access to the large surface parking lots near the highway. The other access is approximately a half mile away near the south boundary of the parcel and because of its orientation is expected to generally be lightly used as an exit from the site. To be conservative, all project traffic was assumed to enter and exit the main driveway. Currently, neither access is signalized.

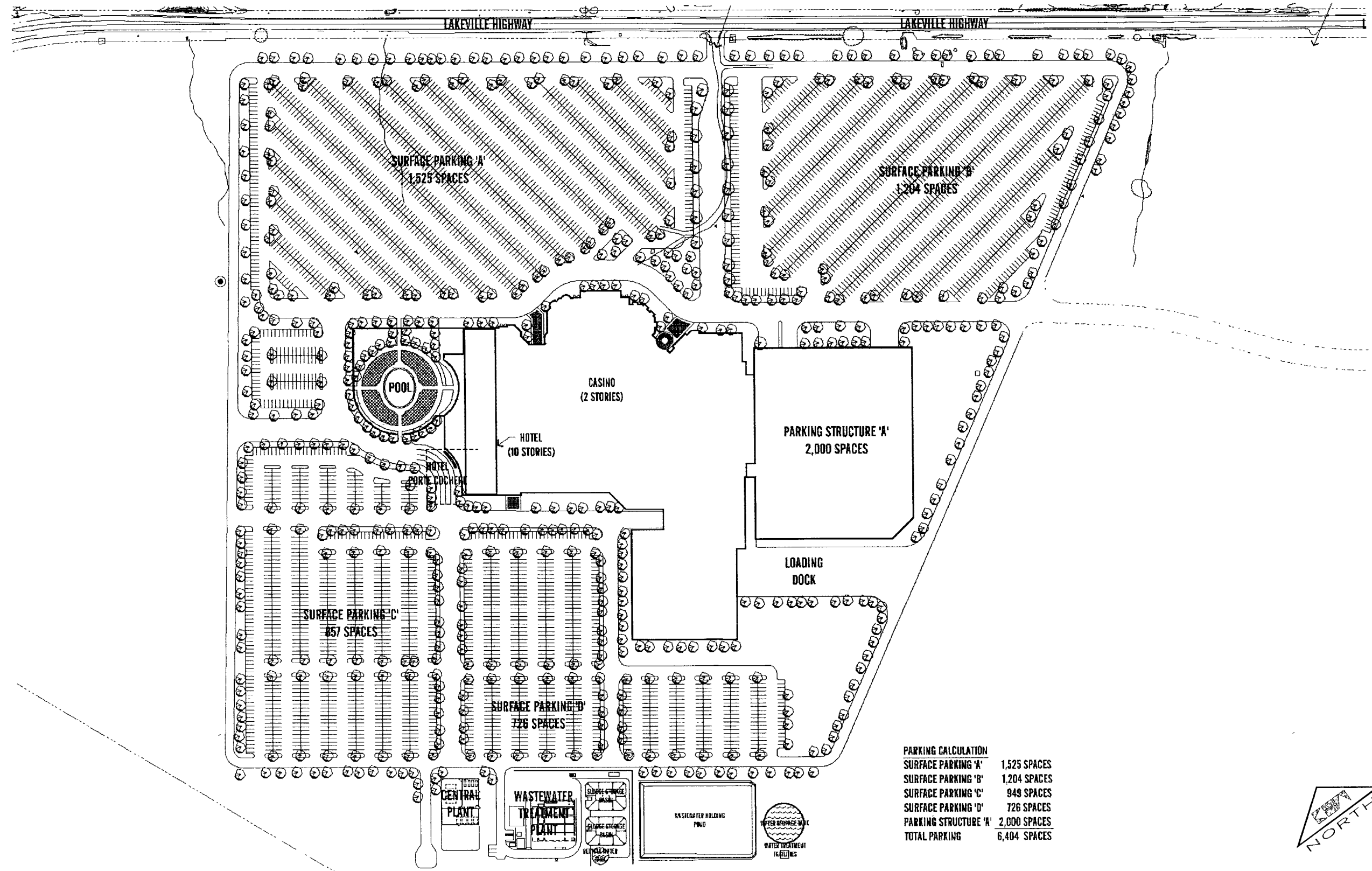


Graton Rancheria Alternative F - Sonoma County, CA

PROJECT SITE LOCATION

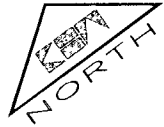
FIGURE F1





PARKING CALCULATION

SURFACE PARKING 'A'	1,525 SPACES
SURFACE PARKING 'B'	1,204 SPACES
SURFACE PARKING 'C'	857 SPACES
SURFACE PARKING 'D'	726 SPACES
PARKING STRUCTURE 'A'	2,000 SPACES
TOTAL PARKING	6,404 SPACES



Graton Rancheria Alternative F – Sonoma County, CA

FIGURE F2



PROPOSED PROJECT SITE PLAN

Project Trip Generation

Trip generation for Native American gaming facilities generally peaks on Saturday evenings; however, background traffic on adjacent streets is lower than during peak weekday periods, making the overall number of vehicles on the road lower as well. In addition, casino facilities are open 24/7 and typically do not generate extreme peaks like other uses. Instead, casino/hotel traffic follows a smoother curve that builds steadily from early morning until about 7:00 PM, after which traffic levels slowly decline. Based on existing traffic volume information and expected trip generation from the casino and hotel, it was determined that the weekday PM peak period represents the worst case period to evaluate.

Trip generation for development projects is typically based on rates contained in the Institute of Transportation Engineer's publication *Trip Generation, 7th Edition*. This manual is a standard reference used by jurisdictions throughout the country and is based on actual trip generation studies at numerous locations in areas of various populations. However, *Trip Generation* does not have a land use for casinos similar to the type proposed by Graton Rancheria.

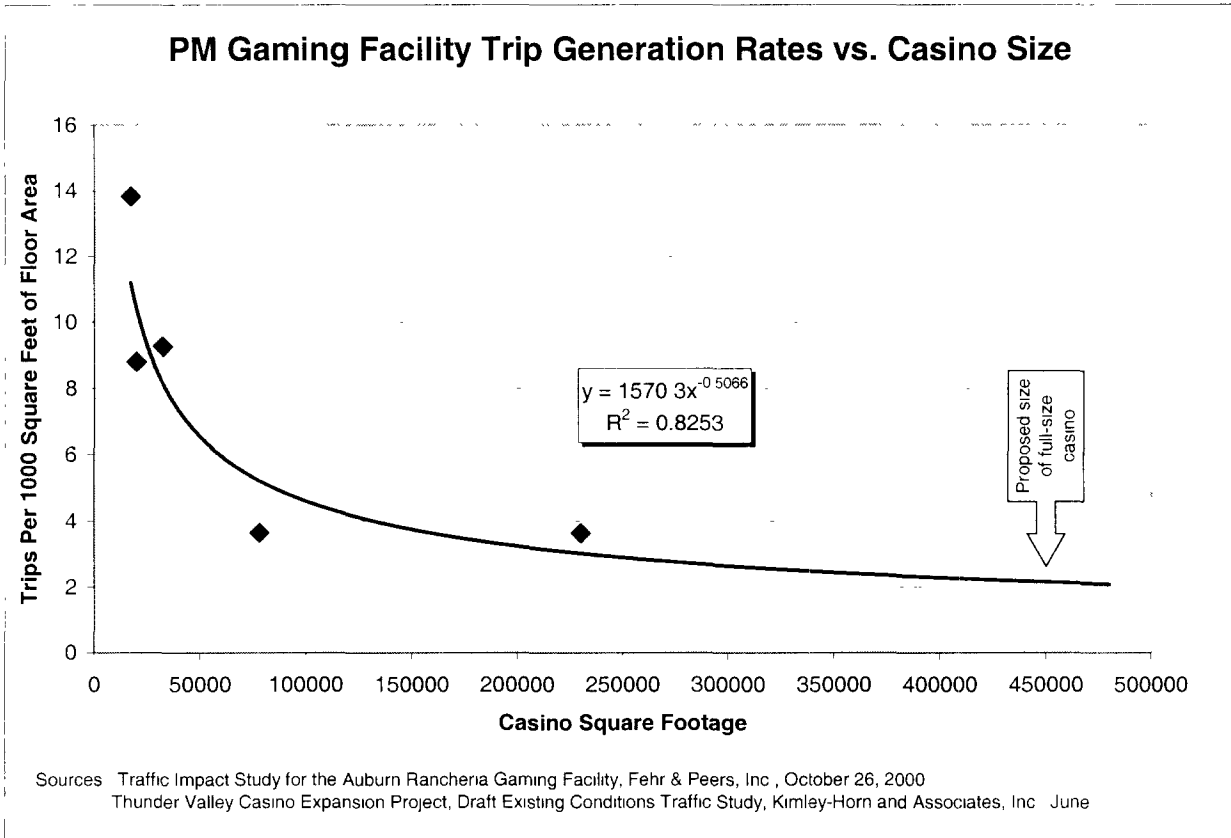
Research has been performed for hotel/casinos such as commonly found in Las Vegas and Reno, but the information is generally not applicable to this project. As a result this project relied on trip generation information obtained from other Native American casino and hotel facilities.

As part of a traffic impact study prepared for the Auburn Rancheria Gaming Facility (A.K.A. Thunder Valley Casino), trip generation was collected at four northern California gaming facilities. Data was reported for the weekday PM peak hour (i.e. the highest one-hour period between 4:00 and 6:00 PM) which is the time in which the greatest amount of combined traffic congestion commonly occurs.

Trip information from the four facilities showed that the smaller gaming facilities had higher trip rates than larger facilities, similar to the trip generation characteristics of shopping centers where small centers generate trips at a somewhat higher rate than larger centers.

Auburn Rancheria traffic study data was supplemented by more recent information collected at the completed Thunder Valley Casino by Kimley-Horn. Based on 2005 traffic data, the facility has a PM peak hour trip generation rate of 3.64 trips per 1,000 square feet of floor area. This rate occurs during the 5:00-6:00 PM period of the weekday and reinforces the principle that trip rates are lower at larger facilities.

Information from the Auburn Rancheria Traffic study and the more recent Thunder Valley Casino data was plotted and clearly shows that the highest trip generation rates based on square footage correspond to the smallest facility and the lowest rate occurs at the largest facility. The data also indicates that trip rates based on building square footages are not linear.



The development alternatives in this study are much larger than the facilities documented in the Auburn report and consequently, the Graton Casino and Hotel project is expected to have a lower rate trip rate. Alternative F is proposed to include 450,000 square feet for the casino and related functions, plus up to a 300 room hotel. Extrapolation of the fitted curve suggests that the PM trip rate for the much larger casino would be approximately two trips per 1000 square feet. Although the data indicates a PM peak trip rate of 2/1000 s.f. is reasonable, it was determined that a higher and more conservative rate should be considered.

Therefore, the Shingle Springs' casino environmental impact report/environmental assessment was also reviewed. The Shingle Springs casino is proposed to include approximately 238,500 square feet and was determined to have the following trip rates.

- Weekday AM Peak Hour: 2.95 trips/1,000 square feet
- Weekday PM Peak Hour: 4.95 trips/1,000 square feet
- Weekday (Daily trips): 39.43 trips/1,000 square feet

Based on the information from the Shingle Springs reports and in comparison with the plotted Auburn Rancheria /Thunder Valley Casino data, it was determined that the trip

rate used for Shingle Springs is a reasonable but more conservative assumption for this traffic study. Therefore, trip rates used in this analysis are the same as for Shingle Springs and which are listed above. Actual trip rates for the Graton casino are likely to be lower. Using a trip generation rate that is higher ensures a conservative approach to identifying project impacts and associated mitigations.

Trip generation for the 300 room hotel was based on data contained in ITE *Trip Generation* but adjusted with the assumption that most guests at the hotel would also be guests of the casino. The casino is expected to implement a pricing structure for the rooms that favors casino guests. Therefore, the ITE hotel rate was reduced by 2/3 to account for internal capture to and from the casino. Reducing the rate is based on professional judgment and is consistent with the Shingle Springs report which researched this issue and ultimately assumed a 3/4 reduction for hotel rooms.

Sometimes developments also attract trips that are already on the road that stop as they pass by the site. These are not new vehicle trips but are considered to be pass-by trips. Although it is likely that some trips to the site will be pass-by trips, no empirical data was readily available to determine a reasonable pass-by rate. Therefore, pass-by trips are conservatively not assumed in the analysis.

Trip generation was calculated based on the previous discussions and is reported in **Table F1**. Additional trip generation calculations are contained in the **Appendix**. As seen in the table the project is expected to generate 1384 new trips in the AM and 2287 new trips in the PM peak hour. Although project trip generation was prepared for daily, AM, and PM periods, only the PM traffic conditions were evaluated in this report because it represents the time period where the project will contribute to the greatest amount of congestion and potential mitigation. In addition, only PM peak hour future year traffic forecast data was available from Sonoma County and the City of Vallejo to complete a cumulative traffic analysis of the proposed casino and hotel traffic.

Table F 1 – Alternative F Project Trip Generation

LAND USE	Trips						
	Daily	AM Peak Hour			PM Peak Hour		
	Total	Entering	Exiting	Total	Entering	Exiting	Total
Casino 450,000 s.f.	17744	930	398	1328	1181	1047	2228
Hotel 300 Room*	817	34	22	56	31	28	59
Net New Vehicle Trips	18261	964	420	1384	1212	1075	2287

*Trip rate is ITE Land Use Code 310 – Hotel. Rate reduced by 2/3 to account for internal capture to/from casino.

Sometimes development traffic includes trips that are already on the road that stop as they pass by the site. These are not new vehicle trips but are considered to be pass-by

trips. Although it is likely that some trips to the site will be pass-by trips, no empirical data was readily available to determine a reasonable pass-by rate. Therefore, pass-by trips are conservatively not assumed in the Alternative F analysis.

Project Trip Distribution and Assignment

In preparation of the traffic distribution, Kimley-Horn reviewed the project's use in proximity to the surrounding population centers. The location of the San Francisco Bay Area population in relation to the project site, as well as peak hour turning movement volumes at the study intersections, the likely customer and employee base for the site, major connections to highways, and potential access limitations, were evaluated in order to estimate the likely distribution of project traffic. Based on the information it was estimated that 40% of the project traffic would be distributed to the east towards Vallejo with the remaining 60% distributed west towards San Rafael and to destinations north of the site. No project traffic was assumed to be generated or attracted in the immediate vicinity of the project site. The project traffic distribution is shown in **Figure F3** and **Figure F4**. **Figure F5** illustrates project traffic assigned to the study intersections based on the assumed trip distribution.

Near-Term Plus Project Traffic Volumes

Near-term 2008 traffic volumes were combined with vehicle trips expected to be generated by the Alternative F casino and hotel project. **Figure F6** illustrates the combined near-term turning movement volumes at the study intersections.

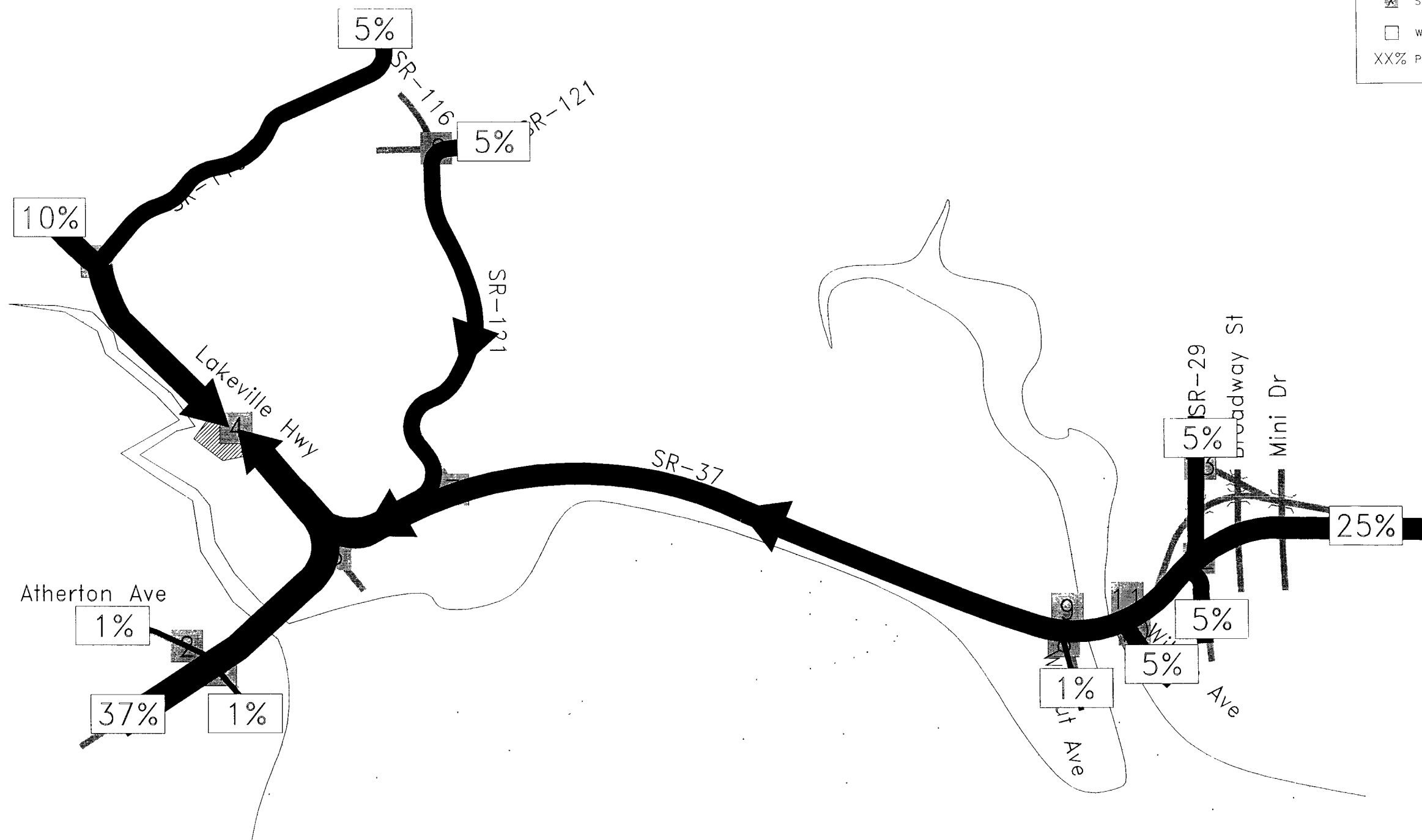
Long -Term Plus Project Traffic Volumes

Long-term 2020 traffic volumes were combined with vehicle trips expected to be generated by the Alternative F casino and hotel project. **Figure F7** illustrates the combined long-term turning movement volumes at the study intersections.



LEGEND

- PROJECT SITE
- STUDY AREA INTERSECTIONS
- WATER
- XX% PROJECT DISTRIBUTION PERCENT



Graton Rancheria Alternative F - Sonoma County, CA

PROJECT TRIP DISTRIBUTION - IN

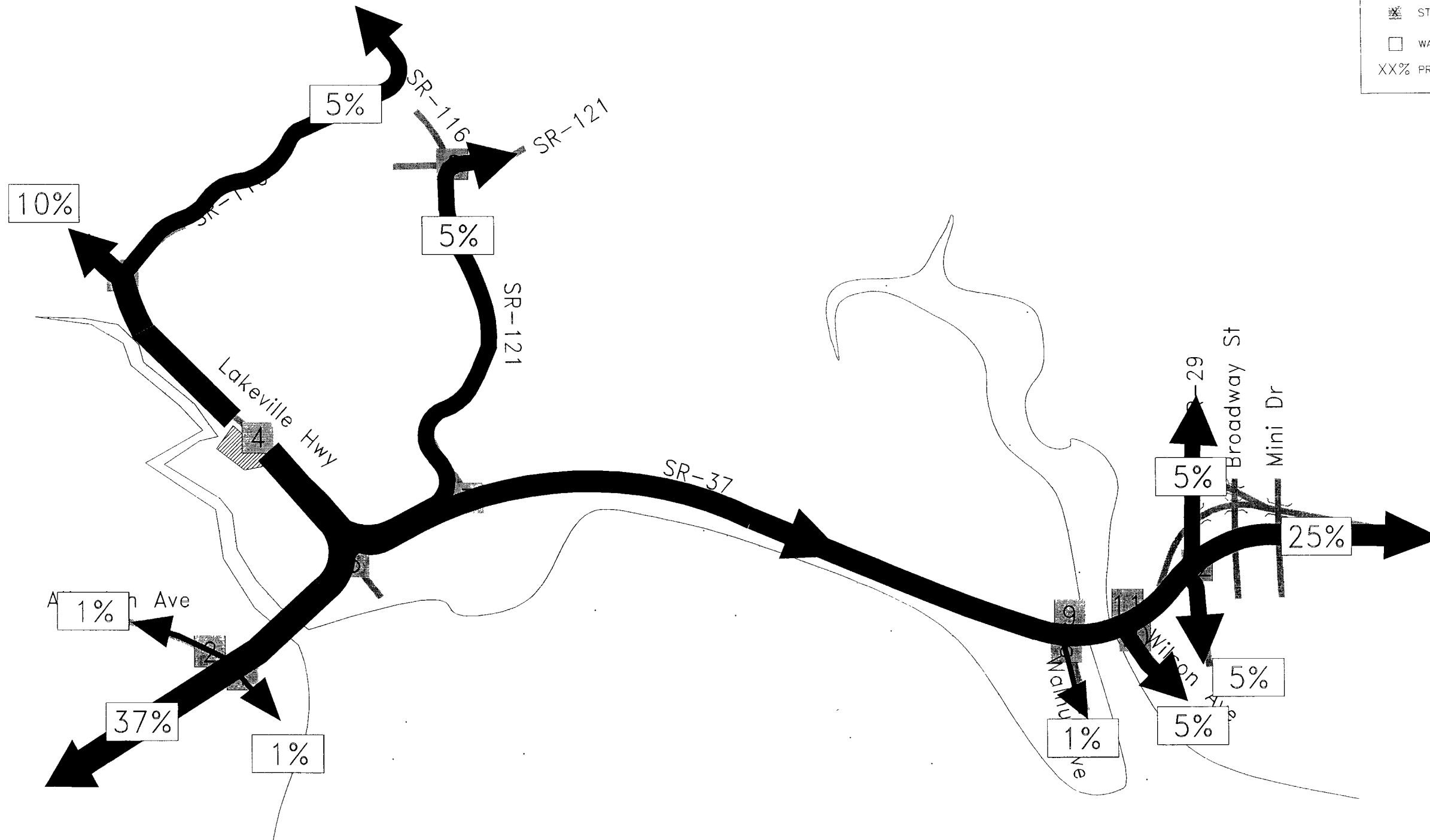
FIGURE F3





LEGEND

- PROJECT SITE
- STUDY AREA INTERSECTIONS
- WATER
- XX% PROJECT DISTRIBUTION PERCENT

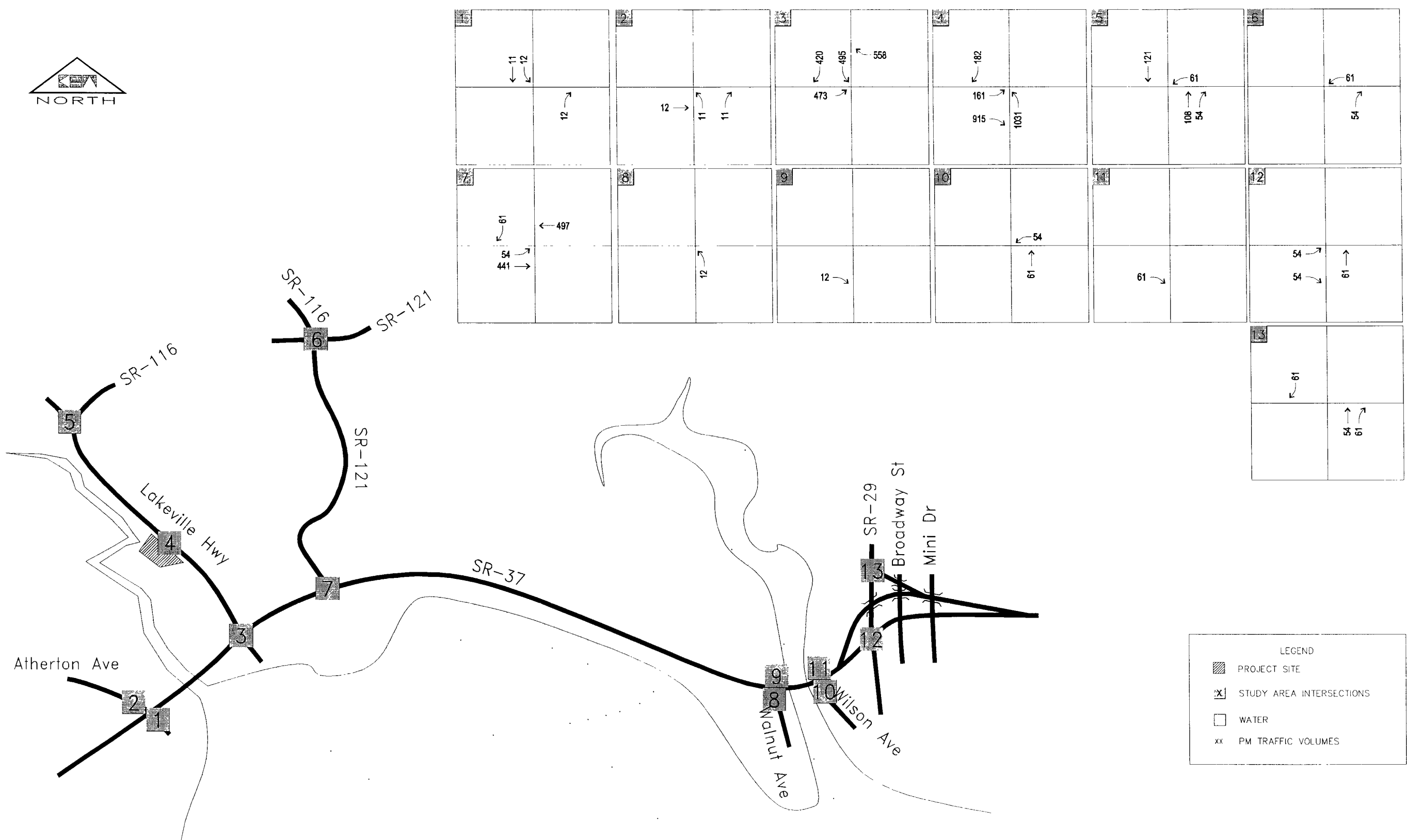


Graton Rancheria Alternative F - Sonoma County, CA

FIGURE F4

PROJECT TRIP DISTRIBUTION - OUT



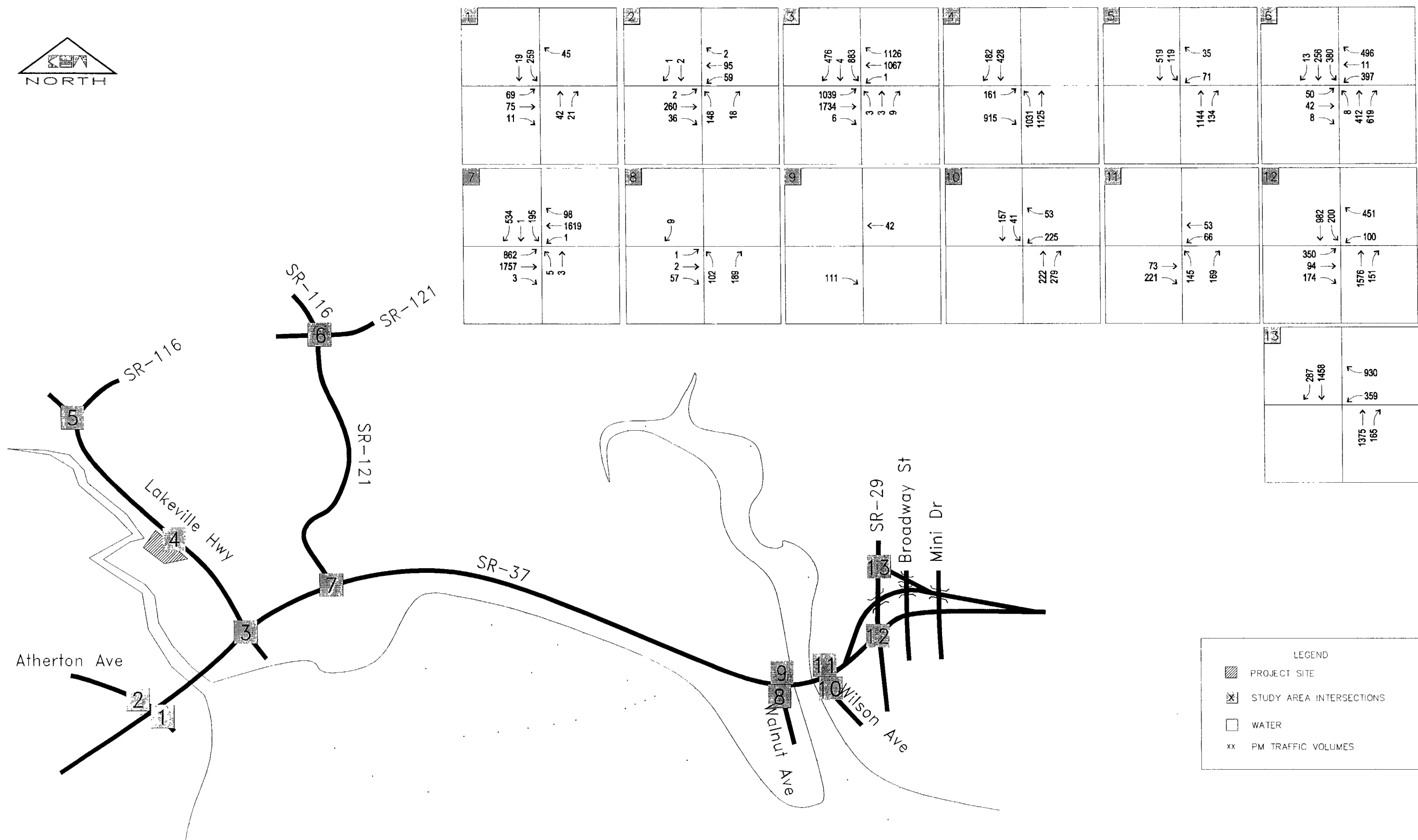


Graton Rancheria Alternative F – Sonoma County, CA

PROJECT GENERATED PM TRAFFIC VOLUMES

FIGURE F5



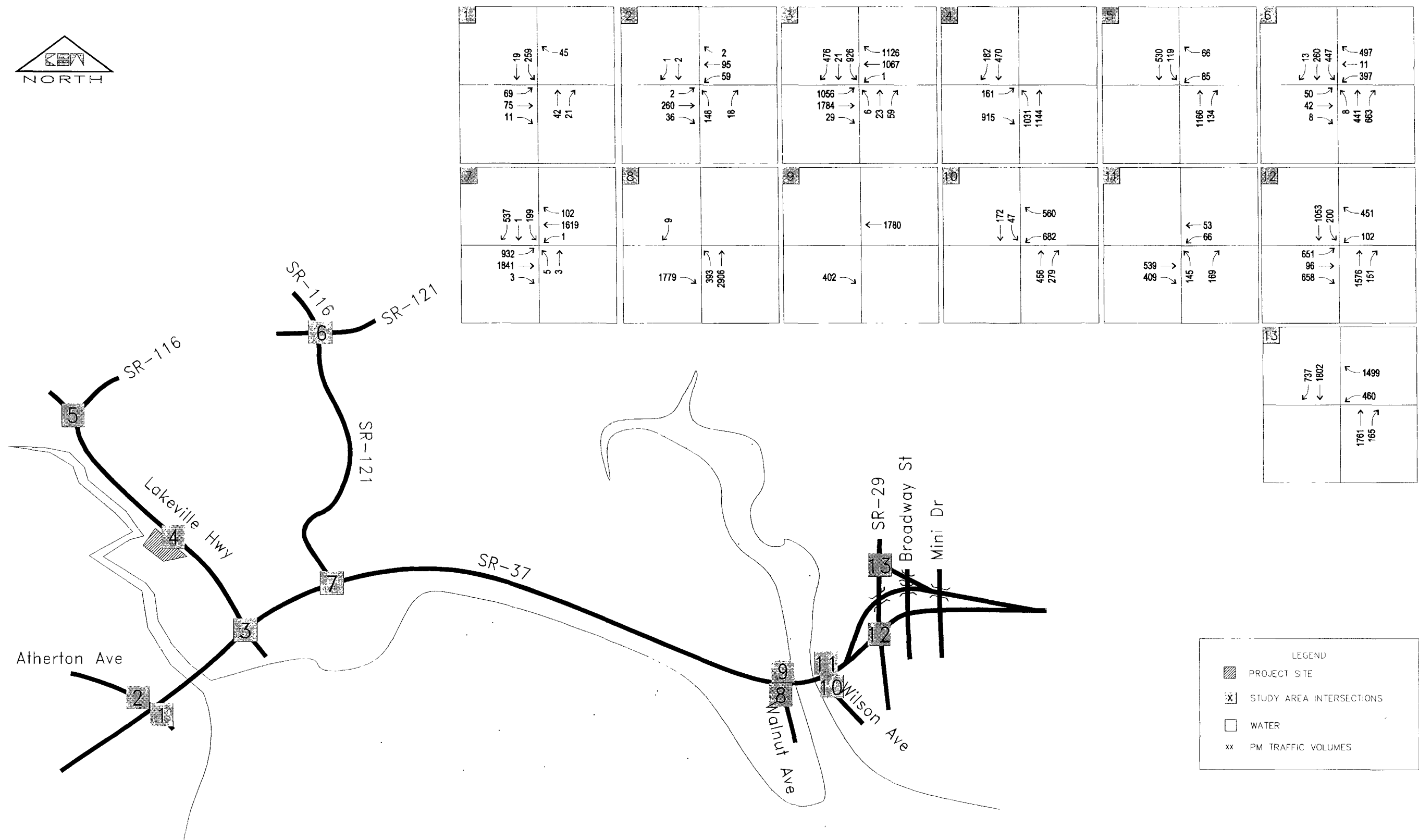


Graton Rancheria Alternative F - Sonoma County, CA

NEAR-TERM + PROJECT PM TRAFFIC VOLUMES

FIGURE F6





Graton Rancheria Alternative F - Sonoma County, CA
 LONG-TERM CUMULATIVE + PROJECT PM TRAFFIC VOLUMES

FIGURE F7



Alternative F LOS Conditions and Impacts at Intersections

Traffic operations were evaluated under the following development conditions:

- Near-term conditions with Alternative F (year 2008)
- Long-term conditions with Alternative F (year 2020)

Results of the analysis are presented in **Table F2**. (Results shown as bold in the table do not meet operational standards.) The signal control is listed as TS for a signalized intersection, AWSC for an all-way stop-controlled intersection and TWSC for a two-way stop-controlled intersection. Two-way stop-controlled (TWSC) intersections maybe operate acceptably overall but only the worst approach is reported in the table. The overall level of service is reported for signalized and all-way stop-controlled intersections. Table results denoted by a plus sign indicate level of service improves at the intersection in the long-term because of improvements assumed to be in place at that time. Additional detail is provided in the **Appendix**. As shown in the results, the following intersections and approaches will fail to meet acceptable level of service thresholds based on established significance criteria and with the addition of project-related traffic.

2008 Results

- Lakeville Highway / SR-37
- Lakeville Highway / Main Project Access
- Lakeville Highway / SR-116
- SR-121 / SR-116
- SR-29 / SR-37 EB Off-Ramp

2020 Results

- Lakeville Highway / SR-37
- Lakeville Highway / Main Project Access
- Lakeville Highway / SR-116
- SR-121 / SR-116
- Walnut Avenue / SR-37 EB Ramps
- Wilson Avenue / SR-37 EB Ramps
- Wilson Avenue / SR-37 WB Off-Ramp
- SR-29 / SR-37 EB Off-Ramp
- SR-29 / SR-37 WB Off-Ramp

Table F 2 – Alternative F Levels of Service

		Alternative F													
		Intersection	Criteria	Signal Control	2006			2008			2020				
					Existing LOS	Existing Delay	Base (w/o Proj.) LOS	Base (w/o Proj.) Delay	With Project LOS	With Project Delay	Base (w/o Proj.) LOS	Base (w/o Proj.) Delay	With Project LOS	With Project Delay	
1	Atherton Avenue / Harbor Drive & SR-37 EB Off-Ramp	C	AWSC	B	10.3	B	10.3	B	10.3	B	10.3	B	10.3	B	10.8
2	Atherton Avenue / Glen Lane & SR-37 WB Ramps	C	TWSC	C	16.1	C	16.1	C	16.1	C	16.1	C	16.1	C	16.8
3	Lakeville Highway / SR-37	C	TS	C	22.4	C	23.4	F	162.4	C	30.7	F	183.6	F	183.6
4	Lakeville Highway / Main Project Access	D	TWSC	A	0.0	A	0.0	F	OVRFL	A	0.0	F	OVRFL	F	OVRFL
5	Lakeville Highway / SR-116	C	TWSC	D	30.4	D	31.0	F	319.6	D	27.8 +	F	225.8	F	225.8
6	SR-121 / SR-116	C	AWSC TS	F	69.6	F	71.9	F	77.9	F	71.6 +	F	72.7	F	72.7
7	SR-121 / SR-37	C	TS	C	20.1	C	20.1	C	26.2	C	20.7	C	28.6	C	28.6
8	Walnut Avenue / SR-37 EB Ramps	C	TWSC	A	9.3	A	9.4	A	9.4	A	9.4	F	502.9	F	502.9
9	Mare Island / SR-37 WB Ramps	C	TWSC	A	9.0	A	9.0	A	9.0	A	9.0	A	9.0	A	9.0
10	Wilson Avenue / SR-37 EB Ramps	C	TWSC	B	13.6	B	14.3	C	18.2	C	753.9	F	934.3	F	934.3
11	Wilson Avenue / SR-37 WB Off-Ramp	C	AWSC	A	10.0	B	10.3	B	11.3	B	186.6	F	223.5	F	223.5
12	SR-29 / SR-37 EB Off-Ramp	C	TS	E	65.7	E	77.6	F	90.4	F	157.0	F	173.5	F	173.5
13	SR-29 / SR-37 WB Off-Ramp	C	TS	C	23.6	C	25.2	C	25.4	C	100.5	F	104.1	F	104.1

Alternative F Traffic Signal Warrant Analysis

Alternative F, near-term and long-term, traffic volumes at unsignalized study intersections were compared against the peak hour warrant in the *2003 Manual on Uniform Traffic Control Devices (MUTCD)* and the *California Supplement*.

Results of the analysis showed that the following intersections will satisfy traffic signal Warrant #3 by the year 2008 and 2020.

- Lakeville Highway / Main Project Access (2008+Project and 2020+Project)
- Lakeville Highway / SR-116 (2008+Project and 2020+Project)
- SR-121 / SR116 (2008+Project only)
- Walnut Avenue / SR-37 EB Ramps (2020+Project only)
- Wilson Avenue / SR-37 (2020+Project only)

SR-121 / SR-116 will be signalized in the year 2020.

Other warrants such as for minimum vehicle volumes, interruption of continuous traffic, and traffic progression were not evaluated because they generally require higher traffic volumes to be satisfied. Accident history and school areas were also not evaluated based on the results of field observations, which noted that neither of these warrant thresholds was likely to be met. A copy of the analysis summary for Warrant #3 is included in the **Appendix**.

Alternative F LOS Conditions and Impacts on Highway Segments and Ramps

Project trips generated by the proposed casino and hotel were added to the year 2008 and 2020 forecast highway volumes.

Traffic analyses were completed to evaluate the operation of the study highway segments and ramps in the year 2008 and 2020, with the addition on the casino and hotel project.

Results of the analyses are presented in **Table F3**. (Results shown as bold in the table do not meet operational standards.) As shown in the table, project traffic will add to the background congestion of the highway segments and ramps. Significant congestion is expected with the project.



Table F 3 – Alternative F Highway Levels of Service

Highway Section/Ramp	Criteria		Existing		2008		2008 + Alt F		2020		2020 + Alt F	
	LOS	LOS	MOE*	LOS	MOE*	LOS	MOE*	LOS	MOE*	LOS	MOE*	
Eastbound / Northbound												
Atherton Avenue EB Off-Ramp	C	C	23.1	C	23.1	C	27.6	C	24.1	D	28.4	
SR-37 between Atherton Avenue and Lakeville Highway (EB)	C	C	22.2	C	22.3	D	27.1	C	23.2	D	28.1	
Lakeville Highway between SR-37 and SR-116 (NB)	C	E	90.8% 40.0	E	90.9% 39.9	-	-	B	11.4	-	-	
Lakeville Highway between SR-37 and Project Site (NB)	C	-	-	-	-	F	95.7% 24.6	-	-	C	21.4	
Lakeville Highway between Project Site and SR-116 (NB)	C	-	-	-	-	E	91.2% 37.9	-	-	B	12.6	
SR-37 between Lakeville Highway and SR-121 (EB)	C	C	20.5	C	20.7	C	25.5	C	22.1	D	27.0	
SR-121 between SR-37 and SR-116 (NB)	C	E	88.2% 40.5	E	88.3% 40.4	E	88.6% 39.6	E	89.1% 39.8	E	89.3% 39.0	
Walnut Avenue EB Off-Ramp	C	B	15.1	B	15.5	B	19.6	B	16.3	C	20.4	
Walnut Avenue EB On-Ramp	C	B	14.1	B	15.0	B	18.5	F	65.2	F	68.8	
Wilson Avenue EB Off-Ramp	C	B	14.0	B	14.9	B	18.8	F	45.1	F	49.1	
Wilson Avenue EB On-Ramp	C	B	15.9	B	16.9	B	20.0	E	37.3	F	40.4	
SR-29 EB Off-Ramp	C	B	10.9	B	11.7	B	15.2	D	34.2	F	37.7	
Westbound / Southbound												
SR-29 WB Off-Ramp	C	A	-4.9	A	-4.0	A	0.7	B	15.5	B	18.3	
SR-29 WB On-Ramp (loop)	C	B	11.1	B	11.7	B	15.2	B	18.1	C	21.6	
SR-29 WB On-Ramp	C	B	12.2	B	13.0	B	17.0	C	26.7	D	30.7	
Wilson Avenue WB Off-Ramp	C	B	10.2	B	10.9	B	14.8	C	22.1	C	26.0	
Wilson Avenue WB On-Ramp	C	B	13.8	B	14.6	B	19.1	D	31.2	E	35.7	
Walnut Avenue WB Off-Ramp	C	A	3.7	A	4.5	A	8.9	C	21.2	C	25.7	
Walnut Avenue WB On-Ramp	C	B	15.0	B	15.1	B	19.3	B	17.4	C	21.6	
SR-121 between SR-116 and SR-37 (SB)	C	E	87.5% 40.7	E	87.5% 40.6	E	88.1% 39.7	E	87.8% 39.9	E	88.9% 39.0	
SR-37 between SR-121 and Lakeville Highway (WB)	C	B	15.8	B	15.9	C	21.3	B	15.9	C	21.3	
Lakeville Highway between SR-116 and SR-37 (SB)	C	E	86.0% 40.6	E	86.1% 40.6	-	-	A	4.9	-	-	
Lakeville Highway between SR-116 and Project Site (SB)	C	-	-	-	-	E	89.4% 38.2	-	-	A	6.0	
Lakeville Highway between Project Site and SR-37 (SB)	C	-	-	-	-	F	94.6% 24.6	-	-	B	13.8	
SR-37 between Lakeville Highway and Atherton Avenue (WB)	C	A	10.9	A	10.9	B	15.0	A	10.9	B	15.0	
Atherton Avenue WB Off-Ramp	C	B	13.4	B	13.4	B	17.3	B	13.4	B	17.3	
Atherton Avenue WB On-Ramp	C	B	12.9	B	12.9	B	16.3	B	12.9	B	16.3	

*MOE for two lane highways = percent time following & average travel speed (mi/hr)

MOE for multi-lane highways & ramps = density (pc/mi/ln)

Results indicate that some highway segments and ramps will not meet standards with the addition of the project. There are only two ramps that do not meet the level of service criteria with the addition of the project that do meet the standard without the project.

Alternative F Mitigation

Intersections with levels of service below established thresholds were investigated to determine the role of the Alternative F traffic in the projected operating conditions at those intersections. The evaluation disclosed that the following improvements as shown on **Table F4** are needed in the near-term (2008) and long-term (2020) to mitigate project impacts.

Table F5 summarizes the expected levels of service with the proposed mitigation. As mentioned previously, the signal control is listed as TS for a signalized intersection, AWSC for an all-way stop-controlled intersection and TWSC for a two-way stop-controlled intersection. Two-way stop-controlled (TWSC) intersections maybe operate acceptably overall but only the worst approach is reported in the table. The overall level of service is reported for signalized and all-way stop-controlled intersections. As shown in the table, all project impacts can be mitigated back to the no action level of service.

Table F 4 – Alternative F Summary of Mitigations

Alternative F					
Period	#	Intersection	Mitigation	Requires ROW?	Reason
2008	1	Atherton Avenue / Harbor Drive & SR-37 EB Off-Ramp	No mitigation necessary	-	-
	2	Atherton Avenue / Glen Lane & SR-37 WB Ramps	No mitigation necessary	-	-
	3	Lakeville Highway / SR-37	<ul style="list-style-type: none"> • Install full interchange 	Yes	Capacity Queue
	4	Lakeville Highway / Main Project Access	<ul style="list-style-type: none"> • Signalize • Add SB right (drop lane) • Widen Lakeville Highway to two lanes in each direction • Add 2 NB lefts (turn bays = 300 feet) • Add 2 EB rights (turn bay = 250 feet) and change all shared to left 	Tribe land	Capacity Queue
	5	Lakeville Highway / SR-116	<ul style="list-style-type: none"> • Signalize 	Yes	Capacity
	6	SR-121 / SR-116	<ul style="list-style-type: none"> • Signalize • Add EB left and change EB all shared to through-right 	Yes	Capacity
	7	SR-121 / SR-37	No mitigation necessary	-	-
	8	Walnut Avenue / SR-37 EB Ramps	No mitigation necessary	-	-
	9	Mare Island / SR-37 WB Ramps	No mitigation necessary	-	-
	10	Wilson Avenue / SR-37 EB Ramps	No mitigation necessary	-	-
	11	Wilson Avenue / SR-37 WB Off-Ramp	No mitigation necessary	-	-
	12	SR-29 / SR-37 EB Off-Ramp	<ul style="list-style-type: none"> • Add a second WB right turn 	Yes	Capacity
	13	SR-29 / SR-37 WB Off-Ramp	No mitigation necessary	-	-
2020	1	Atherton Avenue / Harbor Drive & SR-37 EB Off-Ramp	No mitigation necessary	-	-
	2	Atherton Avenue / Glen Lane & SR-37 WB Ramps	No mitigation necessary	-	-
	3	Lakeville Highway / SR-37	<ul style="list-style-type: none"> • Install full interchange 	Yes	Capacity Queue
	4	Lakeville Highway / Main Project Access	<ul style="list-style-type: none"> • Signalize • Add SB right (drop lane) • Add 2 NB lefts (turn bay = 300 feet) • Add EB right 	Tribe land	Capacity
	5	Lakeville Highway / SR-116	<ul style="list-style-type: none"> • Signalize 	Yes	Capacity
	6	SR-121 / SR-116	<ul style="list-style-type: none"> • Add EB left and change EB all shared to through-right • Extend SB left turn bay to 400 feet 	Yes	Capacity Queue
	7	SR-121 / SR-37	No mitigation necessary	-	-
	8	Walnut Avenue / SR-37 EB Ramps	<ul style="list-style-type: none"> • Signalize 	No	Capacity
	9	Mare Island / SR-37 WB Ramps	No mitigation necessary	-	-
	10	Wilson Avenue / SR-37 EB Ramps	<ul style="list-style-type: none"> • Signalize 	No	Capacity
	11	Wilson Avenue / SR-37 WB Off-Ramp	<ul style="list-style-type: none"> • Add EB right and change EB through-shared-right to through 	Yes	Capacity
	12	SR-29 / SR-37 EB Off-Ramp	<ul style="list-style-type: none"> • Add a second WB right turn • Add a second EB right turn 	Yes	Capacity
	13	SR-29 / SR-37 WB Off-Ramp	<ul style="list-style-type: none"> • Add a third NB through lane 	Yes	Capacity

Table F 5 – Alternative F Mitigated Intersection Levels of Service

Intersection		Criteria	Signal Control	2006				2008				2020					
				Existing		Base (w/o Proj.)		With Project		Mitigated		Base (w/o Proj.)		With Project		Mitigated	
				LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
1	Atherton Avenue / Harbor Drive & SR-37 EB Off-Ramp	C	AWSC	B	10.3	B	10.3	B	10.8	B	10.3	B	10.8	B	10.8	B	10.8
2	Atherton Avenue / Glen Lane & SR-37 WB Ramps	C	TWSC	C	16.1	C	16.1	C	16.8	C	16.1	C	16.8	C	16.8	C	16.8
3	Lakeville Highway / SR-37	C	TS	C	22.4	C	23.4	F	162.4	F	30.7	F	183.6	F	-	-	-
4	Lakeville Highway / Main Project Access	D	TWSC	A	0.0	A	0.0	F	OVRFL	C	31.2	A	0.0	F	OVRFL	C	31.5
5	Lakeville Highway / SR-116	C	TWSC	D	30.4	D	31.0	F	319.6	C	25.5	D	27.8 +	F	225.8	B	10.8
6	SR-121 / SR-116	C	AWSC TS	F	69.6	F	71.9	F	77.9	D	51.4	F	71.6 +	F	72.7	E	64.4
7	SR-121 / SR-37	C	TS	C	20.1	C	20.1	C	26.2	C	26.2	C	20.7	C	28.6	C	28.6
8	Walnut Avenue / SR-37 EB Ramps	C	TWSC	A	9.3	A	9.4	A	9.4	A	9.7	F	502.9	F	502.9	F	288.0
9	Mare Island / SR-37 WB Ramps	C	TWSC	A	9.0	A	9.0	A	9.0	A	9.0	A	9.0	A	9.0	A	9.0
10	Wilson Avenue / SR-37 EB Ramps	C	TWSC	B	13.6	B	14.3	C	18.2	C	18.2	F	753.9	F	934.3	F	192.9
11	Wilson Avenue / SR-37 WB Off-Ramp	C	AWSC	A	10.0	B	10.3	B	11.3	B	11.3	F	186.6	F	223.5	C	24.0
12	SR-29 / SR-37 EB Off-Ramp	C	TS	E	65.7	E	77.6	F	90.4	D	53.3	F	157.0	F	173.5	F	84.2
13	SR-29 / SR-37 WB Off-Ramp	C	TS	C	23.6	C	25.2	C	25.4	C	25.4	F	100.5	F	104.1	E	79.0

Results indicate that some highway segments and ramps will not meet standards with the project. As mitigation the project should do the following which will result in the mitigated levels of service shown in **Table F6**:

- The project should contribute to the widening of SR-37 to three lanes in the eastbound direction between Atherton Avenue and Lakeville Highway in the near-term (2008) when the casino and hotel open. The project should also contribute to further widening of SR-37 to three lanes in the eastbound direction between Lakeville Highway and SR-121 and to four lanes in the eastbound direction between Walnut Avenue and Wilson Avenue in the long-term (2020).
- The project should contribute to the widening of Lakeville Highway to two lanes in each direction in the near-term (2008) when the casino and hotel open.
- The project should contribute to the widening SR-121 to two lanes in each direction in the near-term (2008) when the casino and hotel open.
- The project should contribute to the addition of ramp metering at the Wilson Avenue westbound on-ramp in the year 2020.

In Vallejo there is significant growth expected in the model by the year 2020, regardless of the project. SR-37 will need to be widened to three lanes in each direction accommodate the additional traffic. The casino will add a small amount of traffic to SR-37. The casino should contribute a proportionate share of 9% to the widening of SR-37.



Table F 6 – Alternative F Mitigated Freeway Level of Service Summary

Highway Section/Ramp	Criteria		Existing		2008		2008 + Alt F		2008 + Alt F Mitigated		2020		2020 + Alt F		2020 + Alt F Mitigated		
	LOS	MOE*	LOS	MOE*	LOS	MOE*	LOS	MOE*	LOS	MOE*	LOS	MOE*	LOS	MOE*	LOS	MOE*	
Eastbound / Northbound																	
Atherton Avenue EB Off-Ramp	C	-	C	23.1	C	27.6	C	27.6	C	27.6	C	24.1	D	28.4	B	19.8	
SR-37 between Atherton Avenue and Lakeville Highway (EB)	C	-	C	22.2	C	27.1	B	18.0	C	23.2	D	28.1	D	28.1	C	18.5	
Lakeville Highway between SR-37 and SR-116 (NB)	C	E	E	90.8%	E	90.9%	-	-	-	11.4	-	-	-	-	-	-	
Lakeville Highway between SR-37 and Project Site (NB)	C	-	-	-	-	F	95.7%	C	21.0	-	-	-	C	21.4	C	21.4	
Lakeville Highway between Project Site and SR-116 (NB)	C	-	-	-	-	E	91.2%	B	12.4	-	-	-	B	12.6	B	12.6	
SR-37 between Lakeville Highway and SR-121 (EB)	C	C	C	20.5	C	20.7	C	25.5	C	22.1	D	27.0	D	27.0	B	17.9	
SR-121 between SR-37 and SR-116 (NB)	C	E	E	88.2%	E	88.3%	E	88.6%	A	9.3	E	89.1%	E	89.3%	A	10.1	
Walnut Avenue EB Off-Ramp	C	B	B	15.1	B	15.5	B	19.6	B	16.3	C	20.4	C	20.4	C	20.4	
Walnut Avenue EB On-Ramp	C	B	B	14.1	B	15.0	B	18.5	B	18.5	F	65.2	F	68.8	B	17.4	
Wilson Avenue EB Off-Ramp	C	B	B	14.0	B	14.9	B	18.8	B	18.8	F	45.1	F	49.1	D	29.1	
Wilson Avenue EB On-Ramp	C	B	B	15.9	B	16.9	B	20.0	B	20.0	E	37.3	F	40.4	B	15.5	
SR-29 EB Off-Ramp	C	B	B	10.9	B	11.7	B	15.2	B	15.2	D	34.2	F	37.7	C	27.2	
Westbound / Southbound																	
SR-29 WB Off-Ramp	C	A	A	-4.9	A	-4.0	A	0.7	A	0.7	A	15.5	B	18.3	B	18.3	
SR-29 WB On-Ramp (loop)	C	B	B	11.1	B	11.7	B	15.2	B	15.2	B	18.1	C	21.6	C	21.6	
SR-29 WB On-Ramp	C	B	B	12.2	B	13.0	B	17.0	B	17.0	C	26.7	D	30.7	C	21.5	
Wilson Avenue WB Off-Ramp	C	B	B	10.2	B	10.9	B	14.8	B	14.8	C	22.1	C	26.0	C	26.0	
Wilson Avenue WB On-Ramp	C	B	B	13.8	B	14.6	B	19.1	B	19.1	D	31.2	E	35.7	D	35.0	
Walnut Avenue WB Off-Ramp	C	A	A	3.7	A	4.5	A	8.9	A	8.9	C	21.2	C	25.7	C	25.7	
Walnut Avenue WB On-Ramp	C	B	B	15.0	B	15.1	B	19.3	B	19.3	B	17.4	C	21.6	C	21.6	
SR-121 between SR-116 and SR-37 (SB)	C	E	E	87.5%	E	87.5%	E	88.1%	A	7.1	E	87.8%	E	88.9%	A	7.1	
SR-37 between SR-121 and Lakeville Highway (WB)	C	B	B	15.8	B	15.9	C	21.3	C	21.3	B	15.9	C	21.3	C	21.3	
Lakeville Highway between SR-116 and SR-37 (SB)	C	E	E	86.0%	E	86.1%	-	-	-	-	A	4.9	-	-	-	-	
Lakeville Highway between SR-116 and Project Site (SB)	C	-	-	-	-	-	E	89.4%	B	13.2	-	-	A	6.0	A	6.0	
Lakeville Highway between Project Site and SR-37 (SB)	C	-	-	-	-	-	F	94.6%	A	5.7	-	-	B	13.8	B	13.8	
SR-37 between Lakeville Highway and Atherton Avenue (WB)	C	A	A	10.9	A	10.9	B	15.0	B	15.0	A	10.9	B	15.0	B	15.0	
Atherton Avenue WB Off-Ramp	C	B	B	13.4	B	13.4	B	17.3	B	17.3	B	13.4	B	17.3	B	17.3	
Atherton Avenue WB On-Ramp	C	B	B	12.9	B	12.9	B	16.3	B	16.3	B	12.9	B	16.3	B	16.3	

*MOE for two lane highways = percent time following & average travel speed (mi/hr)
MOE for multi-lane highways & ramps = density (pc/mi/ln)

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- Telephone and email communications with Ray Centeno, Caltrans
- Telephone and email communications with Rod Noda, Caltrans,
- Telephone communications with Brian Albie, General Manager - Sonoma County Transit, October 6, 2003.
- Telephone communications with Norma Jellison, Golden Gate Bridge Authority
- Telephone communications with Rick Kennedy, Executive Director, Northwestern Pacific Railroad Authority
- Traffic Impact Study for the Auburn Rancheria Residential Project – Draft Report, Fehr & Peers Associates, Inc., January 28, 1999.



APPENDIX

TURNING MOVEMENT VOLUMES

All Traffic Data
 (916) 771-8700
 Fax 786-2879

SONOMA COUNTY

File Name STNE37-F
 Site Code 00000000
 Start Date 2/23/2006
 Page No 1

Groups Printed- Movement 1

ATHERTONWAY
 Southbound

Start Time	Right	Thru	Left	App Total	Right	Thru	Left	App Total
Factor	10	10	10	10	10	10	10	10
07 00 AM	0	4	39	43	10	0	0	10
07 15 AM	0	7	36	43	11	0	0	11
07 30 AM	0	6	34	40	13	1	0	13
07 45 AM	0	2	40	42	10	0	0	10
Total	0	19	149	168	44	0	0	44

HARBOR DR
 Westbound

Start Time	Right	Thru	Left	App Total	Right	Thru	Left	App Total
08 00 AM	0	2	35	37	15	0	1	16
08 15 AM	0	10	39	49	10	0	0	10
08 30 AM	0	3	35	38	10	0	0	10
08 45 AM	0	3	20	23	9	1	0	10
Total	0	18	129	147	44	0	2	46

STONETREE LN
 Northbound

Start Time	Right	Thru	Left	App Total	Right	Thru	Left	App Total
08 00 AM	0	3	0	3	0	0	0	3
08 15 AM	0	3	0	3	2	0	0	5
08 30 AM	0	7	0	7	1	0	0	8
08 45 AM	0	7	0	7	11	8	13	32
Total	0	20	0	20	25	24	36	85

SR 37 OFF-RAMP
 Eastbound

Start Time	Right	Thru	Left	App Total	Right	Thru	Left	App Total	Int Total
04 00 PM	0	14	0	14	5	14	16	35	117
04 15 PM	0	5	0	5	6	27	11	44	93
04 30 PM	0	9	0	9	2	16	15	33	112
04 45 PM	0	7	0	7	1	19	17	37	124
Total	0	35	0	35	14	76	59	149	446
05 00 PM	0	12	0	12	2	18	11	31	122
05 15 PM	0	14	0	14	3	13	21	37	136
05 30 PM	0	12	0	12	5	25	20	50	124
05 45 PM	0	18	0	18	3	13	17	33	104
Total	0	56	0	56	13	69	69	151	486
Grand Total	0	182	0	182	63	179	189	431	1503
Approch %	0.0	98.4	0.0	98.4	14.6	41.5	43.9	28.7	
Total %	0.0	11.9	0.0	12.1	4.2	11.9	12.6	8.3	

SONOMA COUNTY

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ATHERTON WAY
 Southbound

Start Time	Right	Thru	Left	App Total
07:45 AM	0	17	149	166
08:15 Volume	0	10.2	89.8	49
08:15 Percent	0	10	39	49
08:15 Peak Factor	0	10	39	49
High Int	0	10	39	49
Volume	0	10	39	49
Peak Factor	0	10	39	0.847

HARBOR DR
 Westbound

Right	Thru	Left	App Total
45	0	1	46
97.8	0.0	2.2	143
10	0	0	10
08:00 AM	0	1	16
Volume	0	1	16
Peak Factor	0	1	0.719

STONETREE LN
 Northbound

Right	Thru	Left	App Total
3	18	0	21
14.3	85.7	0.0	5
2	3	0	5
08:30 AM	7	0	8
Volume	7	0	8
Peak Factor	7	0	0.656

SR 37 OFF-RAMP
 Eastbound

Right	Thru	Left	App Total	Int Total
18	20	34	72	305
25.0	27.8	47.2	14	78
3	5	6	14	0.978
08:00 AM	7	9	21	
Volume	7	9	21	
Peak Factor	7	9	0.857	

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SONOMA COUNTY

ATHERTONWAY			HARBOR DR		
Out	In	Total	Out	In	Total
97	166	263	172	46	218
0 Right 17 Thru 149 Left			45 Right 0 Thru 1 Left		
North			North		
SR 37 OFF-RAMP Out 0 In 72 Total 72			2/23/2006 7:45:00 AM 2/23/2006 8:30:00 AM Movement 1		
18 Right 20 Thru 34 Left			0 Left 18 Thru 3 Right		
36 Out 21 In 57 Total			STONETREE LN		

All Traffic Data
 (916) 771-8700
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File Name STNE37-F
 Site Code 00000000
 Start Date 2/23/2006
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SONOMA COUNTY

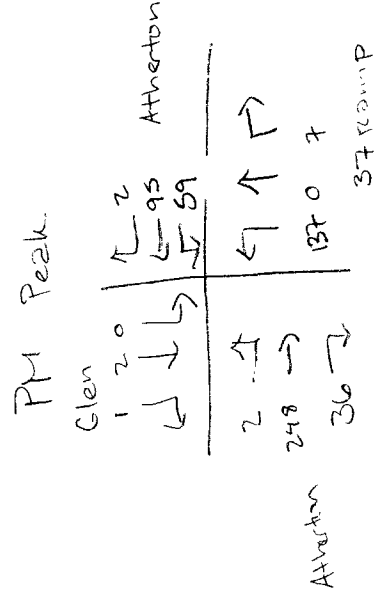
ATHERTON WAY			HARBOR DR														
Out	In	Total	Out	In	Total												
156	255	411	331	45	376												
<table border="0"> <tr> <td>0</td> <td>8</td> <td>247</td> </tr> <tr> <td>Right</td> <td>Thru</td> <td>Left</td> </tr> </table>			0	8	247	Right	Thru	Left	<table border="0"> <tr> <td>45</td> <td>0</td> <td>0</td> </tr> <tr> <td>Right</td> <td>Thru</td> <td>Left</td> </tr> </table>			45	0	0	Right	Thru	Left
0	8	247															
Right	Thru	Left															
45	0	0															
Right	Thru	Left															
<table border="0"> <tr> <td>11</td> <td>75</td> <td>69</td> </tr> <tr> <td>Right</td> <td>Thru</td> <td>Left</td> </tr> </table>			11	75	69	Right	Thru	Left	<table border="0"> <tr> <td>19</td> <td>51</td> <td>70</td> </tr> <tr> <td>Out</td> <td>In</td> <td>Total</td> </tr> </table>			19	51	70	Out	In	Total
11	75	69															
Right	Thru	Left															
19	51	70															
Out	In	Total															
<table border="0"> <tr> <td>0</td> <td>155</td> <td>155</td> </tr> <tr> <td>Out</td> <td>In</td> <td>Total</td> </tr> </table>			0	155	155	Out	In	Total	<table border="0"> <tr> <td>0</td> <td>42</td> <td>9</td> </tr> <tr> <td>Left</td> <td>Thru</td> <td>Right</td> </tr> </table>			0	42	9	Left	Thru	Right
0	155	155															
Out	In	Total															
0	42	9															
Left	Thru	Right															
SR 37 OFF-RAMP 2/23/2006 4:45:00 PM 2/23/2006 5:30:00 PM Movement 1			North STONETREE LN														

All Traffic Data
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SONOMA COUNTY

File Name ATHRGLEN-F
 Site Code 00000000
 Start Date 2/23/2006
 Page No 1

Start Time	Groups Printed- Movement 1																
	GLEN RD Southbound				ATHERTON WAY Westbound				SR 37 OFF-RAMP Northbound				Eastbound				
	Right	Thru	Left	App Total	Right	Thru	Left	App Total	Right	Thru	Left	App Total	Right	Thru	Left	App Total	Int Total
Factor	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10		
07:00 AM	0	0	0	0	0	7	8	15	7	0	45	52	10	35	1	46	113
07:15 AM	0	0	0	0	0	9	10	19	5	0	52	57	14	38	0	52	128
07:30 AM	0	1	0	1	0	10	8	18	5	1	46	52	11	37	1	49	120
07:45 AM	0	0	0	0	1	13	14	28	3	0	58	61	9	39	1	49	138
Total	0	1	0	1	1	39	40	80	20	1	201	222	44	149	3	196	499
08:00 AM	2	0	0	2	0	21	7	28	3	0	36	39	9	33	1	43	112
08:15 AM	0	1	2	3	0	7	11	18	8	0	39	47	10	43	1	54	122
08:30 AM	1	2	2	5	1	11	13	25	7	0	35	42	13	30	0	43	115
08:45 AM	0	0	1	1	0	19	10	29	2	0	32	34	8	21	0	29	93
Total	3	3	5	11	1	58	41	100	20	0	142	162	40	127	2	169	442
04:00 PM	2	1	1	4	2	23	10	35	7	0	22	29	6	55	1	62	130
04:15 PM	1	0	0	1	1	9	9	19	3	2	24	29	11	35	0	46	95
04:30 PM	0	0	1	1	0	25	7	32	2	0	23	25	11	59	0	70	128
04:45 PM	0	2	0	2	0	20	20	40	1	0	28	29	9	61	0	70	141
Total	3	3	2	8	3	77	46	126	13	2	97	112	37	210	1	248	494
05:00 PM	0	0	0	0	0	20	8	28	1	0	30	31	10	69	0	79	138
05:15 PM	0	0	0	0	1	26	14	41	3	0	35	38	7	73	0	80	159
05:30 PM	1	0	0	1	1	29	17	47	2	0	44	46	10	45	2	57	151
05:45 PM	0	0	1	1	1	26	23	50	4	1	26	31	9	34	1	44	126
Total	1	0	1	2	3	101	62	166	10	1	135	146	36	221	3	260	574
Grand Total	7	7	8	22	8	275	189	472	63	4	575	642	157	707	9	873	2009
Approch %	318	318	364	11	17	583	400	235	98	06	896	320	180	810	10	435	
Total %	03	03	04	11	04	137	94	235	31	02	286	320	78	352	04	435	



SONOMA COUNTY

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File Name ATHRGLEN-F
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Start Time	GLEN RD Southbound			ATHERTON WAY Westbound			SR 37 OFF-RAMP Northbound			Eastbound				
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Thru	Left	App Total	Int Total	
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1														
Intersection 07:00 AM	0	1	0	1	39	40	20	1	201	44	149	3	196	499
Volume	0	100	0	13	48	50	9	0	90	22	76	1	49	138
Percent	0	0	0	1	13	14	3	0	58	9	39	1	49	138
07:45 Volume	0	0	0	1	13	14	3	0	58	9	39	1	49	138
Peak Factor														0.904
High Int 07:30 AM	0	1	0	1	13	14	3	0	58	14	38	0	52	
Volume	0	100	0	13	48	50	9	0	90	22	76	1	49	138
Peak Factor														0.942

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File Name ATHRGLEN-F
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GLEN RD			ATHERTON WAY		
Out	In	Total	Out	In	Total
5	1	6	169	80	249
0 1 0 Right Thru Left ◀ ▶ ▶			1 39 40 Right Thru Left ◀ ▶ ▶		
2/23/2006 7:00:00 AM 2/23/2006 7:45:00 AM Movement 1			North 2/23/2006 7:00:00 AM 2/23/2006 7:45:00 AM Movement 1		
Not Named Out 240 In 196 Total 436			SR 37 OFF-RAMP Out 85 In 222 Total 307		
44 149 3 Right Thru Left ▶ ▶ ▶			201 1 20 Left Thru Right ▶ ▶ ▶		

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File Name LAKEV37-F
 Site Code 00000000
 Start Date 2/23/2006
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Groups Printed- Movement 1

LAKEVILLE HWY

SR 37

Start Time	Southbound			Westbound			Northbound			Eastbound			App Total	Int Total
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left		
Factor	10	10	10	10	10	10	10	10	10	10	10	10	202	786
07:00 AM	76	1	114	84	309	0	393	0	0	0	196	4	235	917
07:15 AM	87	2	121	111	357	3	471	0	1	6	222	7	247	848
07:30 AM	87	3	112	87	311	1	399	0	0	6	238	3	220	869
07:45 AM	62	0	128	105	353	1	459	0	0	1	214	5	904	3420
Total	312	6	475	387	1330	5	1722	0	1	15	870	19	249	812
08:00 AM	38	0	112	95	317	1	413	0	0	1	245	3	233	790
08:15 AM	47	0	93	126	290	1	417	0	0	0	224	9	260	782
08:30 AM	41	0	83	92	306	0	398	0	0	0	247	13	198	710
08:45 AM	32	1	95	94	290	0	384	0	0	1	191	6	940	3094
Total	158	1	383	407	1203	2	1612	0	0	2	907	31	523	1045
04:00 PM	13	0	111	144	250	0	394	0	2	2	423	98	560	1052
04:15 PM	5	0	94	122	267	0	389	1	1	1	434	125	591	1115
04:30 PM	16	0	108	142	258	0	400	0	0	0	442	149	543	1058
04:45 PM	12	0	82	148	272	0	420	1	0	1	398	144	2217	4270
Total	46	0	395	556	1047	0	1603	2	4	4	1697	516	571	1074
05:00 PM	12	2	98	135	254	0	389	2	0	2	425	144	585	1120
05:15 PM	16	0	94	143	280	0	423	2	0	0	457	128	535	973
05:30 PM	12	0	57	118	251	0	369	0	0	0	419	116	425	907
05:45 PM	5	0	67	120	288	1	409	0	1	0	334	91	2116	4074
Total	45	2	316	516	1073	1	1590	4	1	2	1635	479	6177	14858
Grand Total	561	9	1569	1866	4653	8	6527	6	5	23	5109	1045	416	
Apprch %	262	0.4	73.4	28.6	71.3	0.1	40.0	40.0	33.3	0.4	82.7	16.9		
Total %	3.8	0.1	10.6	12.6	31.3	0.1	43.9	0.0	0.0	0.2	34.4	7.0		

SONOMA COUNTY

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File Name LAKEV37-F
 Site Code 00000000
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LAKEVILLE HWY
 Southbound

SR 37
 Westbound

Start Time	Southbound			Westbound			Northbound			Eastbound				
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left		
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1														
Intersection 07:15 AM														
Volume	274	5	473	398	1338	6	0	0	1	14	919	18	951	3446
Percent	36.4	0.7	62.9	22.8	76.8	0.3	0.0	0.0	100.0	1.5	96.6	1.9	235	917
07:15 Volume	87	2	121	111	357	3	0	0	1	6	222	7	235	917
Peak Factor														0.939
High Int 07:15 AM				07:15 AM			07:15 AM			08:00 AM				
Volume	87	2	121	111	357	3	0	0	1	1	245	3	249	0.955
Peak Factor				0.925			0.925			0.250				

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File Name LAKEV37-F
 Site Code 00000000
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LAKEVILLE HWY			SR 37		
Out	In	Total	Out	In	Total
416	752	1168	1392	1742	3134
274 5 473 Rght Thru Left			398 1338 6 Rght Thru Left		
North 2/23/2006 7:15:00 AM 2/23/2006 8:00:00 AM Movement 1					
Not Named Out In Total 1613 951 2564			Not Named Out In Total 25 1 26		

SONOMA COUNTY

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File Name LAKEV37-F
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LAKEVILLE HWY
 Southbound

SR 37
 Westbound

Start Time	Southbound			Westbound			Northbound			Eastbound				
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left		
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1														
Intersection 04:30 PM														
Volume	56	2	382	568	1064	0	5	0	0	3	1722	565	2290	4367
Percent	12.7	0.5	86.8	34.8	65.2	0.0	100.0	0.0	0.0	0.1	75.2	24.7	585	1120
05:15 Volume	16	0	94	143	280	0	2	0	0	0	457	128	0.975	
Peak Factor														
High Int 04:30 PM				05:00 PM			04:30 PM							
Volume	16	0	108	143	280	0	2	0	0	0	442	149	591	0.969
Peak Factor				0.887			0.965			0.625				

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File Name LAKEV37-F
 Site Code 00000000
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LAKEVILLE HWY		SR 37	
Out	In	Out	In
1133	440	2109	1632
Total 1573		Total 3741	
56	2	568	1064
Right	Thru	Right	Thru
Left	Left	Left	Left
382		0	
North		SR 37	
2/23/2006 4:30:00 PM		2/23/2006 5:15:00 PM	
Movement 1			
1120	2290	3	1722
Out	In	Right	Thru
Total	Total	Left	Left
3410	565	0	5
Not Named		Not Named	
5	5	5	10
Out	In	Out	In
Total	Total	Total	Total

File Name 12137-F
 Site Code 00000000
 Start Date 2/23/2006
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All Traffic Data
 (916) 771-8700
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SONOMA COUNTY

Groups Printed- Movement 1

SR 37

SR 121

Start Time	Southbound			Westbound			Northbound			Eastbound			App Total	Int Total
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left		
Factor	10	10	10	10	10	10	10	10	10	10	10	10	301	772
07 00 AM	96	0	31	5	337	0	2	0	0	0	233	68	325	797
07 15 AM	88	0	26	6	352	0	0	0	0	0	250	75	356	791
07 30 AM	104	0	24	11	295	0	0	1	1	0	263	93	333	825
07 45 AM	135	0	20	15	320	0	0	2	2	0	254	79	1315	3185
Total	423	0	101	37	1304	0	2	3	5	0	1000	315	375	823
08 00 AM	108	0	22	15	303	0	0	0	0	0	279	96	313	816
08 15 AM	125	0	12	27	339	0	0	0	0	0	211	102	323	693
08 30 AM	88	0	6	10	264	1	0	0	1	0	216	107	304	740
08 45 AM	110	0	20	15	291	0	0	0	0	0	215	89	1315	3072
Total	431	0	60	67	1197	1	0	1	1	0	921	394	522	966
04 00 PM	111	0	24	24	284	0	0	0	1	1	332	190	503	960
04 15 PM	125	3	23	18	284	1	0	3	3	0	324	179	547	1017
04 30 PM	123	0	47	20	276	0	0	1	3	1	349	197	503	946
04 45 PM	110	0	54	30	246	0	0	3	3	0	326	177	2075	3889
Total	469	3	148	92	1090	1	0	10	11	1	1331	743	515	988
05 00 PM	124	1	46	26	274	1	0	0	1	0	305	210	537	1050
05 15 PM	116	0	48	22	326	0	0	0	1	0	322	213	483	910
05 30 PM	102	0	52	23	249	0	0	1	1	0	278	205	414	908
05 45 PM	112	0	64	19	298	0	0	0	1	7	249	158	1949	3856
Total	454	1	210	90	1147	1	0	2	4	9	1154	786	6654	14002
Grand Total	1777	4	519	286	4738	3	4	14	21	10	4406	2238	475	
Approch %	77.3	0.2	22.6	5.7	94.3	0.1	14.3	66.7	0.1	0.2	66.2	33.6		
Total %	12.7	0.0	3.7	2.0	33.8	0.0	0.0	0.1	0.1	0.1	31.5	16.0		

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File Name 12137-F
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Start Time	SR 121 Southbound			SR 37 Westbound			Northbound			Eastbound						
	Right	Thru	Left	Right	Thru	Left	App Total	Right	Thru	Left	App Total	Right	Thru	Left	App Total	Int Total
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1																
Intersection 07:30 AM																
Volume	472	0	78	68	1257	0	1325	0	0	3	3	0	1007	370	1377	3255
Percent	85.8	0.0	14.2	5.1	94.9	0.0	0.0	0.0	0.0	100.0	0.0	0.0	73.1	26.9	333	825
07:45 Volume	135	0	20	15	320	0	335	0	0	2	2	0	254	79	333	825
Peak Factor																0.986
High Int	07:45 AM			08:15 AM				07:45 AM				08:00 AM				
Volume	135	0	20	27	339	0	366	0	0	2	2	0	279	96	375	
Peak Factor				0.887			0.905								0.918	

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SR 121				SR 37				
Out	In	Total	Out	In	Total	Out	In	Total
438	550	988	68	1257	0	1085	1325	2410
472	0	78	Right	Thru	Left	Left		
Right	Thru	Left						
North								
2/23/2006 7:30:00 AM								
2/23/2006 8:15:00 AM								
Movement 1								
Not Named			Not Named			Not Named		
Out	In	Total	Out	In	Total	Out	In	Total
1732	1377	3109	0	1007	370	0	3	3
Right	Thru	Left	Right	Thru	Left	Left	Thru	Right
						3	0	0

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 Site Code 00000000
 Start Date 2/23/2006
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Start Time	SR 121 Southbound			SR 37 Westbound			Northbound			Eastbound			App Total	Int Total
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left		
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1														
Intersection 04:30 PM														
Volume	473	1	195	98	1122	1	0	3	6	3	1302	797	2102	4001
Percent	70.7	0.1	29.1	8.0	91.9	0.1	0.0	33.3	66.7	0.1	61.9	37.9	537	1050
05:15 Volume	116	0	48	22	326	0	0	1	0	2	322	213	537	1050
Peak Factor														0.953
High Int Volume	124	1	46	22	326	0	0	1	3	1	349	197	547	0.961
Peak Factor				0.978			0.877			0.563				

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SONOMA COUNTY

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SR 121		SR 37	
Out	In	Out	In
898	669	1497	1221
Total 1567		Total 2718	
473 Right Thru Left 1 195 195 Left		98 Right Thru Left 1122 Thru 1 Left	
North 2/23/2006 4:30:00 PM 2/23/2006 5:15:00 PM Movement 1			
Not Named Out 1601 In 2102 Total 3703		Not Named Out 5 In 9 Total 14	
3 Right Thru Left 1302 Thru 797 Left		6 Left Thru Right 3 Thru 0 Right	

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SONOMA COUNTY

File Name WALNEB-F
 Site Code 00000000
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 Page No 2

SR37 EB AND WB OFF-RAMPS

RAILROAD (WALNUT)

Westbound

Southbound

Start Time	Southbound			Westbound			Northbound			Eastbound			int Total	
	Right	Thru	Left	Right	Thru	Left	TO FRNTG RD	LEFT TO WB SR37	App Total	EB RAMP TO MARE	OVERPA SSTRC EB SR37	FRNTG RD TO LB SR37		App Total
07:00 AM to 08:45 AM - Peak 1 of 1														
Intersection 07:15 AM														
Volume	0	0	0	0	0	0	4	83	117	111	0	1	112	229
Percent	0.0	0.0	0.0	0.0	0.0	0.0	3.4	70.9	99.1	99.1	0.0	0.9	32	70
Peak Volume	0	0	0	0	0	0	0	27	38	32	0	0	32	0.818
Peak Factor														
High Int	6:45:00 AM			6:45:00 AM			08:00 AM		07:45 AM					
Volume	0	0	0	0	0	0	0	27	38	32	0	0	32	
Peak Factor								0.770					0.875	

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SONOMA COUNTY

Not Named			Not Named		
Out	In	Total	Out	In	Total
5	0	5	30	0	30
0	0	0	0	0	0
Right	Thru	Left	Right	Thru	Left
0	0	0	0	0	0
SR37 EB AND WB OFF-RAMPS Out 83 In 112 Total 195 EBOVERP88NTG RAMP TO EB SR37 111 0 1 2/22/2006 7:15:00 AM 2/22/2006 8:00:00 AM Movement 1 North			SR37 EB AND WB OFF-RAMPS Out 83 In 112 Total 195 EBOVERP88NTG RAMP TO EB SR37 111 0 1 2/22/2006 7:15:00 AM 2/22/2006 8:00:00 AM Movement 1 North		
LEFT TO EB TO WB BRNG R37 83 4 30			LEFT TO EB TO WB BRNG R37 83 4 30		
111	117	228	111	117	228
Out	In	Total	Out	In	Total
RAILROAD (WALNUT)			RAILROAD (WALNUT)		

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File Name WALNEB-F
 Site Code 00000000
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 Page No 4

SR37 EB AND WB OFF-RAMPS

RAILROAD (WALNUT)

Westbound

Southbound

Start Time	Southbound			Westbound			Northbound			Eastbound			App Total	Int. Total
	Right	Thru	Left	Right	Thru	Left	TO FRNTG RD	LEFT TO WB SR37	EB SR37 TO MAKE	OVERPA SS TO EB SR37	FRNTG RD TO EB SR37			
04:00 PM	0	0	0	0	0	0	0	0	0	54	2	1	57	322
04:00 PM	0	0	0	0	0	0	0	0	0	94.7	3.5	1.8	25	99
04:00 PM	0	0	0	0	0	0	0	0	0	74	0	0	74	0.813
04:00 PM	0	0	0	0	0	0	0	0	0	04:00 PM	0	0	25	0.570
04:00 PM	0	0	0	0	0	0	0	0	0	0.895	0	0	0.570	

Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1

Intersection 04:00 PM

Volume

Percent

04:00 Volume

Peak Factor

High Int

Volume

Peak Factor

SONOMA COUNTY

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File Name WIL37E-F
 Site Code 00000000
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 Page No 1

Groups Printed- Movement 1

SR 37 OFF-RAMP

WILSON AVE
 Southbound

Eastbound

Northbound

Westbound

Start Time	Right	Thru	Left	App Total	Right	Thru	Left	App Total	Right	Thru	Left	App Total	Right	Thru	Left	App Total
Factor	1	0	1	1	1	0	1	1	1	0	1	1	1	0	1	1
07:00 AM	0	30	3	33	3	0	31	34	37	17	0	54	0	0	0	0
07:15 AM	0	60	11	71	11	0	42	53	43	25	0	68	0	0	0	0
07:30 AM	0	27	11	38	7	0	43	50	48	18	0	66	0	0	0	0
07:45 AM	0	28	10	38	8	0	45	53	35	27	0	62	0	0	0	0
Total	0	145	35	180	29	0	161	190	163	87	0	250	0	0	0	0
08:00 AM	0	42	10	52	5	0	29	34	38	28	0	66	0	0	0	0
08:15 AM	0	37	10	47	12	0	32	44	38	30	0	68	0	0	0	0
08:30 AM	0	44	5	49	7	0	42	49	29	30	0	59	0	0	0	0
08:45 AM	0	25	19	44	4	0	18	22	35	23	0	58	0	0	0	0
Total	0	148	44	192	28	0	121	149	140	111	0	251	0	0	0	0
04:00 PM	2	39	11	52	20	0	36	56	31	32	0	63	0	0	0	0
04:15 PM	0	41	8	49	17	0	44	61	33	43	0	76	0	0	0	0
04:30 PM	0	44	11	55	19	0	49	68	70	38	0	108	0	0	0	0
04:45 PM	0	19	8	27	14	0	45	59	51	36	0	87	0	0	0	0
Total	2	143	38	183	70	0	174	244	185	149	0	334	0	0	0	0
05:00 PM	0	44	13	57	11	0	40	51	48	45	0	93	0	0	0	0
05:15 PM	0	43	7	50	12	0	32	44	71	42	0	113	0	0	0	0
05:30 PM	0	44	11	55	14	0	45	59	95	30	0	125	0	0	0	0
05:45 PM	0	34	8	42	10	0	38	48	53	27	0	80	0	0	0	0
Total	0	165	39	204	47	0	155	202	267	144	0	411	0	0	0	0
Grand Total	2	601	156	759	174	0	611	785	755	491	0	1246	0	0	0	0
Approch %	0.3	79.2	20.6	27.2	22.2	0.0	77.8	28.1	60.6	39.4	0.0	44.7	0.0	0.0	0.0	0.0
Total %	0.1	21.5	5.6	27.2	6.2	0.0	21.9	28.1	27.1	17.6	0.0	44.7	0.0	0.0	0.0	0.0

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WILSON AVE
 Southbound

Start Time 07:00 AM to 08:45 AM - Peak 1 of 1
 Intersection 07:15 AM
 Volume 157 42 199
 Percent 78.9 21.1
 07:15 Volume 60 11 71
 Peak Factor
 High Int 07:15 AM
 Volume 60 11 71
 Peak Factor 0 701

SR 37 OFF-RAMP
 Westbound

App Total 190
 Right 31
 Thru 0
 Left 159
 App Total 53
 Right 43
 Thru 25
 Left 0
 App Total 68
 Right 0
 Thru 0
 Left 68
 App Total 0.963
 Right 0.43
 Thru 0.25
 Left 0.286

Northbound

App Total 262
 Right 0
 Thru 98
 Left 0
 App Total 68
 Right 0
 Thru 68
 Left 0
 App Total 0.963
 Right 0.0
 Thru 0.374
 Left 0.25

Eastbound

App Total 0
 Right 0
 Thru 0
 Left 0
 App Total 0
 Right 0
 Thru 0
 Left 0
 App Total 0.848
 Right 0.0
 Thru 0.0
 Left 0.192

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WILSON AVE		SR 37 OFF-RAMP	
Out	In	Out	In
129	199	206	190
Total: 328		Total: 396	
0	157	31	0
Right	Thru	Right	Thru
42		159	
Left		Left	
North		North	
2/22/2006 7 15 00 AM		2/22/2006 8 00 00 AM	
Movement 1		Movement 1	
0	0	0	0
Out	In	Out	In
0	0	0	0
Total		Total	
0	0	0	0
Right	Thru	Right	Thru
0	0	0	0
Left		Left	
0	98	0	98
Right		Right	
164		164	
Total		Total	
316	262	316	262
Out	In	Out	In
578		578	
Total		Total	
Not Named	Not Named	Not Named	Not Named

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File Name WIL37E-F
 Site Code 00000000
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Start Time	WILSON AVE Southbound			SR 37 OFF-RAMP Westbound			Northbound			Eastbound					
	Right	Thru	Left	Right	Thru	Left	App Total	Right	Thru	Left	App Total	Right	Thru	Left	App Total
04 00 PM	0	150	39	51	0	162	213	265	153	0	418	0	0	0	0
04 45 PM	0	79.4	20.6	23.9	0.0	76.1	63.4	63.4	36.6	0.0	0.0	0.0	0.0	0.0	0.0
05 00 PM	0	44	11	14	0	45	59	95	30	0	125	0	0	0	0
05 30 PM	0	44	13	14	0	45	59	95	30	0	125	0	0	0	0
High Int Volume	0	44	13	14	0	45	59	95	30	0	125	0	0	0	0
Peak Factor							0.903				0.836				0.858

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File Name WIL37E-F
 Site Code 0000000
 Start Date 2/22/2006
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WILSON AVE			SR 37 OFF-RAMP														
Out	In	Total	Out	In	Total												
204	189	393	304	213	517												
<table border="0"> <tr> <td>0</td> <td>150</td> <td>39</td> </tr> <tr> <td>Right</td> <td>Thru</td> <td>Left</td> </tr> </table>			0	150	39	Right	Thru	Left	<table border="0"> <tr> <td>51</td> <td>0</td> <td>162</td> </tr> <tr> <td>Right</td> <td>Thru</td> <td>Left</td> </tr> </table>			51	0	162	Right	Thru	Left
0	150	39															
Right	Thru	Left															
51	0	162															
Right	Thru	Left															
<table border="0"> <tr> <td>◀</td> <td>▶</td> <td>▶</td> </tr> </table>			◀	▶	▶	<table border="0"> <tr> <td>◀</td> <td>▶</td> <td>▶</td> </tr> </table>			◀	▶	▶						
◀	▶	▶															
◀	▶	▶															
North 2/22/2006 4:45:00 PM 2/22/2006 5:30:00 PM Movement 1																	
<table border="0"> <tr> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>Right</td> <td>Thru</td> <td>Left</td> </tr> </table>			0	0	0	Right	Thru	Left	<table border="0"> <tr> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>Right</td> <td>Thru</td> <td>Left</td> </tr> </table>			0	0	0	Right	Thru	Left
0	0	0															
Right	Thru	Left															
0	0	0															
Right	Thru	Left															
<table border="0"> <tr> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>Out</td> <td>In</td> <td>Total</td> </tr> </table>			0	0	0	Out	In	Total	<table border="0"> <tr> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>Out</td> <td>In</td> <td>Total</td> </tr> </table>			0	0	0	Out	In	Total
0	0	0															
Out	In	Total															
0	0	0															
Out	In	Total															
Not Named			Not Named														
<table border="0"> <tr> <td>312</td> <td>416</td> <td>730</td> </tr> <tr> <td>Out</td> <td>In</td> <td>Total</td> </tr> </table>			312	416	730	Out	In	Total	<table border="0"> <tr> <td>0</td> <td>153</td> <td>265</td> </tr> <tr> <td>Left</td> <td>Thru</td> <td>Right</td> </tr> </table>			0	153	265	Left	Thru	Right
312	416	730															
Out	In	Total															
0	153	265															
Left	Thru	Right															

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SONOMA COUNTY

File Name MAREWB-F
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Groups Printed- Movement 1

PARKING LOT
 Southbound

Start Time	Right	Thru	Left	App Total	Right	Thru	Left	App Total
Factor	10	10	10	0	10	10	10	0
07:00 AM	0	0	0	0	0	23	0	23
07:15 AM	0	0	0	0	1	28	0	29
07:30 AM	0	0	0	0	0	53	0	53
07:45 AM	0	0	0	0	0	61	0	61
Total	0	0	0	0	1	165	0	166

SR 37 OFF-RAMP
 Westbound

Start Time	Right	Thru	Left	App Total	Right	Thru	Left	App Total
Factor	10	10	10	0	10	10	10	0
08:00 AM	0	0	0	0	0	44	0	44
08:15 AM	0	0	0	0	0	35	0	35
08:30 AM	0	0	0	0	0	37	0	37
08:45 AM	0	0	0	0	0	43	0	43
Total	0	0	0	0	0	159	0	159

MARE ISLAND EXIT RAMP
 Eastbound

Start Time	Right	Thru	Left	App Total	Right	Thru	Left	App Total
Factor	10	10	10	0	10	10	10	0
07:00 AM	0	0	0	0	17	0	0	17
07:15 AM	0	0	0	0	19	0	0	19
07:30 AM	0	0	0	0	27	0	0	27
07:45 AM	0	0	0	0	11	0	0	11
Total	0	0	0	0	74	0	0	74

Start Time	Right	Thru	Left	App Total	Right	Thru	Left	App Total	Int Total
08:00 AM	28	0	0	0	28	0	0	28	72
08:15 AM	19	0	0	0	19	0	0	19	54
08:30 AM	11	0	0	0	11	0	0	11	48
08:45 AM	14	0	0	0	14	0	0	14	57
Total	72	0	0	0	72	0	0	72	231
04:00 PM	20	0	0	0	20	0	0	20	34
04:15 PM	21	0	0	0	21	0	0	21	36
04:30 PM	22	0	0	0	22	0	0	22	29
04:45 PM	21	0	0	0	21	0	0	21	31
Total	84	0	0	0	84	0	0	84	130
05:00 PM	30	0	0	0	30	0	0	30	38
05:15 PM	19	0	0	0	19	0	0	19	31
05:30 PM	19	0	0	0	19	0	0	19	27
05:45 PM	20	0	0	0	20	0	0	20	25
Total	88	0	0	0	88	0	0	88	121
Grand Total	318	0	0	0	318	0	0	318	722
Approch %	100.0	0.0	0.0	0.0	100.0	0.0	0.0	100.0	
Total %	44.0	0.0	0.0	0.0	44.0	0.0	0.0	44.0	

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File Name MAREWB-F
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Start Time	PARKING LOT Southbound			SR 37 OFF-RAMP Westbound			MARE ISLAND EXIT RAMP Eastbound			App Total	Int Total
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left		
07:00 AM to 08:45 AM - Peak 1 of 1											
Intersection	07:30 AM										
Volume	0	0	0	0	193	0	0	0	0	0	85
Percent	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0
07:30 Volume	0	0	0	0	53	0	0	0	0	0	27
Peak Factor											
High Int	6:45:00 AM				6:45:00 AM						08:00 AM
Volume	0	0	0	0	61	0	0	0	0	0	28
Peak Factor					0.791						0.759

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SONOMA COUNTY

File Name MAREWB-F
 Site Code 00000000
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MARE ISLAND EXIT RAMP			SR 37 OFF-RAMP		
Out	In	Total	Out	In	Total
40	94	134	0	40	40
Right	Thru	Left	Right	Thru	Left
94	0	94	0	40	0
Left	Thru	Right	Left	Thru	Right
0	0	0	0	0	0
Out	In	Total	Out	In	Total
94	0	94	0	0	0
Not Named			Not Named		

PARKING LOT		
Out	In	Total
0	0	0
Right	Thru	Left
0	0	0

North		
Out	In	Total
0	40	40
Right	Thru	Left
0	40	0

2/22/2006 4 15 00 PM
 2/22/2006 5 00 00 PM
 Movement 1

SONOMA COUNTY

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File Name WIL37WB
 Site Code 00000000
 Start Date 2/22/2006
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Start Time	Groups Printed- Movement 1																
	WILSON AVE				SR 37 WB OFF-RAMP												
	Southbound		Westbound		Northbound		Eastbound										
Right	Thru	Left	App Total	Right	Thru	Left	App Total	Right	Thru	Left	App Total	Right	Thru	Left	App Total	Int Total	
Factor	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	
07 00 AM	0	0	0	0	4	23	27	16	0	29	4	45	22	4	0	26	98
07 15 AM	0	0	0	0	13	22	35	19	0	57	11	76	24	0	0	35	146
07 30 AM	0	0	0	0	12	10	22	20	0	25	8	45	18	0	0	26	93
07 45 AM	0	0	0	0	10	15	25	39	0	29	10	68	22	0	0	32	125
Total	0	0	0	0	39	70	109	94	0	140	33	234	86	0	0	119	462
08 00 AM	0	0	0	0	12	10	22	49	0	40	7	89	26	0	0	33	144
08 15 AM	0	0	0	0	9	23	32	21	0	38	11	59	29	0	0	40	131
08 30 AM	0	0	0	0	7	11	18	21	0	44	8	65	29	0	0	37	120
08 45 AM	0	0	0	0	19	19	38	33	0	25	5	58	22	0	0	27	123
Total	0	0	0	0	47	63	110	124	0	147	31	271	106	0	0	137	518
04 00 PM	0	0	0	0	12	11	23	30	0	44	20	74	34	0	0	54	151
04 15 PM	0	0	0	0	11	10	21	39	0	39	19	78	38	0	0	57	156
04 30 PM	0	0	0	0	15	13	28	32	0	40	23	72	36	0	0	59	159
04 45 PM	0	0	0	0	8	20	28	41	0	19	17	60	35	0	0	52	140
Total	0	0	0	0	46	54	100	142	0	142	79	284	143	0	0	222	606
05 00 PM	0	0	0	0	17	20	37	48	0	40	11	88	43	0	0	54	179
05 15 PM	0	0	0	0	14	11	25	33	0	39	15	72	41	0	0	56	153
05 30 PM	0	0	0	0	13	18	31	37	0	40	16	77	32	0	0	48	156
05 45 PM	0	0	0	0	13	11	24	38	0	33	9	71	28	0	0	37	132
Total	0	0	0	0	57	60	117	156	0	152	51	308	144	0	0	195	620
Grand Total	0	0	0	0	189	247	436	516	0	581	194	1097	479	0	0	673	2206
Approch %	0.0	0.0	0.0	0.0	43.3	56.7	19.8	47.0	0.0	53.0	28.8	71.2	71.2	0.0	0.0	28.8	0.0
Total %	0.0	0.0	0.0	0.0	8.6	11.2	19.8	23.4	0.0	26.3	8.8	49.7	21.7	0.0	0.0	8.8	30.5

SONOMA COUNTY

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File Name WIL37WB
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Start Time	Southbound			WILSON AVE Westbound			SR 37 WB OFF-RAMP Northbound			Eastbound				
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	App Total	Int Total
Peak Hour From 07 00 AM to 08 45 AM - Peak 1 of 1														
Intersection 07 45 AM	0	0	0	0	38	59	0	130	0	151	0	36	281	520
Volume	0	0	0	0	392	608	0	463	0	537	0	254	89	144
Percent	0	0	0	0	12	10	0	49	0	40	0	7	33	144
08 00 Volume	0	0	0	0	12	10	0	49	0	40	0	7	89	144
Peak Factor														
High Int 6 45 00 AM				08 15 AM				08 00 AM						
Volume	0	0	0	0	9	23	0	49	0	40	0	11	89	40
Peak Factor													0.758	0.888

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File Name WIL37WB
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 Start Date 2/22/2006
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Start Time	Southbound			WILSON AVE Westbound			SR 37 WB OFF-RAMP Northbound			Eastbound			App Total	Int Total
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left		
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1														
Intersection 04:15 PM														
Volume	0	0	0	0	51	63	0	160	138	0	70	0	222	634
Percent	0.0	0.0	0.0	0.0	44.7	55.3	0.0	53.7	46.3	0.0	31.5	0.0	68.5	179
05:00 Volume	0	0	0	0	17	20	0	48	40	0	11	0	54	179
Peak Factor														0.885
High Int Volume	0	0	0	0	17	20	0	48	40	0	23	0	59	0.885
Peak Factor														0.941
05:00 PM														
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All Traffic Data
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File Name WIL37WB
 Site Code 00000000
 Start Date 2/22/2006
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SONOMA COUNTY

Not Named			WILSON AVE																				
Out	In	Total	Out	In	Total																		
0	0	0	230	114	344																		
<table border="0"> <tr> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>Right</td> <td>Thru</td> <td>Left</td> </tr> <tr> <td>◀</td> <td>▶</td> <td>▶</td> </tr> </table>			0	0	0	Right	Thru	Left	◀	▶	▶	<table border="0"> <tr> <td>0</td> <td>51</td> <td>63</td> </tr> <tr> <td>Right</td> <td>Thru</td> <td>Left</td> </tr> <tr> <td>◀</td> <td>▼</td> <td>▶</td> </tr> </table>			0	51	63	Right	Thru	Left	◀	▼	▶
0	0	0																					
Right	Thru	Left																					
◀	▶	▶																					
0	51	63																					
Right	Thru	Left																					
◀	▼	▶																					
<table border="0"> <tr> <td>189</td> <td>222</td> <td>411</td> </tr> <tr> <td>Out</td> <td>In</td> <td>Total</td> </tr> </table>			189	222	411	Out	In	Total	<table border="0"> <tr> <td>152</td> <td>70</td> <td>222</td> </tr> <tr> <td>Right</td> <td>Thru</td> <td>Left</td> </tr> <tr> <td>▶</td> <td>▶</td> <td>▶</td> </tr> </table>			152	70	222	Right	Thru	Left	▶	▶	▶			
189	222	411																					
Out	In	Total																					
152	70	222																					
Right	Thru	Left																					
▶	▶	▶																					
<table border="0"> <tr> <td>215</td> <td>298</td> <td>513</td> </tr> <tr> <td>Out</td> <td>In</td> <td>Total</td> </tr> </table>			215	298	513	Out	In	Total	<table border="0"> <tr> <td>138</td> <td>0</td> <td>160</td> </tr> <tr> <td>Left</td> <td>Thru</td> <td>Right</td> </tr> <tr> <td>▶</td> <td>▶</td> <td>▶</td> </tr> </table>			138	0	160	Left	Thru	Right	▶	▶	▶			
215	298	513																					
Out	In	Total																					
138	0	160																					
Left	Thru	Right																					
▶	▶	▶																					
<table border="0"> <tr> <td colspan="3">North</td> </tr> <tr> <td colspan="3">2/22/2006 4 15 00 PM</td> </tr> <tr> <td colspan="3">2/22/2006 5 00 00 PM</td> </tr> <tr> <td colspan="3">Movement 1</td> </tr> </table>			North			2/22/2006 4 15 00 PM			2/22/2006 5 00 00 PM			Movement 1			<table border="0"> <tr> <td colspan="3">SR 37 WB OFF-RAMP</td> </tr> </table>			SR 37 WB OFF-RAMP					
North																							
2/22/2006 4 15 00 PM																							
2/22/2006 5 00 00 PM																							
Movement 1																							
SR 37 WB OFF-RAMP																							

SONOMA COUNTY
 File Name 116LAKE-F
 Site Code 00000000
 Start Date 2/23/2006
 Page No 1

All Traffic Data
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Groups Printed- Movement 1

Start Time	SR 116 Southbound				LAKEVILLE HWY Westbound				LAKEVILLE HWY Northbound				LAKEVILLE HWY Eastbound			
	Right	Thru	Left	App Total	Right	Thru	Left	App Total	Right	Thru	Left	App Total	Right	Thru	Left	App Total
	Factor	10	10	10	20	10	10	10	94	10	10	10	0	10	10	10
07 00 AM	12	0	8	20	2	92	0	94	0	0	0	0	0	222	7	229
07 15 AM	11	0	10	21	3	120	0	123	0	0	0	0	0	220	18	238
07 30 AM	18	0	1	19	2	108	0	110	0	0	0	0	0	192	12	204
07 45 AM	12	0	5	17	4	112	0	116	0	0	0	0	0	165	11	176
Total	53	0	24	77	11	432	0	443	0	0	0	0	0	799	48	847
08 00 AM	16	0	5	21	2	91	0	93	0	0	0	0	0	154	18	172
08 15 AM	17	0	2	19	2	111	0	113	0	0	0	0	0	135	13	148
08 30 AM	22	0	5	27	6	123	0	129	0	0	0	0	0	130	23	153
08 45 AM	13	0	1	14	3	97	0	100	0	0	0	0	0	134	15	149
Total	68	0	13	81	13	422	0	435	0	0	0	0	0	553	69	622
04 00 PM	12	0	1	13	13	209	0	222	0	0	0	0	0	121	25	146
04 15 PM	16	0	6	22	11	229	0	240	0	0	0	0	0	90	32	122
04 30 PM	12	0	3	15	25	277	0	302	0	0	0	0	0	112	28	140
04 45 PM	6	0	3	9	21	262	0	283	0	0	0	0	0	87	27	114
Total	46	0	13	59	70	977	0	1047	0	0	0	0	0	410	112	522
05 00 PM	6	0	2	8	19	232	0	251	0	0	0	0	0	99	34	133
05 15 PM	7	0	1	8	15	261	0	276	0	0	0	0	0	98	30	128
05 30 PM	13	0	1	14	11	219	0	230	0	0	0	0	0	70	25	95
05 45 PM	13	0	4	17	11	175	0	186	0	0	0	0	0	64	20	84
Total	39	0	8	47	56	887	0	943	0	0	0	0	0	331	109	440
Grand Total	206	0	58	264	150	2718	0	2868	0	0	0	0	0	2093	338	2431
Approch %	78.0	0.0	22.0	4.7	5.2	94.8	0.0	5.16	0.0	0.0	0.0	0.0	0.0	86.1	13.9	43.7
Total %	3.7	0.0	1.0	4.7	2.7	48.9	0.0	5.16	0.0	0.0	0.0	0.0	0.0	37.6	6.1	14.3

PM Peak
 209 150 2718
 229 948 2868
 277 489 1047
 262 0 0
 977 0 0
 232 0 0
 261 0 0
 219 0 0
 175 0 0
 887 0 0
 251 0 0
 276 0 0
 230 0 0
 186 0 0
 943 0 0
 2868 0 0
 948 0 0
 489 0 0
 5.16 0.0 0.0
 119 396 0

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File Name 116LAKE-F
 Site Code 00000000
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	SR 116 Southbound				LAKEVILLE HWY Westbound				LAKEVILLE HWY Eastbound					
	Right	Thru	Left	App Total	Right	Thru	Left	App Total	Right	Thru	Left	App Total	Int Total	
Start Time	07:00 AM	07:00 AM	07:00 AM	07:00 AM	07:00 AM	07:00 AM	07:00 AM	07:00 AM	07:00 AM	07:00 AM	07:00 AM	07:00 AM		
Peak Hour From	07:00 AM to 08:45 AM - Peak 1 of 1													
Intersection	07:00 AM													
Volume	53	0	24	77	11	432	0	443	0	0	0	0	847	1367
Percent	68.8	0.0	31.2		2.5	97.5	0.0		0.0	0.0	0.0	0.0		
07:15 Volume	11	0	10	21	3	120	0	123	0	0	0	0	238	382
Peak Factor														0.895
High Int Volume	11	0	10	21	3	120	0	123	0	0	0	0	238	
Peak Factor				0.917				0.900						0.890
					07:15 AM			6:45:00 AM		07:15 AM				

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SR 116			LAKEVILLE HWY		
Out	In	Total	Out	In	Total
59	77	136	823	443	1266
SR 116			LAKEVILLE HWY		
53	0	24	11	432	0
Right	Thru	Left	Right	Thru	Left
0	0	24	0	0	0
North			North		
2/23/2006 7:00:00 AM			2/23/2006 7:45:00 AM		
Movement 1			Movement 1		
0	799	48	0	799	48
Right	Thru	Left	Right	Thru	Left
0	0	0	0	0	0
LAKEVILLE HWY			LAKEVILLE HWY		
485	847	1332	485	847	1332
Out	In	Total	Out	In	Total
0	0	0	0	0	0
Out	In	Total	Out	In	Total
0	0	0	0	0	0
Not Named			Not Named		

All Traffic Data
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File Name 121116-F
 Site Code 00000000
 Start Date 2/23/2006
 Page No 1

Groups Printed- Movement 1

Start Time	SR 116 Southbound			SR 121 Westbound			SR 121 Northbound			BONNEAU RD Eastbound				
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	App Total	Int Total
Factor	10	10	10	10	10	10	10	10	10	10	10	10	17	497
07:00 AM	5	105	121	88	5	88	48	19	1	68	14	2	13	493
07:15 AM	2	101	116	92	4	73	58	32	2	92	3	7	19	534
07:30 AM	10	96	132	80	8	95	65	27	2	94	4	2	14	489
07:45 AM	5	96	130	59	4	95	56	26	4	86	6	3	63	2013
Total	22	398	499	319	21	351	227	104	9	340	36	14	63	
08:00 AM	6	80	91	73	1	88	74	27	1	102	8	4	16	457
08:15 AM	3	88	77	76	4	87	82	32	1	115	8	7	18	468
08:30 AM	0	91	95	76	5	71	72	44	0	116	6	5	16	470
08:45 AM	2	90	97	61	3	83	55	41	1	97	8	5	19	452
Total	11	349	360	286	13	329	283	144	3	430	30	21	69	1847
04:00 PM	4	66	86	144	4	90	99	96	0	195	6	10	18	607
04:15 PM	2	75	89	96	9	97	125	96	1	222	12	8	22	612
04:30 PM	4	78	98	115	4	93	141	95	2	238	16	11	31	661
04:45 PM	1	63	84	123	1	89	118	98	0	216	7	15	23	600
Total	11	282	357	478	18	369	483	385	3	871	41	44	94	2480
05:00 PM	4	60	93	124	6	78	138	112	2	252	7	10	17	634
05:15 PM	4	53	96	134	0	76	159	103	4	266	12	14	29	658
05:30 PM	4	57	77	100	2	96	149	106	0	255	7	13	23	614
05:45 PM	3	56	96	91	6	71	132	85	1	218	7	8	16	557
Total	15	226	362	449	14	321	578	406	7	991	33	45	85	2463
Grand Total	59	1255	1578	1532	66	1370	1571	1039	22	2632	140	124	311	8803
Approch %	20	43.4	54.6	51.6	2.2	46.2	59.7	39.5	0.8	151	45.0	39.9		
Total %	0.7	14.3	17.9	17.4	0.7	15.6	17.8	11.8	0.2	29.9	1.6	1.4		3.5

SONOMA COUNTY

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File Name 121116-F
 Site Code 00000000
 Start Date 2/23/2006
 Page No 2

Start Time	SR 116 Southbound			SR 121 Westbound			SR 121 Northbound			BONNEAU RD Eastbound			App Total	Int Total
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left		
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1														
Intersection 07:00 AM														
Volume	22	398	499	319	21	351	227	104	9	206	36	14	63	2013
Percent	2.4	43.3	54.3	46.2	3.0	50.8	66.8	30.6	2.6	20.6	57.1	22.2	19	534
07:30 Volume	10	96	132	80	8	95	65	27	2	4	13	2	19	0.942
Peak Factor														
High Int 07:30 AM				07:30 AM			07:30 AM			07:30 AM				
Volume	10	96	132	80	8	95	65	27	2	4	13	2	19	0.829
Peak Factor				0.965			0.944			0.904				

SONOMA COUNTY

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File Name 121116-F
 Site Code 0000000
 Start Date 2/23/2006
 Page No 4

Start Time	SR 116 Southbound			SR 121 Westbound			SR 121 Northbound			BONNEAU RD Eastbound			App Total	Int Total
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left		
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1														
Intersection 04:30 PM														
Volume	13	254	371	496	11	336	556	408	8	8	42	50	972	100
Percent	2.0	39.8	58.2	58.8	1.3	39.9	57.2	42.0	0.8	8.0	42.0	50.0	238	31
04:30 Volume	4	78	98	115	4	93	141	95	2	4	16	11	238	31
Peak Factor														0.966
High Int 04:30 PM				04:45 PM			05:15 PM			04:30 PM				
Volume	4	78	98	123	1	89	159	103	4	4	16	11	266	31
Peak Factor				0.886			0.989			0.914			0.806	

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SR 116			SR 121		
Out	In	Total	Out	In	Total
954	638	1592	969	843	1812
13 Right 254 Thru 371 Left 13 Right 254 Thru 371 Left			496 Right 11 Thru 336 Left 496 Right 11 Thru 336 Left		
SR 116 Out 954 In 638 Total 1592 13 Right 254 Thru 371 Left 13 Right 254 Thru 371 Left			SR 121 Out 969 In 843 Total 1812 496 Right 11 Thru 336 Left 496 Right 11 Thru 336 Left		
BONNEAU RD Out 32 In 100 Total 132 8 Right 42 Thru 50 Left 8 Right 42 Thru 50 Left			North 2/23/2006 4:30:00 PM 2/23/2006 5:15:00 PM Movement 1		
SR 121 Out 598 In 972 Total 1570 8 Left 408 Thru 556 Right 8 Left 408 Thru 556 Right					

SONOMA COUNTY

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 (916) 771-8700
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File Name VALLAN-F
 Site Code 00000000
 Start Date 2/22/2006
 Page No 1

Groups Printed- Movement 1
 SR 37 OFF-RAMP

SR 29

Southbound

Westbound

Northbound

Eastbound

Start Time	Southbound			Westbound			Northbound			Eastbound			App Total	Int Total
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left		
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0	0
07 00 AM	65	270	0	335	173	41	214	22	112	0	134	0	0	683
07 15 AM	79	332	0	411	236	56	292	16	153	0	169	0	0	872
07 30 AM	69	337	0	406	230	76	306	17	184	0	201	0	0	913
07 45 AM	65	311	0	376	253	104	357	25	143	0	168	0	0	901
Total	278	1250	0	1528	892	277	1169	80	592	0	672	0	0	3369
08 00 AM	77	323	0	400	191	102	293	25	136	0	161	0	0	854
08 15 AM	72	293	0	365	191	109	300	22	174	0	196	0	0	861
08 30 AM	59	355	0	414	178	78	256	23	157	0	180	0	0	850
08 45 AM	53	325	0	378	178	62	240	23	153	0	176	0	0	794
Total	261	1296	0	1557	738	351	1089	93	620	0	713	0	0	3359
04 00 PM	62	366	0	428	180	93	273	16	232	0	248	0	0	949
04 15 PM	63	334	0	397	198	84	282	27	262	0	289	0	0	968
04 30 PM	41	385	0	426	205	91	296	25	287	0	312	0	0	1034
04 45 PM	46	390	0	436	224	74	298	21	293	0	314	0	0	1048
Total	212	1475	0	1687	807	342	1149	89	1074	0	1163	0	0	3999
05 00 PM	60	363	0	423	228	83	311	30	293	0	323	0	0	1057
05 15 PM	54	322	0	376	215	89	304	26	297	0	323	0	0	1003
05 30 PM	54	307	0	361	215	94	309	22	369	0	391	0	0	1061
05 45 PM	51	317	0	368	217	83	300	23	343	0	366	0	0	1034
Total	219	1309	0	1528	875	349	1224	101	1302	0	1403	0	0	4155
Grand Total	970	5330	0	6300	3312	1319	4631	363	3588	0	3951	0	0	14882
Approch %	15.4	84.6	0.0	42.3	71.5	28.5	31.1	9.2	90.8	0.0	26.5	0.0	0.0	0.0
Total %	6.5	35.8	0.0	42.3	22.3	8.9	31.1	2.4	24.1	0.0	26.5	0.0	0.0	0.0

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File Name VALLANN-F
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SR 37 OFF-RAMP

SR 29 Southbound

Start Time	Southbound			Westbound			Northbound			Eastbound		
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1												
Intersection 07:15 AM												
Volume	290	1303	0	910	0	338	83	616	0	0	0	0
Percent	18.2	81.8	0.0	72.9	0.0	27.1	11.9	88.1	0.0	0.0	0.0	0.0
07:30 Volume	69	337	0	230	0	76	17	184	0	0	0	0
Peak Factor												
High Int 07:15 AM				07:45 AM			07:30 AM			6:45:00 AM		
Volume	79	332	0	253	0	104	17	184	0	201	0	0
Peak Factor				0.969			0.874			0.869		
App Total	1593			1248			699			201		
App Total	406			306			201			0		
App Total	411			357			201			0		
App Total	0.969			0.874			0.869			0		

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File Name VALLANN-F
 Site Code 00000000
 Start Date 2/22/2006
 Page No 4

Start Time	SR 29 Southbound			SR 37 OFF-RAMP Westbound			Northbound			Eastbound			App Total	Int Total
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left		
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1														
Intersection 04:45 PM														
Volume	214	1382	0	882	0	340	1222	99	1252	0	1351	0	0	4169
Percent	13.4	86.6	0.0	72.2	0.0	27.8	7.3	7.3	92.7	0.0	0.0	0.0	0.0	1061
05:30 Volume	54	307	0	215	0	94	309	22	369	0	391	0	0	0 982
Peak Factor														
High Int 04:45 PM				05:00 PM			05:30 PM							
Volume	46	390	0	228	0	83	311	22	369	0	391	0	0	0 864
Peak Factor							0 982							

All Traffic Data
 (916) 771-8700
 Fax 786-2879

SONOMA COUNTY

File Name VALLANN-F
 Site Code 00000000
 Start Date 2/22/2006
 Page No 5

SR 29			SR 37 OFF-RAMP		
Out	In	Total	Out	In	Total
2134	1596	3730	99	1222	1321
214 1382 Right Thru Left			882 0 340 Right Thru Left		
Not Named Out 214 In 0 Total 214			North 2/22/2006 4 45 00 PM 2/22/2006 5 30 00 PM Movement 1		
0 0 0 Right Thru Left			0 1252 99 Left Thru Right		
1722 1351 3073 Out In Total			Not Named		

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SONOMA COUNTY

File Name : Sr37sr29-F
 Site Code 00000000
 Start Date : 3/9/2006
 Page No : 1

Start Time	Groups Printed- Movement_1																
	SR 29 Southbound				MARINE WORLD PARKWAY Westbound				SR 29 Northbound				SR 37 OFF-RAMP Eastbound				
	Thru	Left	ON-RAMP	App Total	Right	Left	App Total	Right	Thru	Thru	Right	App Total	Thru	Left	App Total	Int. Total	
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
07:00 AM	0	208	22	161	391	58	0	64	1	133	0	61	16	11	35	0	
07:15 AM	0	226	29	177	432	58	0	73	7	184	0	70	16	12	48	0	
07:30 AM	0	236	29	182	447	71	0	90	10	157	0	93	260	21	11	50	0
07:45 AM	0	248	38	166	452	50	0	82	18	163	0	75	34	16	33	0	
Total	0	918	118	686	1722	237	0	309	36	637	0	299	87	52	166	0	
08:00 AM	0	266	34	172	472	37	0	64	11	137	0	65	26	13	47	0	
08:15 AM	0	253	22	171	446	48	0	61	12	151	0	67	18	11	35	0	
08:30 AM	0	240	30	144	414	46	0	63	20	156	0	73	25	22	49	0	
08:45 AM	0	244	41	137	422	42	0	61	18	147	0	69	20	15	31	0	
Total	0	1003	127	624	1754	173	0	249	61	591	0	274	89	61	162	0	
04:00 PM	0	255	46	161	462	116	0	139	35	312	0	144	22	10	55	0	
04:15 PM	0	217	32	174	423	82	0	108	27	305	0	127	18	17	75	0	
04:30 PM	0	266	45	179	490	92	0	110	24	289	0	155	468	27	29	66	0
04:45 PM	0	244	63	190	497	111	0	131	30	307	0	161	26	19	56	0	
Total	0	982	186	704	1872	401	0	488	116	1213	0	587	93	75	252	0	
05:00 PM	0	227	41	186	454	129	0	155	24	414	0	186	28	26	78	0	
05:15 PM	0	224	51	167	442	94	0	118	43	356	0	159	35	28	52	0	
05:30 PM	0	231	45	175	451	89	0	118	30	372	0	162	27	23	86	0	
05:45 PM	0	208	42	166	416	83	0	109	32	390	0	144	25	15	52	0	
Total	0	890	179	694	1763	395	0	500	129	1532	0	651	115	92	268	0	
Grand Total	0	3793	610	2708	7111	1206	0	1546	342	3973	0	1811	384	280	848	0	
Approch %	0.0	53.3	8.6	38.1	78.0	0.0	0.0	9.5	5.6	64.9	0.0	29.6	25.4	18.5	56.1	0.0	
Total %	0.0	23.3	3.7	16.6	43.6	7.4	0.0	9.5	2.1	24.4	0.0	11.1	2.4	1.7	5.2	0.0	

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File Name : S:\37sr29-F
 Site Code : 00000000
 Start Date : 3/9/2006
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SONOMA COUNTY

Start Time	SR 29 Southbound			MARINE WORLD PARKWAY Westbound			SR 29 Northbound			SR 37 OFF-RAMP Eastbound			Int Total					
	Thru	Left	RAM	Right	Left	App Total	Right	Thru	App Total	Right	Thru	Left		App Total				
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																		
Intersection 04:45 PM	0	200	718	1844	423	0	522	127	1449	0	668	2244	116	96	272	0	484	5094
Volume	0	50.2	10.8	38.9	81.0	0.0	19.0	0.0	64.6	0.0	29.8	24.0	19.8	56.2	0.0			
Percent	0	22.7	4.1	18.6	45.4	1.29	0	2.6	4.14	0	18.6	62.4	2.8	2.6	7.8	0	1.32	13.65
Volume	0	244	63	190	497	129	155	24	414	0	186	624	27	23	86	0	135	0 933
Peak Factor	0	0.244	0.063	0.190	0.497	0.129	0.155	0.024	0.414	0	0.186	0.624	0.027	0.023	0.086	0	0.135	0 890
High Int 04:45 PM																		
Volume	0	244	63	190	497	129	155	24	414	0	186	624	27	23	86	0	135	0 890
Peak Factor	0	0.244	0.063	0.190	0.497	0.129	0.155	0.024	0.414	0	0.186	0.624	0.027	0.023	0.086	0	0.135	0 890

**EXISTING CONDITIONS
(TRAFFIX)**

 Impact Analysis Report
 Level Of Service

Intersection	Base LOS	Base		Future LOS	Future		Change in
		Del/ Veh	V/ C		Del/ Veh	V/ C	
# 1 Atherton Ave and Harbor Dr/ EB	A	8.3	0.220	A	8.3	0.220	+ 0.000 V/C
# 2 Atherton Ave and Glen Ln/ WB S	B	13.4	0.000	B	13.4	0.000	+ 0.000 D/V
# 3 Lakeville Hwy and SR 37	B	19.5	0.725	B	19.5	0.725	+ 0.000 D/V
# 4 Lakeville Hwy and Project Site	A	0.0	0.000	A	0.0	0.000	- 0.000 D/V
# 5 SR 116 and Lakeville Hwy	C	18.6	0.000	C	18.6	0.000	+ 0.000 D/V
# 6 SR 116 and SR 121	E	49.8	1.105	E	49.8	1.105	+ 0.000 V/C
# 7 SR 37 and SR 121	B	12.5	0.582	B	12.5	0.582	+ 0.000 D/V
# 8 Walnut Ave and EB SR 37 On/Off	A	9.6	0.000	A	9.6	0.000	+ 0.000 D/V
# 9 Walnut Ave and WB SR 37	A	9.0	0.000	A	9.0	0.000	+ 0.000 D/V
# 10 Wilson Ave and EB SR 37 On/Off	B	12.8	0.000	B	12.8	0.000	+ 0.000 D/V
# 11 Wilson Ave and WB SR 37 Ramps	A	9.1	0.256	A	9.1	0.256	+ 0.000 V/C
# 12 SR 29 and Old SR 37	C	26.4	0.569	C	26.4	0.569	+ 0.000 D/V
# 13 SR 29 and WB SR 37 Off-Ramp	C	23.0	0.788	C	23.0	0.788	+ 0.000 D/V

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #1 Atherton Ave and Harbor Dr/ EB SR 37 Off-Ramp

Cycle (sec): 100 Critical Vol./Cap.(X): 0.220
Loss Time (sec): 0 (Y+R=0.0 sec) Average Delay (sec/veh): 8.3
Optimal Cycle: 0 Level Of Service: A

Street Name: Atherton Ave Harbor Dr/ EB SR 37 Off-Ramp
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Stop Sign Stop Sign
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 0 1 0 0 1 0 0 0 1 1 0 0 0 1

Volume Module:
Base Vol: 0 18 3 149 17 0 34 20 18 1 0 45
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 18 3 149 17 0 34 20 18 1 0 45
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 18 3 149 17 0 34 20 18 1 0 45
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 0 19 3 157 18 0 36 21 19 1 0 47
Reduced Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 19 3 157 18 0 36 21 19 1 0 47
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 0 19 3 157 18 0 36 21 19 1 0 47

Saturation Flow Module:
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 0.00 0.86 0.14 0.90 0.10 0.00 0.63 0.37 1.00 1.00 0.00 1.00
Final Sat.: 0 688 115 713 81 0 412 242 802 628 0 793

Capacity Analysis Module:
Vol/Sat: xxxx 0.03 0.03 0.22 0.22 xxxx 0.09 0.09 0.02 0.00 xxxx 0.06
Crit Moves: **** **** ****
Delay/Veh: 0.0 7.4 7.4 8.6 8.6 0.0 8.5 8.5 7.1 8.3 0.0 7.3
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 7.4 7.4 8.6 8.6 0.0 8.5 8.5 7.1 8.3 0.0 7.3
LOS by Move: * A A A A * A A A A * A
ApproachDel: 7.4 8.6 8.2 7.3
Delay Adj: 1.00 1.00 1.00
ApprAdjDel: 7.4 8.6 8.2 7.3
LOS by Appr: A A A
AllWayAvgQ: 0.0 0.0 0.0 0.3 0.3 0.3 0.1 0.1 0.0 0.0 0.0 0.1

Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)
*****
Intersection #2 Atherton Ave and Glen Ln/ WB SR 37 Ramps
*****
Average Delay (sec/veh):      6.6      Worst Case Level Of Service: B[ 13.4]
*****
Street Name:      Glen Ln/ WB SR 37 Ramps      Atherton Ave
Approach:      North Bound      South Bound      East Bound      West Bound
Movement:      L - T - R      L - T - R      L - T - R      L - T - R
-----|-----|-----|-----|
Control:      Stop Sign      Stop Sign      Uncontrolled      Uncontrolled
Rights:      Include      Include      Include      Include
Lanes:      0 0 1 0 0      0 0 1 0 0      0 1 0 0 1      1 0 0 1 0
-----|-----|-----|-----|
Volume Module:
Base Vol:      201 1 20 0 1 0 3 149 44 40 39 1
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: 201 1 20 0 1 0 3 149 44 40 39 1
Adged Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 201 1 20 0 1 0 3 149 44 40 39 1
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 212 1 21 0 1 0 3 157 46 42 41 1
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 212 1 21 0 1 0 3 157 46 42 41 1
Critical Gap Module:
Critical Gp: 7.1 6.5 6.2 xxxxx 6.5 xxxxx 4.1 xxxx xxxxx 4.1 xxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 xxxxx 4.0 xxxxx 2.2 xxxx xxxxx 2.2 xxxx xxxxx
-----|-----|-----|-----|
Capacity Module:
Cnflct Vol: 289 289 157 xxxx 335 xxxxx 42 xxxx xxxxx 203 xxxx xxxxx
Potent Cap.: 663 621 889 xxxx 585 xxxxx 1567 xxxx xxxxx 1369 xxxx xxxxx
Move Cap.: 645 600 889 xxxx 566 xxxxx 1567 xxxx xxxxx 1369 xxxx xxxxx
Volume/Cap: 0.33 0.00 0.02 xxxx 0.00 xxxx 0.00 xxxx xxxx 0.03 xxxx xxxx
-----|-----|-----|-----|
Level Of Service Module:
2Way95thQ: xxxx xxxx xxxxx xxxx 0.0 xxxxx 0.0 xxxx xxxxx 0.1 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx 11.4 xxxxx 7.3 xxxx xxxxx 7.7 xxxx xxxxx
LOS by Move: * * * * B * A * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx 661 xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
SharedQueue:xxxxx 1.6 xxxxx xxxxx xxxx xxxxx 0.0 xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 13.4 xxxxx xxxxx xxxx xxxxx 7.3 xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS: * B * * * * A * * * * *
ApproachDel: 13.4 11.4 xxxxxxx xxxxxxx
ApproachLOS: B B * *
*****
Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #3 Lakeville Hwy and SR 37

Cycle (sec): 100 Critical Vol./Cap.(X): 0.725
Loss Time (sec): 12 (Y+R=0.0 sec) Average Delay (sec/veh): 19.5
Optimal Cycle: 63 Level Of Service: B

Table with columns for Street Name (Lakeville Hwy, SR 37), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Split Phase, Protected), Rights (Include), Min. Green, and Lanes.

Table for Volume Module showing Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol. across various lanes.

Table for Saturation Flow Module showing Sat/Lane, Adjustment, Lanes, and Final Sat. across various lanes.

Table for Capacity Analysis Module showing Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueueDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and FCM2kAvgQ across various lanes.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Lakeville Hwy and Project Site

Average Delay (sec/veh): 0.0 Worst Case Level Of Service: A[0.0]

Table with columns: Street Name, Approach, Movement, Control, Rights, Lanes. Rows include Lakeville Hwy and Project Site details.

Volume Module:

Table with columns: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Vol.

Critical Gap Module:

Table with columns: Critical Gp, FollowUpTim.

Capacity Module:

Table with columns: Cnflct Vol, Potent Cap., Move Cap., Volume/Cap.

Level Of Service Module:

Table with columns: 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #5 SR 116 and Lakeville Hwy

Average Delay (sec/veh): 1.3 Worst Case Level Of Service: C[18.6]

Table with columns for Street Name (SR 116, Lakeville Hwy), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Uncontrolled, Stop Sign), Rights (Include), and Lanes (0, 1, 0, 0, 0, 0, 0, 0, 1, 0, 0, 1).

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Vol. across 12 lanes.

Critical Gap Module table with columns for Critical Gp and FollowUpTim across 12 lanes.

Capacity Module table with columns for Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap. across 12 lanes.

Level Of Service Module table with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS across 12 lanes.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #6 SR 116 and SR 121

Cycle (sec): 100 Critical Vol./Cap.(X): 1.105
Loss Time (sec): 0 (Y+R=0.0 sec) Average Delay (sec/veh): 49.8
Optimal Cycle: 0 Level Of Service: E

Table with columns for Street Name (SR 116, SR 121), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Stop Sign, Ignore, Include), Rights, Min. Green, and Lanes.

Table for Volume Module showing Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol across various approaches.

Table for Saturation Flow Module showing Adjustment, Lanes, and Final Sat. for different approaches.

Table for Capacity Analysis Module showing Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, and AllWayAvgQ.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 SR 37 and SR 121

Cycle (sec): 100 Critical Vol./Cap.(X): 0.582

Loss Time (sec): 12 (Y+R=0.0 sec) Average Delay (sec/veh): 12.5

Optimal Cycle: 47 Level Of Service: B

Street Name: SR 121 SR 37

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|

Control: Split Phase Split Phase Protected Protected

Rights: Include Ignore Include Ignore

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 1 0 0 0 0 1 1 0 0 1 2 0 1 1 0 1 0 2 0 1

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Volume Module:

Base Vol: 3 0 0 78 0 472 370 1007 0 0 1257 68

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: 3 0 0 78 0 472 370 1007 0 0 1257 68

Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 3 0 0 78 0 472 370 1007 0 0 1257 68

User Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 0.00

PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.00 0.95 0.95 0.95 0.95 0.95 0.00

PHF Volume: 3 0 0 82 0 0 389 1060 0 0 1323 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 3 0 0 82 0 0 389 1060 0 0 1323 0

PCE Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 0.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 0.00

Final Vol.: 3 0 0 82 0 0 389 1060 0 0 1323 0

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Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900

Adjustment: 0.93 1.00 1.00 0.93 1.00 1.00 0.90 0.93 0.95 1.00 0.93 1.00

Lanes: 1.00 0.00 0.00 2.00 0.00 1.00 2.00 2.00 0.00 1.00 2.00 1.00

Final Sat.: 1769 0 0 3545 0 1900 3432 3538 0 1900 3538 1900

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Capacity Analysis Module:

Vol/Sat: 0.00 0.00 0.00 0.02 0.00 0.00 0.11 0.30 0.00 0.00 0.37 0.00

Crit Moves: **** **** **** ****

Green/Cycle: 0.00 0.00 0.00 0.04 0.00 0.00 0.19 0.84 0.00 0.00 0.64 0.00

Volume/Cap: 0.58 0.00 0.00 0.58 0.00 0.00 0.58 0.36 0.00 0.00 0.58 0.00

Uniform Del: 49.8 0.0 0.0 47.2 0.0 0.0 36.6 1.9 0.0 0.0 10.2 0.0

IncrementDel: 104.6 0.0 0.0 6.1 0.0 0.0 1.3 0.1 0.0 0.0 0.4 0.0

InitQueueDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

Delay Adj: 1.00 0.00 0.00 1.00 0.00 0.00 1.00 1.00 0.00 0.00 1.00 0.00

Delay/Veh: 154.4 0.0 0.0 53.3 0.0 0.0 37.9 2.0 0.0 0.0 10.6 0.0

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 154.4 0.0 0.0 53.3 0.0 0.0 37.9 2.0 0.0 0.0 10.6 0.0

LOS by Move: F A A D A A D A A A B A

HCM2kAvgQ: 1 0 0 2 0 0 6 4 0 0 12 0

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #8 Walnut Ave and EB SR 37 On/Off Ramps

Average Delay (sec/veh): 7.3 Worst Case Level Of Service: A[9.6]

Table with columns: Street Name, Approach, Movement, Control, Rights, Lanes. Rows include Walnut Ave and EB SR 37 Ramps with sub-columns for North Bound, South Bound, East Bound, and West Bound.

Volume Module: Table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Vol. Rows include Walnut Ave and EB SR 37 Ramps.

Critical Gap Module: Table with columns for Critical Gp, FollowUpTim. Rows include Walnut Ave and EB SR 37 Ramps.

Capacity Module: Table with columns for Cnflct Vol, Potent Cap., Move Cap., Volume/Cap. Rows include Walnut Ave and EB SR 37 Ramps.

Level Of Service Module: Table with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS. Rows include Walnut Ave and EB SR 37 Ramps.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #9 Walnut Ave and WB SR 37

Average Delay (sec/veh): 0.0 Worst Case Level Of Service: A[9.0]

Street Name: Wilson Ave WB SR 37

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R). Rows include Control, Rights, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Vol. Rows include various volume and adjustment factors.

Critical Gap Module table with columns for Critical Gp and FollowUpTim, containing placeholder values (xxxx).

Capacity Module table with columns for Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap, containing placeholder values (xxxx).

Level Of Service Module table with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS, containing placeholder values (xxxx).

Note: Queue reported as the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #10 Wilson Ave and EB SR 37 On/Off Ramps

Average Delay (sec/veh): 4.2 Worst Case Level Of Service: B[12.8]

Table with columns: Street Name, Approach, Movement, Control, Rights, Lanes. Rows include Wilson Ave and EB SR 37 On/Off Ramps with various traffic flow parameters.

Volume Module: Table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Vol. Rows include Wilson Ave and EB SR 37 On/Off Ramps.

Critical Gap Module: Table with columns for Critical Gp, FollowUpTim. Rows include Wilson Ave and EB SR 37 On/Off Ramps.

Capacity Module: Table with columns for Cnflct Vol, Potent Cap., Move Cap., Volume/Cap. Rows include Wilson Ave and EB SR 37 On/Off Ramps.

Level Of Service Module: Table with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS. Rows include Wilson Ave and EB SR 37 On/Off Ramps.

Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)
*****
Intersection #11 Wilson Ave and WB SR 37 Ramps
*****
Cycle (sec):          100          Critical Vol./Cap. (X):          0.256
Loss Time (sec):      0 (Y+R=0.0 sec) Average Delay (sec/veh):          9.1
Optimal Cycle:        0          Level Of Service:          A
*****
Street Name:          WB SR 37 Ramps          Wilson Ave
Approach:             North Bound          South Bound          East Bound          West Bound
Movement:             L - T - R          L - T - R          L - T - R          L - T - R
-----|-----|-----|-----|
Control:              Stop Sign          Stop Sign          Stop Sign          Stop Sign
Rights:               Include          Include          Include          Include
Min. Green:           0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes:                1 0 0 0 1 0 0 0 0 0 0 0 0 1 0 1 0 1 0 0 0
-----|-----|-----|-----|
Volume Module:
Base Vol:             151 0 130 0 0 0 0 0 36 106 59 38 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:          151 0 130 0 0 0 0 0 36 106 59 38 0
Added Vol:            0 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol:         0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut:          151 0 130 0 0 0 0 0 36 106 59 38 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:              0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume:           159 0 137 0 0 0 0 0 38 112 62 40 0
Reduct Vol:           0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol:          159 0 137 0 0 0 0 0 38 112 62 40 0
PCE Adj:              1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj:              1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.:           159 0 137 0 0 0 0 0 38 112 62 40 0
-----|-----|-----|-----|
Saturation Flow Module:
Adjustment:           1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes:                1.00 0.00 1.00 0.00 0.00 0.00 0.00 0.25 0.75 1.00 1.00 0.00
Final Sat.:           622 0 783 0 0 0 0 0 186 548 588 639 0
-----|-----|-----|-----|
Capacity Analysis Module:
Vol/Sat:              0.26 xxxx 0.17 xxxx xxxx xxxx 0.20 0.20 0.11 0.06 xxxx
Crit Moves:          ****
Delay/Veh:            10.2 0.0 8.1 0.0 0.0 0.0 0.0 8.9 8.9 9.3 8.4 0.0
Delay Adj:            1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh:           10.2 0.0 8.1 0.0 0.0 0.0 0.0 8.9 8.9 9.3 8.4 0.0
LOS by Move:          B * A * * * * * A A A A *
ApproachDel:          9.2          xxxxxx          8.9          8.9
Delay Adj:             1.00          xxxxxx          1.00          1.00
ApprAdjDel:           9.2          xxxxxx          8.9          8.9
LOS by Appr:          A *
AllWayAvgQ:           0.3 0.0 0.2 0.0 0.0 0.0 0.2 0.2 0.2 0.1 0.1 0.0
*****
Note: Queue reported is the number of cars per lane.

```

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #12 SR 29 and Old SR 37

Cycle (sec): 100 Critical Vol./Cap.(X): 0.569
Loss Time (sec): 12 (Y+R=0.0 sec) Average Delay (sec/veh): 26.4
Optimal Cycle: 46 Level Of Service: C

Table with columns for Street Name (SR 29, Old SR 37), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Protected, Split Phase), Rights (Include), Min. Green, and Lanes.

Table for Volume Module showing Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol. across various movements.

Table for Saturation Flow Module showing Sat/Lane, Adjustment, Lanes, and Final Sat. across various movements.

Table for Capacity Analysis Module showing Vol/Sat, Crit. Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueueDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ across various movements.

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #13 SR 29 and WB SR 37 Off-Ramp

Cycle (sec): 100 Critical Vol./Cap.(X): 0.788
 Loss Time (sec): 9 (Y+R=0.0 sec) Average Delay (sec/veh): 23.0
 Optimal Cycle: 66 Level Of Service: C

Street Name: SR 29 WB SR 37 Off-Ramp
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected			Protected			Protected			Protected										
Rights:	Include			Ignore			Include			Include										
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0								
Lanes:	0	0	2	0	1	0	0	2	0	1	0	0	0	0	0	2	0	0	0	2

Volume Module:

Base Vol:	0	616	83	0	1303	290	0	0	0	338	0	910
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	616	83	0	1303	290	0	0	0	338	0	910
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	616	83	0	1303	290	0	0	0	338	0	910
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.00	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	648	87	0	1372	0	0	0	0	356	0	958
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	648	87	0	1372	0	0	0	0	356	0	958
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	648	87	0	1372	0	0	0	0	356	0	958

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.95	0.85	1.00	0.95	1.00	1.00	1.00	1.00	0.92	1.00	0.75
Lanes:	0.00	2.00	1.00	0.00	2.00	1.00	0.00	0.00	0.00	2.00	0.00	2.00
Final Sat.:	0	3610	1615	0	3610	1900	0	0	0	3502	0	2842

Capacity Analysis Module:

Vol/Sat:	0.00	0.18	0.05	0.00	0.38	0.00	0.00	0.00	0.00	0.10	0.00	0.34
Crit Moves:	****			****						****		
Green/Cycle:	0.00	0.48	0.48	0.00	0.48	0.00	0.00	0.00	0.00	0.43	0.00	0.43
Volume/Cap:	0.00	0.37	0.11	0.00	0.79	0.00	0.00	0.00	0.00	0.24	0.00	0.79
Uniform Del:	0.0	16.3	14.2	0.0	21.6	0.0	0.0	0.0	0.0	18.2	0.0	24.7
IncrcmntDel:	0.0	0.1	0.1	0.0	2.5	0.0	0.0	0.0	0.0	0.1	0.0	3.5
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Delay/Veh:	0.0	16.5	14.2	0.0	24.1	0.0	0.0	0.0	0.0	18.3	0.0	28.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	16.5	14.2	0.0	24.1	0.0	0.0	0.0	0.0	18.3	0.0	28.2
LOS by Move:	A	B	B	A	C	A	A	A	A	B	A	C
HCM2kAvgQ:	0	7	1	0	20	0	0	0	0	4	0	16

Impact Analysis Report
Level Of Service

Intersection		Base		Future		Change in
		LOS	Veh C	LOS	Veh C	
# 1 Atherton Ave and Harbor Dr/ EB	A	9.7	0.364	A	9.7 0.364	+ 0.000 V/C
# 2 Atherton Ave and Glen Ln/ WB S	C	16.1	0.000	C	16.1 0.000	+ 0.000 D/V
# 3 Lakeville Hwy and SR 37	C	22.4	0.781	C	22.4 0.781	+ 0.000 D/V
# 4 Lakeville Hwy and Project Site	A	0.0	0.000	A	0.0 0.000	+ 0.000 D/V
# 5 SR 116 and Lakeville Hwy	D	30.4	0.000	D	30.4 0.000	+ 0.000 D/V
# 6 SR 116 and SR 121	F	69.6	1.125	F	69.6 1.125	+ 0.000 V/C
# 7 SR 37 and SR 121	C	20.1	0.729	C	20.1 0.729	+ 0.000 D/V
# 8 Walnut Ave and EB SR 37 On/Off	A	9.3	0.000	A	9.3 0.000	+ 0.000 D/V
# 9 Walnut Ave and WB SR 37	A	9.0	0.000	A	9.0 0.000	+ 0.000 D/V
# 10 Wilson Ave and EB SR 37 On/Off	B	13.6	0.000	B	13.6 0.000	+ 0.000 D/V
# 11 Wilson Ave and WB SR 37 Ramps	A	9.6	0.325	A	9.6 0.325	+ 0.000 V/C
# 12 SR 29 and Old SR 37	E	65.7	1.067	E	65.7 1.067	+ 0.000 D/V
# 13 SR 29 and WB SR 37 Off-Ramp	C	23.6	0.802	C	23.6 0.802	+ 0.000 D/V

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #1 Atherton Ave and Harbor Dr/ EB SR 37 Off-Ramp

Cycle (sec): 100 Critical Vol./Cap. (X): 0.364

Loss Time (sec): 0 (Y+R=0.0 sec) Average Delay (sec/veh): 9.7

Optimal Cycle: 0 Level Of Service: A

Street Name: Atherton Ave Harbor Dr/ EB SR 37 Off-Ramp

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Stop Sign Stop Sign

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 0 0 0 1 0 0 1 0 0 0 0 1 0 1 0 0 0 1

Volume Module:

Base Vol: 0 42 9 247 8 0 69 75 11 0 0 45

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 42 9 247 8 0 69 75 11 0 0 45

Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 C

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 C

Initial Fut: 0 42 9 247 8 0 69 75 11 0 0 45

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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95

PHF Volume: 0 44 9 260 8 0 73 79 12 0 0 47

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 0 44 9 260 8 0 73 79 12 0 0 47

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Vol.: 0 44 9 260 8 0 73 79 12 0 0 47

Saturation Flow Module:

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 0.00 0.82 0.18 0.97 0.03 0.00 0.48 0.52 1.00 1.00 0.00 1.00

Final Sat.: 0 598 128 713 23 0 296 322 736 569 0 702

Capacity Analysis Module:

Vol/Sat: xxxx 0.07 0.07 0.36 0.36 xxxx 0.25 0.25 0.02 0.00 xxxx 0.07

Crit Moves: **** **** **** ****

Delay/Veh: 0.0 8.1 8.1 10.3 10.3 0.0 10.0 10.0 7.4 0.0 0.0 7.8

Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 0.0 8.1 8.1 10.3 10.3 0.0 10.0 10.0 7.4 0.0 0.0 7.8

LOS by Move: * A A B B * A A A * * A

ApproachDel: 8.1 10.3 9.8 7.8

Delay Adj: 1.00 1.00 1.00

ApprAdjDel: 8.1 10.3 9.8 7.8

LOS by Appr: A B A A

AllWayAvgQ: 0.1 0.1 0.1 0.5 0.5 0.5 0.3 0.3 0.0 0.0 0.0 0.1

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Atherton Ave and Glen Ln/ WB SR 37 Ramps

Average Delay (sec/veh): 4.8 Worst Case Level Of Service: C [16.1]

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes. Rows include North Bound, South Bound, East Bound, and West Bound for Glen Ln/ WB SR 37 Ramps and Atherton Ave.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Vol. Rows include various traffic volume metrics.

Critical Gap Module table with columns for Critical Gap and FollowUpTim. Rows include gap and follow-up time data for different approaches.

Capacity Module table with columns for Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap. Rows include capacity and volume-to-capacity ratio data.

Level Of Service Module table with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., Shared Queue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS. Rows include detailed LOS and delay data.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #3 Lakeville Hwy and SR 37

Cycle (sec): 100 Critical Vol./Cap.(X): 0.781

Loss Time (sec): 12 (Y+R=0.0 sec) Average Delay (sec/veh): 22.4

Optimal Cycle: 73 Level Of Service: C

Street Name: Lakeville Hwy SR 37

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Split Phase			Split Phase			Protected			Protected						
Rights:	Include			Include			Include			Include						
Min. Green:	0	0	0	0	0	0	0	0	0	0	C	0				
Lanes:	0	0	0	0	1	1	2	0	1	1	0	1	0	2	0	1

Volume Module:

Base Vol:	0	0	5	382	2	56	565	1722	3	0	1064	568
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	5	382	2	56	565	1722	3	0	1064	568
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	5	382	2	56	565	1722	3	0	1064	568
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	5	402	2	59	595	1813	3	0	1120	598
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	5	402	2	59	595	1813	3	0	1120	598
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	5	402	2	59	595	1813	3	0	1120	598

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	0.85	0.92	0.92	0.92	0.90	0.93	0.93	1.00	0.93	0.83
Lanes:	0.00	0.00	1.00	1.86	0.01	1.13	2.00	1.99	0.01	1.00	2.00	1.00
Final Sat.:	0	0	1611	3262	16	1972	3432	3532	6	1900	3538	1583

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.12	0.13	0.03	0.17	0.51	0.51	0.00	0.32	0.38
Crit Moves:			****	****			****					****
Green/Cycle:	0.00	0.00	0.00	0.17	0.17	0.17	0.22	0.71	0.71	0.00	0.48	0.48
Volume/Cap:	0.00	0.00	0.78	0.72	0.78	0.18	0.78	0.73	0.73	0.00	0.65	0.78
Uniform Del:	0.0	0.0	49.7	39.3	39.7	35.5	36.6	8.9	8.9	0.0	19.5	21.4
IncemntDel:	0.0	0.0	203.2	4.1	6.6	0.0	5.2	1.1	1.1	0.0	0.9	5.2
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Delay/Veh:	0.0	0.0	253.0	43.4	46.3	35.5	41.8	10.0	10.0	0.0	20.4	26.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	253.0	43.4	46.3	35.5	41.8	10.0	10.0	0.0	20.4	26.6
LOS by Move:	A	A	F	D	D	D	D	B	B	A	C	C
HCM2kAvgQ:	0	0	1	8	9	1	11	19	19	0	14	17

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Lakeville Hwy and Project Site

Average Delay (sec/veh): 0.0 Worst Case Level Of Service: A[0.0]

Table with columns for Street Name (Lakeville Hwy, Project Site), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L-T-R), Control (Uncontrolled, Stop Sign), Rights (Include), and Lanes (0 0 1 0 0).

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Vol. across 12 lanes.

Critical Gap Module table with columns for Critical Gap and FollowUpTim across 12 lanes.

Capacity Module table with columns for Conflict Vol, Potent Cap., Move Cap., and Volume/Cap. across 12 lanes.

Level Of Service Module table with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS across 12 lanes.

Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)
*****
Intersection #5 SR 116 and Lakeville Hwy
*****
Average Delay (sec/veh):      1.6      Worst Case Level Of Service: D[ 30.4]
*****
Street Name:      SR 116      Lakeville Hwy
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 1 0 0      0 0 0 0 0      1 0 0 0 1
-----
Volume Module:
Base Vol:      0 1032      80      119 396      0      0 0 0 0      9 0 31
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:  0 1032      80      119 396      0      0 0 0 0      9 0 31
Added Vol:    0 0      0      0 0 0      0      0 0 0 0      0 0 0
PasserByVol:  0 0      0      0 0 0      0      0 0 0 0      0 0 0
Initial Fut:  0 1032      80      119 396      0      0 0 0 0      9 0 31
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:     0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95 0.95 0.95
PHF Volume:  0 1086      84      125 417      0      0 0 0 0      9 0 33
Reduct Vol:   0 0      0      0 0 0      0      0 0 0 0      0 0 0
Final Vol.:  0 1086      84      125 417      0      0 0 0 0      9 0 33
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxxx  4.1 xxxx xxxxxx xxxxxx xxxx xxxxxx  6.4 xxxx  6.2
FollowUpTim:xxxxx xxxx xxxxxx  2.2 xxxx xxxxxx xxxxxx xxxx xxxxxx  3.5 xxxx  3.3
-----
Capacity Module:
Cnflct Voi:  xxxx xxxx xxxxxx  1171 xxxx xxxxxx xxxx xxxx xxxxxx  1796 xxxx  1128
Potent Cap.: xxxx xxxx xxxxxx  597 xxxx xxxxxx xxxx xxxx xxxxxx  88 xxxx  248
Move Cap.:   xxxx xxxx xxxxxx  597 xxxx xxxxxx xxxx xxxx xxxxxx  74 xxxx  248
Volume/Cap:  xxxx xxxx xxxxxx  0.21 xxxx xxxxxx xxxx xxxx xxxxxx  0.13 xxxx  0.13
-----
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxxx  0.8 xxxx xxxxxx xxxx xxxx xxxxxx  0.4 xxxx  0.4
Control Del:xxxxx xxxx xxxxxx  12.6 xxxx xxxxxx xxxxxx xxxx xxxxxx  60.6 xxxx  21.7
LOS by Move: * * *      B * *      * * *      F * *      C
Movement:    LT - LTR - RT      LT - LTR - RT      LT - LTR - RT      LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxxx xxxx xxxx xxxxxx xxxx xxxx xxxxxx xxxx xxxx xxxxxx
SharedQueue:xxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx
Shrd ConDel:xxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx
Shared LOS:  * * *      * * *      * * *      * * *      * * *
ApproachDel: xxxxxx      xxxxxx      xxxxxx      30.4
ApproachLOS: *      *      *      D
*****
Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #6 SR 116 and SR 121

Cycle (sec):	100	Critical Vol./Cap. (X):	1.125
Loss Time (sec):	0 (Y+R=0.0 sec)	Average Delay (sec/veh):	69.6
Optimal Cycle:	0	Level Of Service:	F

Street Name:	SR 116						SR 121					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Ignore			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	0	1	0	0	0	1	0	0	1

Volume Module:	SR 116						SR 121					
Base Vol:	8	408	556	371	254	13	50	42	8	336	11	496
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:	8	408	556	371	254	13	50	42	8	336	11	496
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	8	408	556	371	254	13	50	42	8	336	11	496
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.00	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	8	429	0	391	267	14	53	44	8	354	12	522
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	8	429	0	391	267	14	53	44	8	354	12	522
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	8	429	0	391	267	14	53	44	8	354	12	522

Saturation Flow Module:	SR 116						SR 121					
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	0.95	0.05	0.50	0.42	0.08	1.00	0.02	0.98
Final Sat.:	356	382	404	417	423	22	183	154	29	421	11	478

Capacity Analysis Module:	SR 116						SR 121					
Vol/Sat:	0.02	1.13	0.00	0.94	0.63	0.63	0.29	0.29	0.29	0.84	1.09	1.09
Crit Moves:	****			****			****			****		
Delay/Veh:	12.9	115	0.0	59.0	23.7	23.7	16.6	16.6	16.6	42.5	94.3	94.3
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	12.9	115	0.0	59.0	23.7	23.7	16.6	16.6	16.6	42.5	94.3	94.3
LOS by Move:	B	F	*	F	C	C	C	C	C	E	F	F
ApproachDel:	113.1			44.3			16.6			73.7		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	113.1			44.3			16.6			73.7		
LOS by Appr:	F			E			C			F		
AllWayAvgQ:	0.0	10.9	0.0	5.5	1.6	1.6	0.4	0.4	0.4	3.7	11.4	11.4

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 SR 37 and SR 121

Cycle (sec): 100 Critical Vol./Cap.(X): 0.729
Loss Time (sec): 12 (Y+R=0.0 sec) Average Delay (sec/veh): 20.1
Optimal Cycle: 64 Level Of Service: C

Table with columns for Street Name (SR 121, SR 37), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Split Phase, Protected), Rights (Include, Ignore), and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueueDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #8 Walnut Ave and EB SR 37 On/Off Ramps

Average Delay (sec/veh): 3.5 Worst Case Level Of Service: A[9.3]

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes. Rows include Walnut Ave and EE SR 37 Ramps with various traffic details.

Volume Module:

Table showing traffic volume data including Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Vol.

Critical Gap Module:

Table showing critical gap and follow-up time data for different approaches.

Capacity Module:

Table showing capacity-related data including Conflict Vol, Potent Cap., Move Cap., and Volume/Cap.

Level Of Service Module:

Table showing level of service data including 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., Shared Queue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #9 Walnut Ave and WB SR 37

Average Delay (sec/veh): 0.0 Worst Case Level Of Service: A[9.0]

Street Name: Wilson Ave WB SR 37

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 0 0 0 0 0 1! 0 0 1 0 0 1 0 1 0

Volume Module:

Base Vol: 0 0 0 0 0 0 0 0 0 94 0 40 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: 0 0 0 0 0 0 0 0 0 94 0 40 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 0 0 0 0 0 0 94 0 40 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 0 0 0 0 0 0 0 0 0 99 0 42 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 0 0 0 0 0 0 0 0 0 99 0 42 0

Critical Gap Module:

Critical Gp:xxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx
FollowUpTim:xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx

Capacity Module:

Cnfilct Vol: xxxx xxxx xxxxxx xxxx xxxx xxxxxx xxxx xxxx xxxxxx xxxx xxxx xxxxxx
Potent Cap.: xxxx xxxx xxxxxx xxxx xxxx xxxxxx xxxx xxxx xxxxxx xxxx xxxx xxxxxx
Move Cap.: xxxx xxxx xxxxxx xxxx xxxx xxxxxx xxxx xxxx xxxxxx xxxx xxxx xxxxxx
Volume/Cap: xxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxxx xxxx xxxx xxxxxx xxxx xxxx xxxxxx xxxx xxxx xxxxxx
Control Del:xxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx
LOS by Move: *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxxx xxxx 0 xxxxxx xxxx xxxx xxxxxx xxxx xxxx xxxxxx
SharedQueue:xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx 0.0 xxxx xxxxxx
Shrd ConDel:xxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx 9.0 xxxx xxxxxx
Shared LOS: *
ApproachDel: xxxxxxx xxxxxxx xxxxxxx xxxxxxx
ApproachLOS: * * * * *

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #10 Wilson Ave and EB SR 37 On/Off Ramps

Average Delay (sec/veh): 3.9 Worst Case Level Of Service: B[13.6]

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes. Rows include Wilson Ave and EB SR 37 On/Off Ramps with various movement and control details.

Volume Module:

Table showing volume data including Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Vol. across different approaches.

Critical Gap Module:

Table showing Critical Gap and FollowUpTim values for different approaches.

Capacity Module:

Table showing Capacity data including Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap. for different approaches.

Level Of Service Module:

Table showing Level Of Service data including 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., Shared Queue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #11 Wilson Ave and WB SR 37 Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.325

Loss Time (sec): 0 (Y+R=0.0 sec) Average Delay (sec/veh): 9.6

Optimal Cycle: 0 Level Of Service: A

Street Name: WB SR 37 Ramps Wilson Ave
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Stop Sign Stop Sign
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 0 0 1 0 0 0 0 0 0 0 1 0 1 0 0 0

Volume Module:
Base Vol: 138 0 160 0 0 0 0 70 152 63 51 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: 138 0 160 0 0 0 0 70 152 63 51 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 138 0 160 0 0 0 0 70 152 63 51 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 145 0 168 0 0 0 0 74 160 66 54 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 145 0 168 0 0 0 0 74 160 66 54 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 145 0 168 0 0 0 0 74 160 66 54 0

Saturation Flow Module:
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 0.32 0.68 1.00 1.00 0.00
Final Sat.: 592 0 737 0 0 0 0 227 493 572 622 0

Capacity Analysis Module:
Vol/Sat: 0.25 xxxx 0.23 xxxx xxxx xxxx 0.32 0.32 0.12 0.09 xxxx
Crit Moves: ****
Delay/Veh: 10.4 0.0 8.7 0.0 0.0 0.0 0.0 10.0 10.0 9.5 8.7 0.0
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 10.4 0.0 8.7 0.0 0.0 0.0 0.0 10.0 10.0 9.5 8.7 0.0
LOS by Move: B * A * * * * * B B A A *
ApproachDel: 9.5 xxxxxx 10.0 9.2
Delay Adj: 1.00 xxxxxx 1.00 1.00
ApprAdjDel: 9.5 xxxxxx 10.0 9.2
LOS by Appr: A * B A
AllWayAvgQ: 0.3 0.0 0.3 0.0 0.0 0.0 0.4 0.4 0.4 0.1 0.1 0.0

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #12 SR 29 and Old SR 37

Cycle (sec): 100 Critical Vol./Cap. (X): 1.067
Loss Time (sec): 12 (Y+R=0.0 sec) Average Delay (sec/veh): 65.7
Optimal Cycle: 180 Level Of Service: E

Street Name: SR 29 Old SR 37
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 2 0 1 1 0 2 0 0 1 1 0 0 0 1

Volume Module:
Base Vol: 0 1449 127 200 926 0 272 96 116 99 0 423
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 1449 127 200 926 0 272 96 116 99 0 423
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 1449 127 200 926 0 272 96 116 99 0 423
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 0 1525 134 211 975 0 286 101 122 104 0 445
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 1525 134 211 975 0 286 101 122 104 0 445
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 0 1525 134 211 975 0 286 101 122 104 0 445

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 1.00 0.93 0.83 0.93 0.93 1.00 0.94 0.94 0.83 0.90 1.00 0.83
Lanes: 0.00 2.00 1.00 1.00 2.00 0.00 1.48 0.52 1.00 2.00 0.00 1.00
Final Sat.: 0 3538 1583 1769 3538 0 2653 937 1583 3432 0 1583

Capacity Analysis Module:
Vol/Sat: 0.00 0.43 0.08 0.12 0.28 0.00 0.11 0.11 0.08 0.03 0.00 0.28
Crit Moves: **** **** ****
Green/Cycle: 0.00 0.40 0.40 0.11 0.52 0.00 0.10 0.10 0.10 0.26 0.00 0.26
Volume/Cap: 0.00 1.07 0.21 1.07 0.53 0.00 1.07 1.07 0.76 0.12 0.00 1.07
Uniform Del: 0.0 29.8 19.4 44.4 16.2 0.0 44.9 44.9 43.8 28.0 0.0 36.8
IncrmntDel: 0.0 44.1 0.2 83.1 0.3 0.0 66.3 66.3 19.3 0.1 0.0 63.2
InitQueueDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 0.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 0.00 1.00
Delay/Veh: 0.0 73.9 19.6 127.5 16.5 0.0 111.2 111 63.1 28.0 0.0 100.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 73.9 19.6 127.5 16.5 0.0 111.2 111 63.1 28.0 0.0 100.0
LOS by Move: A E B F B A F F E C A F
HCM2kAvgQ: 0 36 3 12 11 0 11 11 6 1 0 22

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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)
*****
Intersection #13 SR 29 and WB SR 37 Off-Ramp
*****
Cycle (sec):          100          Critical Vol./Cap.(X):          0.802
Loss Time (sec):      9 (Y+R=0.0 sec) Average Delay (sec/veh):          23.6
Optimal Cycle:        69          Level Of Service:          C
*****
Street Name:          SR 29          WB SR 37 Off-Ramp
Approach:             North Bound    South Bound    East Bound    West Bound
Movement:            L - T - R    L - T - R    L - T - R    L - T - R
-----|-----|-----|-----|
Control:             Protected    Protected    Protected    Protected
Rights:              Include     Ignore       Include     Include
Min. Green:          0 0 0      0 0 0      0 0 0      0 0 0
Lanes:               0 0 2 0 1  0 0 2 0 1  0 0 0 0 0  2 0 0 0 2
-----|-----|-----|-----|
Volume Module:
Base Vol:            0 1252 99    0 1382 214    0 0 0      340 0 882
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:         0 1252 99    0 1382 214    0 0 0      340 0 882
Added Vol:           0 0 0      0 0 0      0 0 0      0 0 0
PasserByVol:        0 0 0      0 0 0      0 0 0      0 0 0
Initial Fut:         0 1252 99    0 1382 214    0 0 0      340 0 882
User Adj:            1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:             0.95 0.95 0.95 0.95 0.95 0.00 0.95 0.95 0.95 0.95 0.95
PHF Volume:          0 1318 104    0 1455 0      0 0 0      358 0 928
Reduct Vol:          0 0 0      0 0 0      0 0 0      0 0 0
Reduced Vol:         0 1318 104    0 1455 0      0 0 0      358 0 928
PCE Adj:            1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00
MLF Adj:            1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00
Final Vol.:          0 1318 104    0 1455 0      0 0 0      358 0 928
-----|-----|-----|-----|
Saturation Flow Module:
Sat/Lane:            1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment:          1.00 0.95 0.85 1.00 0.95 1.00 1.00 1.00 1.00 0.92 1.00 0.75
Lanes:               0.00 2.00 1.00 0.00 2.00 1.00 0.00 0.00 0.00 2.00 0.00 2.00
Final Sat.:          0 3610 1615 0 3610 1900 0 0 0 3502 0 2842
-----|-----|-----|-----|
Capacity Analysis Module:
Vol/Sat:             0.00 0.37 0.06 0.00 0.40 0.00 0.00 0.00 0.00 0.10 0.00 0.33
Crit Moves:          ****          ****          ****
Green/Cycle:         0.00 0.50 0.50 0.00 0.50 0.00 0.00 0.00 0.00 0.41 0.00 0.41
Volume/Cap:          0.00 0.73 0.13 0.00 0.80 0.00 0.00 0.00 0.00 0.25 0.00 0.80
Uniform Del:         0.0 19.5 13.2 0.0 20.7 0.0 0.0 0.0 0.0 19.6 0.0 26.1
IncrcmntDel:         0.0 1.5 0.1 0.0 2.7 0.0 0.0 0.0 0.0 0.1 0.0 4.1
InitQueueDel:        0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj:           0.00 1.00 1.00 0.00 1.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00
Delay/Veh:           0.0 21.0 13.3 0.0 23.4 0.0 0.0 0.0 0.0 19.7 0.0 30.2
User DelAdj:         1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh:          0.0 21.0 13.3 0.0 23.4 0.0 0.0 0.0 0.0 19.7 0.0 30.2
LOS by Move:         A C B A C A A A A B A C
HCM2kAvgQ:           0 18 2 0 21 0 0 0 0 4 0 16
*****

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**NEAR-TERM 2008 NO ACTION
TRAFFIC CONDITIONS
(TRAFFIX)**

Impact Analysis Report
Level Of Service

Intersection		Base		Future		Change in
		LOS	Del/ Veh C	LOS	Del/ Veh C	
# 1 Atherton Ave and Harbor Dr/ EB	A	9.7	0.364	A	9.7 0.364	+ 0.000 V/C
# 2 Atherton Ave and Glen Ln/ WB S	C	16.1	0.000	C	16.1 0.000	+ 0.000 D/V
# 3 Lakeville Hwy and SR 37	C	23.4	0.792	C	23.4 0.792	+ 0.000 D/V
# 4 Lakeville Hwy and Project Site	A	0.0	0.000	A	0.0 0.000	+ 0.000 D/V
# 5 SR 116 and Lakeville Hwy	D	31.0	0.000	D	31.0 0.000	+ 0.000 D/V
# 6 SR 116 and SR 121	F	71.9	1.140	F	71.9 1.140	+ 0.000 V/C
# 7 SR 37 and SR 121	C	20.1	0.732	C	20.1 0.732	+ 0.000 D/V
# 8 Walnut Ave and EB SR 37 On/Off	A	9.4	0.000	A	9.4 0.000	+ 0.000 D/V
# 9 Walnut Ave and WB SR 37	A	9.0	0.000	A	9.0 0.000	+ 0.000 D/V
# 10 Wilson Ave and EB SR 37 On/Off	B	14.3	0.000	B	14.3 0.000	+ 0.000 D/V
# 11 Wilson Ave and WB SR 37 Ramps	A	9.8	0.344	A	9.8 0.344	+ 0.000 V/C
# 12 SR 29 and Old SR 37	E	77.6	1.118	E	77.6 1.118	+ 0.000 D/V
# 13 SR 29 and WB SR 37 Off-Ramp	C	25.2	0.846	C	25.2 0.846	+ 0.000 D/V

Level Of Service Computation Report
 2000 HCM 4-Way Stop Method (Future Volume Alternative)

 Intersection #1 Atherton Ave and Harbor Dr/ EB SR 37 Off-Ramp

Cycle (sec): 100 Critical Vol./Cap.(X): 0.364
 Loss Time (sec): 0 (Y+R=0.0 sec) Average Delay (sec/veh): 9.7
 Optimal Cycle: 0 Level Of Service: A

Street Name:	Atherton Ave						Harbor Dr/ EB SR 37 Off-Ramp							
Approach:	North Bound			South Bound			East Bound			West Bound				
Movement:	L	T	R	L	T	R	L	T	R	L	T	R		
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign				
Rights:	Include			Include			Include			Include				
Mir. Green:	0	0	0	0	0	0	0	0	0	0	0	0		
Lanes:	0	0	1	0	0	1	0	0	0	0	1	0	0	1

Volume Module:	Atherton Ave NB			Atherton Ave SB			Harbor Dr EB			Harbor Dr WB		
Base Vol:	0	42	9	247	8	0	69	75	11	0	0	45
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	42	9	247	8	0	69	75	11	0	0	45
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	42	9	247	8	0	69	75	11	0	0	45
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	44	9	260	8	0	73	79	12	0	0	47
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	44	9	260	8	0	73	79	12	0	0	47
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	44	9	260	8	0	73	79	12	0	0	47

Saturation Flow Module:	Atherton Ave NB			Atherton Ave SB			Harbor Dr EB			Harbor Dr WB		
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.82	0.18	0.97	0.03	0.00	0.48	0.52	1.00	1.00	0.00	1.00
Final Sat.:	0	598	128	713	23	0	296	322	736	569	0	702

Capacity Analysis Module:	Atherton Ave NB			Atherton Ave SB			Harbor Dr EB			Harbor Dr WB		
Vol/Sat:	xxxx	0.07	0.07	0.36	0.36	xxxx	0.25	0.25	0.02	0.00	xxxx	0.07
Crit. Moves:	****			****			****			****		
Delay/Veh:	0.0	8.1	8.1	10.3	10.3	0.0	10.0	10.0	7.4	0.0	0.0	7.8
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	8.1	8.1	10.3	10.3	0.0	10.0	10.0	7.4	0.0	0.0	7.8
LOS by Move:	*	A	A	B	B	*	A	A	A	*	*	A
ApproachDel:	8.1			10.3			9.8			7.8		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	8.1			10.3			9.8			7.8		
LOS by Appr:	A			B			A			A		
AllWayAvgQ:	0.1	0.1	0.1	0.5	0.5	0.5	0.3	0.3	0.0	0.0	0.0	0.1

 Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Atherton Ave and Glen Ln/ WB SR 37 Ramps

Average Delay (sec/veh): 4.8 Worst Case Level Of Service: C [16.1]

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes. Rows include Glen Ln/ WB SR 37 Ramps and Atherton Ave with various movement and control details.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHE Adj, PHE Volume, Reduct Vol, and Final Vol. Includes Critical Gap Module with Critical Gp and FollowUpTim values.

Capacity Module table showing Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap. for different approaches and movements.

Level Of Service Module table showing 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #3 Lakeville Hwy and SR 37

Cycle (sec): 100 Critical Vol./Cap.(X): 0.792
Loss Time (sec): 12 (Y+R=0.0 sec) Average Delay (sec/veh): 23.4
Optimal Cycle: 75 Level Of Service: C

Table with columns for Street Name (Lakeville Hwy, SR 37), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Split Phase, Protected), Rights (Include), Min. Green, and Lanes.

Volume Module:

Table with columns for various volume and adjustment factors: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module:

Table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueueDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Lakeville Hwy and Project Site

Average Delay (sec/veh): 0.0 Worst Case Level Of Service: A[0.0]

Street Name: Lakeville Hwy Project Site

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 1 0 0 0 0 1 0 0 0 0 0 0 0 0

Volume Module:

Table with 13 columns and 13 rows of volume data including Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Vol.

Critical Gap Module:

Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx

Capacity Module:

Cnflct Vol: xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
Move Cap.: xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
Volume/Cap: xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move: *
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 xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS: *
ApproachDel: xxxxxx xxxxxx xxxxxx xxxxxx
ApproachLOS: * * * *

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #5 SR 116 and Lakeville Hwy

Average Delay (sec/veh): 1.7 Worst Case Level Of Service: D[31.0]

Table with columns for Street Name (SR 116, Lakeville Hwy), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L - T - R), Control (Uncontrolled, Stop Sign), Rights (Include), and Lanes (0 0 0 1 0).

Volume Module: Table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Vol. Values range from 0 to 1000.

Critical Gap Module: Table with columns for Critical Gp, FollowUpTim. Values include 4.1, 6.4, 2.2, 3.5.

Capacity Module: Table with columns for Cnflct Vol, Potent Cap., Move Cap., Volume/Cap. Values include 1175, 1802, 595, 73, 0.21, 0.14.

Level Of Service Module: Table with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., Shared Queue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS. Values include 0.8, 12.7, 0.5, 62.2, 0.5, 31.0.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #6 SR 116 and SR 121

Cycle (sec): 100 Critical Vol./Cap. (X): 1.140
 Loss Time (sec): 0 (Y+R=0.0 sec) Average Delay (sec/veh): 71.9
 Optimal Cycle: 0 Level Of Service: F

Street Name: SR 116 SR 121
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Stop Sign Stop Sign
 Rights: Ignore Include Include Include
 Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
 Lanes: 1 0 1 0 1 1 0 0 1 0 0 0 1! 0 0 1 0 0 1 0

Volume Module:

Base Vol:	8	412	565	380	256	13	50	42	8	336	11	496
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:	8	412	565	380	256	13	50	42	8	336	11	496
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	8	412	565	380	256	13	50	42	8	336	11	496
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.00	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	8	434	0	400	269	14	53	44	8	354	12	522
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	8	434	0	400	269	14	53	44	8	354	12	522
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	8	434	0	400	269	14	53	44	8	354	12	522

Saturation Flow Module:

Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	0.95	0.05	0.50	0.42	0.08	1.00	0.02	0.98
Final Sat.:	357	380	404	417	423	21	184	154	29	420	11	477

Capacity Analysis Module:

Vol/Sat:	0.02	1.14	0.00	0.96	0.64	0.64	0.29	0.29	0.29	0.84	1.09	1.09
Crit Moves:	****			****			****			****		
Delay/Veh:	12.9	120	0.0	63.9	24.0	24.0	16.6	16.6	16.6	42.8	95.1	95.1
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	12.9	120	0.0	63.9	24.0	24.0	16.6	16.6	16.6	42.8	95.1	95.1
LOS by Move:	B	F	*	F	C	C	C	C	C	E	F	F
ApproachDel:	118.1			47.4			16.6			74.3		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	118.1			47.4			16.6			74.3		
LOS by Appr:	F			E			C			F		
AllWayAvgQ:	0.0	11.4	0.0	6.1	1.6	1.6	0.4	0.4	0.4	3.7	11.5	11.5

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 SR 37 and SR 121

Cycle (sec): 100 Critical Vol./Cap.(X): 0.732
Loss Time (sec): 12 (Y+R=0.0 sec) Average Delay (sec/veh): 20.1
Optimal Cycle: 64 Level Of Service: C

Table with columns for Street Name (SR 121, SR 37), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Split Phase, Protected), Rights (Include, Ignore), and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueueDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #8 Walnut Ave and EB SR 37 On/Off Ramps

Average Delay (sec/veh): 3.5 Worst Case Level Of Service: A[9.4]

Street Name: Walnut Ave EB SR 37 Ramps

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Uncontrolled, Stop Sign), Rights (Include), and Lanes (1, 0, 1, 1, 0).

Volume Module: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Vol.

Critical Gap Module: Critical Gp, FollowUpTim.

Capacity Module: Cnflct Vol, Potent Cap., Move Cap., Volume/Cap.

Level Of Service Module: 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., Shared Queue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #9 Walnut Ave and WB SR 37

Average Delay (sec/veh): 0.0 Worst Case Level Of Service: A[9.0]

Street Name: Wilson Ave WB SR 37

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 0 0 0 0 0 0 1 0 0 1 0 0 1 0 1 0

Volume Module:

Base Vol: 0 0 0 0 0 0 0 0 0 99 0 42 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: 0 0 0 0 0 0 0 0 0 99 0 42 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 0 0 0 0 0 0 99 0 42 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 0 0 0 0 0 0 0 0 0 104 0 44 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 0 0 0 0 0 0 0 0 0 104 0 44 0

Critical Gap Module:

Critical Gap:xxxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
FollowUpTim:xxxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Capacity Module:

Cnflict Vol: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Potent Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Move Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Volume/Cap: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Level Of Service Module:

2Way95thQ: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Control Del:xxxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
LOS by Move: * * * * * * * * * * * * * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx xxxxx xxxxx xxxxx 0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue:xxxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx
Shrd ConDel:xxxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 9.0 xxxxx xxxxx
Shared LOS: * * * * * * * * * * A * *
ApproachDel: xxxxxx xxxxxx xxxxxx xxxxxx
ApproachLOS: * * * *

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #10 Wilson Ave and EB SR 37 On/Off Ramps

Average Delay (sec/veh): 4.1 Worst Case Level Of Service: B[14.3]

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes. Rows include Wilson Ave and EB SR 37 On/Off Ramps with details on North and South Bound movements.

Volume Module: Table showing Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Vol for various approaches.

Critical Gap Module: Table showing Critical Gap and FollowUpTim for different approaches.

Capacity Module: Table showing Conflict Vol, Potent Cap., Move Cap., and Volume/Cap for different approaches.

Level Of Service Module: Table showing 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS for different approaches.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #11 Wilson Ave and WB SR 37 Ramps

Cycle (sec): 100 Critical Vol./Cap. (X): 0.344
Loss Time (sec): 0 (Y+R=0.0 sec) Average Delay (sec/veh): 9.8
Optimal Cycle: 0 Level Of Service: A

Table with columns for Street Name (WB SR 37 Ramps, Wilson Ave), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Stop Sign), Rights (Include), and Lanes.

Volume Module table with columns for various traffic volume metrics like Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module table with columns for Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, and AllWayAvgQ.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #12 SR 29 and Old SR 37

Cycle (sec): 100 Critical Vol./Cap. (X): 1.118
Loss Time (sec): 12 (Y+R=0.0 sec) Average Delay (sec/veh): 77.6
Optimal Cycle: 180 Level Of Service: E

Street Name: SR 29 Old SR 37
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 2 0 1 1 0 2 0 0 1 1 0 0 1 2 0 0 0 1

Volume Module:
Base Vol: 0 1515 151 200 982 0 296 94 120 100 0 451
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 1515 151 200 982 0 296 94 120 100 0 451
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 1515 151 200 982 0 296 94 120 100 0 451
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 0 1595 159 211 1034 0 312 99 126 105 0 475
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 1595 159 211 1034 0 312 99 126 105 0 475
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 0 1595 159 211 1034 0 312 99 126 105 0 475

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 1.00 0.93 0.83 0.93 0.93 1.00 0.94 0.94 0.83 0.90 1.00 0.83
Lanes: 0.00 2.00 1.00 1.00 2.00 0.00 1.52 0.48 1.00 2.00 0.00 1.00
Final Sat.: 0 3538 1583 1769 3538 0 2722 864 1583 3432 0 1583

Capacity Analysis Module:
Vol/Sat: 0.00 0.45 0.10 0.12 0.29 0.00 0.11 0.11 0.08 0.03 0.00 0.30
Crit Moves: **** **** ****
Green/Cycle: 0.00 0.40 0.40 0.11 0.51 0.00 0.10 0.10 0.10 0.27 0.00 0.27
Volume/Cap: 0.00 1.12 0.25 1.12 0.57 0.00 1.12 1.12 0.78 0.11 0.00 1.12
Uniform Del: 0.0 29.8 19.8 44.7 17.0 0.0 44.9 44.9 43.8 27.6 0.0 36.6
IncrcmntDel: 0.0 63.3 0.2 101.0 0.5 0.0 83.0 83.0 21.1 0.1 0.0 80.0
InitQueueDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 0.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 0.00 1.00
Delay/Veh: 0.0 93.2 20.0 145.6 17.5 0.0 127.9 128 64.9 27.7 0.0 116.6
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 93.2 20.0 145.6 17.5 0.0 127.9 128 64.9 27.7 0.0 116.6
LOS by Move: A F C F B A F F E C A F
HCM2kAvgQ: 0 41 3 13 12 0 12 12 6 1 0 25

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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)
*****
Intersection #13 SR 29 and WB SR 37 Off-Ramp
*****
Cycle (sec):          100          Critical Vol./Cap. (X):          0.846
Loss Time (sec):      9 (Y+R=0.0 sec) Average Delay (sec/veh):          25.2
Optimal Cycle:        81          Level Of Service:          C
*****
Street Name:          SR 29          WB SR 37 Off-Ramp
Approach:             North Bound    South Bound    East Bound    West Bound
Movement:             L - T - R    L - T - R    L - T - R    L - T - R
-----|-----|-----|-----|
Control:              Protected    Protected    Protected    Protected
Rights:               Include      Ignore       Include      Include
Min Green:            0 0 0      0 0 0      0 0 0      0 C 0
Lanes:                0 0 2 0 1  0 0 2 0 1  0 0 0 0 0  2 0 0 0 2
-----|-----|-----|-----|
Volume Module:
Base Vol:             0 1321 104  0 1458 226  0 0 0  359 0 930
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:          0 1321 104  0 1458 226  0 0 0  359 0 930
Added Vol:            0 0 0      0 0 0      0 0 0      0 0 0
PasserByVol:         0 0 0      0 0 0      0 0 0      0 0 0
Initial Fut:          0 1321 104  0 1458 226  0 0 0  359 0 930
User Adj:             1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:              0.95 0.95 0.95 0.95 0.95 0.00 0.95 0.95 0.95 0.95 0.95
PHE Volume:           0 1391 109  0 1535 0  0 0 0  378 0 979
Reduct Vol:           0 0 0      0 0 0      0 0 0      0 0 0
Reduced Vol:          0 1391 109  0 1535 0  0 0 0  378 0 979
PCE Adj:              1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00
MLF Adj:              1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00
Final Vol.:           0 1391 109  0 1535 0  0 0 0  378 0 979
-----|-----|-----|-----|
Saturation Flow Module:
Sat/Lane:             1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment:           1.00 0.95 0.85 1.00 0.95 1.00 1.00 1.00 1.00 0.92 1.00 0.75
Lanes:                0.00 2.00 1.00 0.00 2.00 1.00 0.00 0.00 0.00 2.00 0.00 2.00
Final Sat.:           0 3610 1615  0 3610 1900  0 0 0  3502 0 2842
-----|-----|-----|-----|
Capacity Analysis Module:
Vol/Sat:              0.00 0.39 0.07 0.00 0.43 0.00 0.00 0.00 0.00 0.11 0.00 0.34
Crit Moves:          ****          ****          ****
Green/Cycle:          0.00 0.50 0.50 0.00 0.50 0.00 0.00 0.00 0.00 0.41 0.00 0.41
Volume/Cap:           0.00 0.77 0.13 0.00 0.85 0.00 0.00 0.00 0.00 0.26 0.00 0.85
Uniform Del:          0.0 20.1 13.3 0.0 21.5 0.0 0.0 0.0 0.0 19.7 0.0 26.8
IncrementDel:         0.0 2.0 0.1 0.0 3.9 0.0 0.0 0.0 0.0 0.1 0.0 5.9
InitQueueDel:         0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj:            0.00 1.00 1.00 0.00 1.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00
Delay/Veh:            0.0 22.1 13.3 0.0 25.4 0.0 0.0 0.0 0.0 19.8 0.0 32.7
User DelAdj:          1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh:           0.0 22.1 13.3 0.0 25.4 0.0 0.0 0.0 0.0 19.8 0.0 32.7
LOS by Move:          A C B A C A A A A B A C
HCM?kAvgQ:           0 19 2 0 24 0 0 0 0 4 0 18
*****

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TRIP GENERATION

Trip Generation Planner (ITE 7th Edition)

Weekday Trip Generation
Average Trip Rates

Project Name: Alternative F
Project Number: 097360004



Kimley-Horn
and Associates, Inc.

ITE Code	Land Use Description	Independent Variable	No. of Units	Daily Rate	AM Rate	PM Rate	Total			Total			New			New				
							Daily Trips	AM Trips	PM Trips	Total Trips	AM Trips	PM Trips	Total Trips	AM Trips	PM Trips	Total Trips	AM Trips	PM Trips	Total Trips	
310	Hotel	Room(s)	100	8.17	0.56	0.59	817	56	59	34	22	31	28	817	56	59	34	22	31	28
473-b	Native American Gaming Facility	1,000 Sq Ft	450	39.43	2.95	4.95	17744	1328	2228	930	398	1181	1047	17744	1328	2228	930	398	1181	1047
Totals							18561	1384	2287	964	420	1212	1075	18561	1384	2287	964	420	1212	1075

Notes

- (1) AM and/or PM rates correspond to peak hour of generator
- A Trip Generation data from ITE Trip Generation, 7th Edition
- B AM/PM rates correspond to peak of adjacent street traffic (if data available)
- C Includes weekday rates only
- D Total trips include pass-by trips
- E Pass-by rates from ITE Trip Generation Handbook, 2001
- F Worksheet is intended as a planning tool. Verify results w/ ITE Trip Generation 7th Edition
- G Enter data only in shaded cells

**NEAR-TERM 2008 + ALTERNATIVE F
TRAFFIC CONDITIONS
(TRAFFIX)**

 Impact Analysis Report
 Level Of Service

Intersection		Base		Future		Change in	
		Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C		
# 1 Atherton Ave and Harbor Dr/ EB	A	9.7	0.364	A 10.0	0.398	+ 0.034	V/C
# 2 Atherton Ave and Glen Ln/ WB S	C	16.1	0.000	C 16.8	0.000	+ 0.735	D/V
# 3 Lakeville Hwy and SR 37	C	23.4	0.792	F 162.4	1.702	+138.951	D/V
# 4 Lakeville Hwy and Project Site	A	0.0	0.000	F OVRFL	0.000	+ 1.8E+0308	
# 5 SR 116 and Lakeville Hwy	D	31.0	0.000	F 319.6	0.000	+288.611	D/V
# 6 SR 116 and SR 121	F	71.9	1.140	F 77.9	1.154	+ 0.014	V/C
# 7 SR 37 and SR 121	C	20.1	0.732	C 26.2	0.919	+ 6.047	D/V
# 8 Walnut Ave and EB SR 37 On/Off	A	9.4	0.000	A 9.4	0.000	+ 0.023	D/V
# 9 Walnut Ave and WB SR 37	A	9.0	0.000	A 9.0	0.000	+ 0.000	D/V
# 10 Wilson Ave and EB SR 37 On/Off	B	14.3	0.000	C 18.2	0.000	+ 3.937	D/V
# 11 Wilson Ave and WB SR 37 Ramps	A	9.8	0.344	B 10.4	0.431	+ 0.087	V/C
# 12 SR 29 and Old SR 37	E	77.6	1.118	F 90.4	1.157	+12.765	D/V
# 13 SR 29 and WB SR 37 Off-Ramp	C	25.2	0.846	C 25.4	0.846	+ 0.164	D/V

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #1 Atherton Ave and Harbor Dr/ EB SR 37 Off-Ramp

Cycle (sec): 100 Critical Vol./Cap. (X): 0.398
Loss Time (sec): 0 (Y+R=0.0 sec) Average Delay (sec/veh): 10.0
Optimal Cycle: 0 Level Of Service: A

Street Name: Atherton Ave Harbor Dr/ EB SR 37 Off-Ramp
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Stop Sign Stop Sign
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 0 1 0 0 1 0 0 0 1 1 0 0 0 1

Volume Module:
Base Vol: 0 42 9 247 8 0 69 75 11 0 0 45
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 42 9 247 8 0 69 75 11 0 0 45
Added Vol: 0 0 12 12 11 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 42 21 259 19 0 69 75 11 0 0 45
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 0 44 22 273 20 0 73 79 12 0 0 47
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 44 22 273 20 0 73 79 12 0 0 47
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 0 44 22 273 20 0 73 79 12 0 0 47

Saturation Flow Module:
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 0.00 0.67 0.33 0.93 0.07 0.00 0.48 0.52 1.00 1.00 0.00 1.00
Final Sat.: 0 489 245 685 50 0 290 316 719 557 0 685

Capacity Analysis Module:
Vol/Sat: xxxx 0.09 0.09 0.40 0.40 xxxx 0.25 0.25 0.02 0.00 xxxx 0.07
Crit Moves: **** **** ****
Delay/Veh: 0.0 8.1 8.1 10.8 10.8 0.0 10.1 10.1 7.5 0.0 0.0 7.9
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 8.1 8.1 10.8 10.8 0.0 10.1 10.1 7.5 0.0 0.0 7.9
LCS by Move: * A A B B * B B A * * A
ApproachDel: 8.1 10.8 10.0 7.9
Delay Adj: 1.00 1.00 1.00
ApprAdjDel: 8.1 10.8 10.0 7.9
LCS by Appr: A B A
AllWayAvgQ: 0.1 0.1 0.1 0.6 0.6 0.6 0.3 0.3 0.0 0.0 0.0 0.1

Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)
*****
Intersection #2 Atherton Ave and Glen Ln/ WB SR 37 Ramps
*****
Average Delay (sec/veh):      5.3      Worst Case Level Of Service: C[ 16.8]
*****
Street Name:      Glen Ln/ WB SR 37 Ramps      Atherton Ave
Approach:      North Bound      South Bound      East Bound      West Bound
Movement:      L - T - R      L - T - R      L - T - R      L - T - R
-----|-----|-----|-----|
Control:      Stop Sign      Stop Sign      Uncontrolled      Uncontrolled
Rights:      Include      Include      Include      Include
Lanes:      0 0 1! 0 0      0 0 0 1 0      0 1 0 0 1      1 0 0 1 0
-----|-----|-----|-----|
Volume Module:
Base Vol:      137 0 7 0 2 1 2 248 36 59 95 2
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: 137 0 7 0 2 1 2 248 36 59 95 2
Added Vol: 11 0 11 0 0 0 0 12 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 148 0 18 0 2 1 2 260 36 59 95 2
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 156 0 19 0 2 1 2 274 38 62 100 2
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 156 0 19 0 2 1 2 274 38 62 100 2
Critical Gap Module:
Critical Gp: 7.1 xxxx 6.2 xxxxx 6.5 6.2 4.1 xxxx xxxxx 4.1 xxxx xxxxx
FollowUpTim: 3.5 xxxx 3.3 xxxxx 4.0 3.3 2.2 xxxx xxxxx 2.2 xxxx xxxxx
-----|-----|-----|-----|
Capacity Module:
Cnflct Vol: 505 xxxx 274 xxxx 541 101 102 xxxx xxxxx 312 xxxx xxxxx
Potent Cap.: 478 xxxx 765 xxxx 448 954 1490 xxxx xxxxx 1249 xxxx xxxxx
Move Cap.: 457 xxxx 765 xxxx 425 954 1490 xxxx xxxxx 1249 xxxx xxxxx
Volume/Cap: 0.34 xxxx 0.02 xxxx 0.00 0.00 0.00 xxxx xxxx 0.05 xxxx xxxx
-----|-----|-----|-----|
Level Of Service Module:
2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx 0.0 xxxx xxxxx 0.2 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx 7.4 xxxx xxxxx 8.0 xxxx xxxxx
LOS by Move: * * * * * A * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx 478 xxxxx xxxx xxxx 522 xxxx xxxx xxxxx xxxx xxxx xxxxx
SharedQueue:xxxxx 1.7 xxxxx xxxxx xxxx 0.0 0.0 xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 16.8 xxxxx xxxxx xxxx 11.9 7.4 xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS: * C * * * B A * * * * *
ApproachDel: 16.8 11.9 xxxxxx xxxxxx
ApproachLOS: C B * *
*****
Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)
*****
Intersection #3 Lakeville Hwy and SR 37
*****
Cycle (sec):          100          Critical Vol./Cap.(X):          1.702
Loss Time (sec):      12 (Y+R=0.0 sec) Average Delay (sec/veh):          162.4
Optimal Cycle:        180          Level Of Service:          F
*****
Street Name:          Lakeville Hwy          SR 37
Approach:             North Bound          South Bound          East Bound          West Bound
Movement:             L - T - R          L - T - R          L - T - R          L - T - R
-----|-----|-----|-----|
Control:              Split Phase          Split Phase          Protected          Protected
Rights:               Include              Include              Include              Include
Mir. Green:           0 0 0              0 0 0              0 0 0              0 C 0
Lanes:                0 0 1! 0 0          1 0 1! 0 1          2 0 1 1 0          1 0 2 0 1
-----|-----|-----|-----|
Volume Module:
Base Vol:             3 3 9 388 4 56 566 1734 6 1 1067 568
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:          3 3 9 388 4 56 566 1734 6 1 1067 568
Added Vol:            0 0 0 495 0 420 473 0 0 0 0 558
PasserByVol:         0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut:          3 3 9 883 4 476 1039 1734 6 1 1067 1126
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:              0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume:           3 3 9 929 4 501 1094 1825 6 1 1123 1185
Reduct Vol:           0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol:          3 3 9 929 4 501 1094 1825 6 1 1123 1185
PCE Adj:              1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj:              1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.:           3 3 9 929 4 501 1094 1825 6 1 1123 1185
-----|-----|-----|-----|
Saturation Flow Module:
Sat/Lane:             1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment:           0.89 0.89 0.89 0.90 0.90 0.90 0.90 0.93 0.93 0.93 0.93 0.83
Lanes:                0.20 0.20 0.60 1.64 0.01 1.35 2.00 1.99 0.01 1.00 2.00 1.00
Final Sat.:           339 339 1016 2815 10 2306 3432 3526 12 1769 3538 1583
-----|-----|-----|-----|
Capacity Analysis Module:
Vol/Sat:              0.01 0.01 0.01 0.33 0.42 0.22 0.32 0.52 0.52 0.00 0.32 0.75
Crit Moves:           ****          ****          ****          ****
Green/Cycle:          0.01 0.01 0.01 0.25 0.25 0.25 0.19 0.63 0.63 0.00 0.44 0.44
Volume/Cap:           1.70 1.70 1.70 1.34 1.70 0.88 1.70 0.83 0.83 0.83 0.72 1.70
Uniform Del:           49.7 49.7 49.7 37.6 37.6 36.2 40.6 14.5 14.5 50.0 23.0 28.0
IncrcmntDel:          574.4 574 574.4 157.5 321 5.8 322.4 2.7 2.7 577.9 1.7 321.9
InitQueueDel:         0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj:            1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Delay/Veh:            624.1 624 624.1 195.1 359 42.0 363.1 17.1 17.1 627.9 24.7 349.9
User DelAdj:          1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh:           624.1 624 624.1 195.1 359 42.0 363.1 17.1 17.1 627.9 24.7 349.9
LOS by Move:          F F F F F D F B B F C F
HCM2kAvgQ:            2 2 2 37 59 14 47 25 25 0 16 96
*****

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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Lakeville Hwy and Project Site

Average Delay (sec/veh): OVERFLOW Worst Case Level Of Service: F[xxxxx]

Table with columns: Street Name, Approach, Movement, Control, Rights, Lanes. Rows include Lakeville Hwy and Project Site details.

Volume Module table with columns: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Vol.

Critical Gap Module table with columns: Critical Gp, FollowUpTim.

Capacity Module table with columns: Cnflct Vol, Potent Cap., Move Cap., Volume/Cap.

Level Of Service Module table with columns: 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #5 SR 116 and Lakeville Hwy

Average Delay (sec/veh): 17.6 Worst Case Level Of Service: F[319.6]

Street Name:	SR 116						Lakeville Hwy									
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	1	0	1	0	0	0	0	0	0	1	0	0	0	1

Volume Module:

Base Vol:	0	1036	80	119	398	0	0	0	0	10	0	35
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	1036	80	119	398	0	0	0	0	10	0	35
Added Vol:	0	108	54	0	121	0	0	0	0	61	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	1144	134	119	519	0	0	0	0	71	0	35
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	1204	141	125	546	0	0	0	0	75	0	37
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	1204	141	125	546	0	0	0	0	75	0	37

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxxx	4.1	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	6.4	xxxx	6.2
FollowUpTim:	xxxxx	xxxx	xxxxxx	2.2	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	3.5	xxxx	3.3

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxxxx	1345	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	2072	xxxx	1275
Potent Cap.:	xxxx	xxxx	xxxxxx	512	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	59	xxxx	204
Move Cap.:	xxxx	xxxx	xxxxxx	512	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	48	xxxx	204
Volume/Cap:	xxxx	xxxx	xxxx	0.24	xxxx	xxxx	xxxx	xxxx	xxxx	1.55	xxxx	0.18

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxxx	1.0	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	7.2	xxxx	0.6			
Control Del:	xxxxxx	xxxx	xxxxxx	14.3	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	464.1	xxxx	26.5			
LOS by Move:	*	*	*	B	*	*	*	*	*	F	*	D			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx			
SharedQueue:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx			
Shrd ConDel:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx			
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*			
ApproachDel:	xxxxxxx			xxxxxxx			xxxxxxx			319.6					
ApproachLOS:	*			*			*			F					

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #6 SR 116 and SR 121

Cycle (sec): 100 Critical Vol./Cap.(X): 1.154
Loss Time (sec): 0 (Y+R=0.0 sec) Average Delay (sec/veh): 77.9
Optimal Cycle: 0 Level Of Service: F

Street Name: SR 116 SR 121
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Stop Sign Stop Sign
Rights: Ignore Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 1 0 1 1 0 0 1 0 0 0 1! 0 0 1 0 0

Volume Module:
Base Vol: 8 412 565 380 256 13 50 42 8 336 11 496
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: 8 412 565 380 256 13 50 42 8 336 11 496
Added Vol: 0 0 54 0 0 0 0 0 0 61 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 8 412 619 380 256 13 50 42 8 397 11 496
User Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.00 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 8 434 0 400 269 14 53 44 8 418 12 522
Reduced Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 8 434 0 400 269 14 53 44 8 418 12 522
PCE Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 8 434 0 400 269 14 53 44 8 418 12 522

Saturation Flow Module:
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 1.00 1.00 1.00 0.95 0.05 0.50 0.42 0.08 1.00 0.02 0.98
Final Sat.: 354 376 401 416 422 21 184 154 29 420 11 477

Capacity Analysis Module:
Vol/Sat: 0.02 1.15 0.00 0.96 0.64 0.64 0.29 0.29 0.29 0.99 1.09 1.09
Crit Moves: ****
Delay/Veh: 13.0 126 0.0 64.7 24.1 24.1 16.6 16.6 16.6 72.0 95.3 95.3
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 13.0 126 0.0 64.7 24.1 24.1 16.6 16.6 16.6 72.0 95.3 95.3
LOS by Move: B F * F C C C F F F
ApproachDel: 123.4 47.9 16.6 85.0
Delay Adj: 1.00 1.00 1.00
ApprAdjDel: 123.4 47.9 16.6 85.0
LOS by Appr: F E C F
AllWayAvgQ: 0.0 11.8 0.0 6.2 1.6 1.6 0.4 0.4 0.4 7.1 11.5 11.5

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
 2000 HCM Operations Method (Future Volume Alternative)

 Intersection #7 SR 37 and SR 121

Cycle (sec): 100 Critical Vol./Cap. (X): 0.919
 Loss Time (sec): 12 (Y+R=0.0 sec) Average Delay (sec/veh): 26.2
 Optimal Cycle: 119 Level Of Service: C

Street Name:	SR 121						SR 37														
Approach:	North Bound			South Bound			East Bound			West Bound											
Movement:	L	T	R	L	T	R	L	T	R	L	T	R									
Control:	Split Phase			Split Phase			Protected			Protected											
Rights:	Include			Ignore			Include			Ignore											
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0									
Lanes:	0	1	0	0	0	1	1	1	0	0	1	2	0	1	1	0	1	0	2	0	1

Volume Module:	SR 121 NB			SR 121 SB			SR 37 EB			SR 37 WB		
Base Vol:	5	3	0	195	1	473	808	1316	3	1	1122	98
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:	5	3	0	195	1	473	808	1316	3	1	1122	98
Added Vol:	0	0	0	0	0	61	54	441	0	0	497	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	5	3	0	195	1	534	862	1757	3	1	1619	98
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.00	0.95	0.95	0.95	0.95	0.95	0.00
PHF Volume:	5	3	0	205	1	0	907	1849	3	1	1704	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	5	3	0	205	1	0	907	1849	3	1	1704	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Final Vol.:	5	3	0	205	1	0	907	1849	3	1	1704	0

Saturation Flow Module:	SR 121 NB			SR 121 SB			SR 37 EB			SR 37 WB		
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	1.00	0.93	0.93	1.00	0.90	0.93	0.93	0.93	0.93	1.00
Lanes:	0.63	0.37	0.00	1.99	0.01	1.00	2.00	1.99	0.01	1.00	2.00	1.00
Final Sat.:	1129	677	0	3531	18	1900	3432	3532	6	1769	3538	1900

Capacity Analysis Module:	SR 121 NB			SR 121 SB			SR 37 EB			SR 37 WB		
Vol/Sat:	0.00	0.00	0.00	0.06	0.06	0.00	0.26	0.52	0.52	0.00	0.48	0.00
Crit Moves:	****			****			****			****		
Green/Cycle:	0.01	0.01	0.00	0.06	0.06	0.00	0.29	0.81	0.81	0.00	0.52	0.00
Volume/Cap:	0.92	0.92	0.00	0.92	0.92	0.00	0.92	0.65	0.65	0.65	0.92	0.00
Uniform Del:	49.7	49.7	0.0	46.6	46.6	0.0	34.5	3.8	3.8	49.9	21.9	0.0
IncrementDel:	248.5	248	0.0	38.6	38.6	0.0	13.2	0.5	0.5	310.1	7.9	0.0
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	298.2	298	0.0	35.1	85.1	0.0	47.7	4.3	4.3	360.0	29.8	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	298.2	298	0.0	35.1	85.1	0.0	47.7	4.3	4.3	360.0	29.8	0.0
LOS by Move:	F	F	A	F	F	A	D	A	A	F	C	A
HCM2kAvgQ:	1	1	0	6	6	0	18	13	13	0	30	0

Level Of Service Computation Report
 2000 HCM Unsignalized Method (Future Volume Alternative)

 Intersection #8 Walnut Ave and EB SR 37 On/Off Ramps

Average Delay (sec/veh): 3.7 Worst Case Level Of Service: A[9.4]

Street Name:	Walnut Ave						EB SR 37 Ramps					
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:	1	0	1	1	0	0	0	0	0	1	1	0

Volume Module:

Base Vol:	90	0	189	0	0	9	1	2	57	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:	90	0	189	0	0	9	1	2	57	0	0	0
Added Vol:	12	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	102	0	189	0	0	9	1	2	57	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	107	0	199	0	0	9	1	2	60	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	107	0	199	0	0	9	1	2	60	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:

Cnflct Vol:	9	xxxx	xxxxx	xxxx	xxxx	xxxxx	215	414	0	xxxx	xxxx	xxxxx
Potent Cap.:	1610	xxxx	xxxxx	xxxx	xxxx	xxxxx	774	529	900	xxxx	xxxx	xxxxx
Move Cap.:	1610	xxxx	xxxxx	xxxx	xxxx	xxxxx	734	494	900	xxxx	xxxx	xxxxx
Volume/Cap:	0.07	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	0.00	0.07	xxxx	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	0.2	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0.1	xxxx	xxxx	xxxxx
Control Del:	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	9.1	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	*	*	*	*	*	A	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	554	xxxx	854	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	0.1	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	11.5	xxxx	9.4	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	B	*	A	*	*	*
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	9.4	xxxxxx	xxxxxx	xxxxxx	xxxxxx	
ApproachLOS:	*	*	*	*	*	*	A	*	A	*	*	*

 Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
 2000 HCM Unsignalized Method (Future Volume Alternative)

 Intersection #9 Walnut Ave and WB SR 37

Average Delay (sec/veh): 0.0 Worst Case Level Of Service: A[9.0]

Street Name:	Wilson Ave						WB SR 37					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	0	0	0	1	0	0	1	0	1	0

Volume Module:

Base Vol:	0	0	0	0	0	0	0	0	99	0	42	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:	0	0	0	0	0	0	0	0	99	0	42	0
Added Vol:	0	0	0	0	0	0	0	0	12	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	0	0	0	0	0	111	0	42	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	0	0	0	0	0	117	0	44	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	0	0	0	0	0	117	0	44	0

Critical Gap Module:
 Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
 FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	0	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shared Queue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.0	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	A	*	*
ApproachDel:	xxxxxxx			xxxxxxx			xxxxxxx			xxxxxxx		
ApproachLOS:	*			*			*			*		

 Note: Queue reported is the number of cars per lane.

 Level Of Service Computation Report
 2000 HCM Unsignalized Method (Future Volume Alternative)

 Intersection #10 Wilson Ave and EB SR 37 On/Off Ramps

Average Delay (sec/veh): 5.5 Worst Case Level Of Service: C[18.2]

Street Name:	Wilson Ave					EB SR 37 On/Off Ramps														
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	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0

Volume Module:

Base Vol:	0	161	279	41	157	0	0	0	0	171	0	53
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	161	279	41	157	0	0	0	0	171	0	53
Added Vol:	0	61	0	0	0	0	0	0	0	54	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	222	279	41	157	0	0	0	0	225	0	53
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	234	294	43	165	0	0	0	0	237	0	56
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	234	294	43	165	0	0	0	0	237	0	56

Critical Gap Module:

Critical Gp:xxxxx	xxxx	xxxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2
FollowUpTim:xxxxx	xxxx	xxxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxxx	527	xxxx	xxxxx	xxxx	xxxx	xxxxx	485	xxxx	234
Potent Cap.:	xxxx	xxxx	xxxxx	1040	xxxx	xxxxx	xxxx	xxxx	xxxxx	541	xxxx	805
Move Cap.:	xxxx	xxxx	xxxxx	1040	xxxx	xxxxx	xxxx	xxxx	xxxxx	523	xxxx	805
Volume/Cap:	xxxx	xxxx	xxxx	0.04	xxxx	xxxx	xxxx	xxxx	xxxx	0.45	xxxx	0.07

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:xxxxx	xxxx	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	xxxx	xxxxx	xxxx	561	xxxxx
SharedQueue:xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	3.0	xxxxx
Shrd ConDel:xxxxx	xxxx	xxxx	xxxxx	8.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	18.2	xxxxx
Shared LOS:	*	*	*	A	*	*	*	*	*	*	C	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			18.2		
ApproachLOS:	*			*			*			C		

 Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
 2000 HCM 4-Way Stop Method (Future Volume Alternative)

 Intersection #11 Wilson Ave and WB SR 37 Ramps

Cycle (sec): 100 Critical Vol./Cap. (X): 0.431
 Loss Time (sec): 0 (Y+R=0.0 sec) Average Delay (sec/veh): 10.4
 Optimal Cycle: 0 Level Of Service: B

Street Name:	WB SR 37 Ramps						Wilson Ave						
	North Bound		South Bound		East Bound		West Bound		East Bound		West Bound		
Approach:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Stop Sign		Stop Sign		Stop Sign		Stop Sign		Stop Sign		Stop Sign		
Rights:	Include		Include		Include		Include		Include		Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	1	0	0	0	1	0	0	0	0	0	0	0	0

Volume Module:

Base Vol:	145	0	169	0	0	0	0	73	160	66	53	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:	145	0	169	0	0	0	0	73	160	66	53	0
Added Vol:	0	0	0	0	0	0	0	0	61	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	145	0	169	0	0	0	0	73	221	66	53	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	153	0	178	0	0	0	0	77	233	69	56	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	153	0	178	0	0	0	0	77	233	69	56	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	153	0	178	0	0	0	0	77	233	69	56	0

Saturation Flow Module:

Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.25	0.75	1.00	1.00	0.00
Final Sat.:	572	0	705	0	0	0	0	178	540	558	605	0

Capacity Analysis Module:

Vol/Sat:	0.27	xxxx	0.25	xxxx	xxxx	xxxx	xxxx	0.43	0.43	0.12	0.09	xxxx
Crit Moves:	****								****	****		
Delay/Veh:	10.9	0.0	9.1	0.0	0.0	0.0	0.0	11.3	11.3	9.7	8.9	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	10.9	0.0	9.1	0.0	0.0	0.0	0.0	11.3	11.3	9.7	8.9	0.0
LOS by Move:	B	*	A	*	*	*	*	B	B	A	A	*
ApproachDel:		9.9		xxxxxx				11.3			9.4	
Delay Adj:		1.00		xxxxxx				1.00			1.00	
ApprAdjDel:		9.9		xxxxxx				11.3			9.4	
LOS by Appr:		A		*				B			A	
AllWayAvgQ:	0.3	0.0	0.3	0.0	0.0	0.0	0.7	0.7	0.7	0.1	0.1	0.0

 Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
 2000 HCM Operations Method (Future Volume Alternative)

 Intersection #12 SR 29 and Old SR 37

Cycle (sec): 100 Critical Vol./Cap.(X): 1.157
 Loss Time (sec): 12 (Y+R=0.0 sec) Average Delay (sec/veh): 90.4
 Optimal Cycle: 180 Level Of Service: F

Street Name:	SR 29						Old SR 37													
Approach:	North Bound			South Bound			East Bound			West Bound										
Movement:	L	T	R	L	T	R	L	T	R	L	T	R								
Control:	Protected			Protected			Split Phase			Split Phase										
Rights:	Include			Include			Include			Include										
Mir. Green:	0	0	0	0	0	0	0	0	0	0	0	0								
Lanes:	0	0	2	0	1	1	0	2	0	0	1	1	0	0	1	2	0	0	0	1

Volume Module:

Base Vol:	0	1515	151	200	982	0	296	94	120	100	0	451
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	1515	151	200	982	0	296	94	120	100	0	451
Added Vol:	0	61	0	0	0	0	54	0	54	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	1576	151	200	982	0	350	94	174	100	0	451
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	1659	159	211	1034	0	368	99	183	105	0	475
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1659	159	211	1034	0	368	99	183	105	0	475
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	1659	159	211	1034	0	368	99	183	105	0	475

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.93	0.83	0.93	0.93	1.00	0.94	0.94	0.83	0.90	1.00	0.83
Lanes:	0.00	2.00	1.00	1.00	2.00	0.00	1.58	0.42	1.00	2.00	0.00	1.00
Final Sat.:	0	3538	1583	1769	3538	0	2824	758	1583	3432	0	1583

Capacity Analysis Module:

Voi/Sat:	0.00	0.47	0.10	0.12	0.29	0.00	0.13	0.13	0.12	0.03	0.00	0.30
Crit Moves:	****			****			****			****		
Green/Cycle:	0.00	0.41	0.41	0.10	0.51	0.00	0.11	0.11	0.11	0.26	0.00	0.26
Volume/Cap:	0.00	1.16	0.25	1.16	0.58	0.00	1.16	1.16	1.03	0.12	0.00	1.16
Uniform Del:	0.0	29.7	19.7	44.9	17.1	0.0	44.4	44.4	44.4	28.3	0.0	37.0
IncrementDel:	0.0	79.0	0.2	115.4	0.5	0.0	95.1	95.1	74.5	0.1	0.0	94.8
InntQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00
Delay/Veh:	0.0	109	19.9	160.3	17.6	0.0	139.5	140	118.9	28.4	0.0	131.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	109	19.9	160.3	17.6	0.0	139.5	140	118.9	28.4	0.0	131.9
LOS by Move:	A	F	B	F	B	A	F	F	F	C	A	F
HCM2kAvgQ:	0	44	3	13	12	0	14	14	10	1	0	26

Level Of Service Computation Report
 2000 HCM Operations Method (Future Volume Alternative)

 Intersection #13 SR 29 and WB SR 37 Off-Ramp

Cycle (sec): 100 Critical Vol./Cap.(X): 0.846
 Loss Time (sec): 9 (Y+R=0.0 sec) Average Delay (sec/veh): 25.4
 Optimal Cycle: 81 Level Of Service: C

Street Name:	SR 29						WB SR 37 Off-Ramp					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Ignore			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	2	0	0	2	0	0	0	2	0	0

Volume Module:

Base Vol:	C	1321	104	0	1458	226	0	0	0	359	0	930
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:	C	1321	104	0	1458	226	0	0	0	359	0	930
Added Vol:	0	54	61	0	0	61	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	1375	165	0	1458	287	0	0	0	359	0	930
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.00	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	1447	174	0	1535	0	0	0	0	378	0	979
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1447	174	0	1535	0	0	0	0	378	0	979
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	1447	174	0	1535	0	0	0	0	378	0	979

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.95	0.85	1.00	0.95	1.00	1.00	1.00	1.00	0.92	1.00	0.75
Lanes:	0.00	2.00	1.00	0.00	2.00	1.00	0.00	0.00	0.00	2.00	0.00	2.00
Final Sat.:	0	3610	1615	0	3610	1900	0	0	0	3502	0	2842

Capacity Analysis Module:

Vol/Sat:	0.00	0.40	0.11	0.00	0.43	0.00	0.00	0.00	0.00	0.11	0.00	0.34
Crit Moves:	****			****						****		
Green/Cycle:	0.00	0.50	0.50	0.00	0.50	0.00	0.00	0.00	0.00	0.41	0.00	0.41
Volume/Cap:	0.00	0.80	0.21	0.00	0.85	0.00	0.00	0.00	0.00	0.26	0.00	0.85
Uniform Del:	0.0	20.6	13.9	0.0	21.5	0.0	0.0	0.0	0.0	19.7	0.0	26.8
IncrementDel:	0.0	2.6	0.1	0.0	3.9	0.0	0.0	0.0	0.0	0.1	0.0	5.9
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Delay/Veh:	0.0	23.2	14.0	0.0	25.4	0.0	0.0	0.0	0.0	19.8	0.0	32.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	23.2	14.0	0.0	25.4	0.0	0.0	0.0	0.0	19.8	0.0	32.7
LOS by Move:	A	C	B	A	C	A	A	A	A	B	A	C
HCM2kAvgQ:	0	21	3	0	24	0	0	0	0	4	0	18

**CUMULATIVE 2020 NO ACTION
TRAFFIC CONDITIONS
(TRAFFIX)**

 Impact Analysis Report
 Level Of Service

Intersection		Base		Future			Change in
		LOS	Veh C	LOS	Veh C		
# 1 Atherton Ave and Harbor Dr/ EB	A	9.7	0.364	A	9.7	0.364	+ 0.000 V/C
# 2 Atherton Ave and Glen Ln/ WB S	C	16.1	0.000	C	16.1	0.000	+ 0.000 D/V
# 3 Lakeville Hwy and SR 37	C	30.7	0.875	C	30.7	0.875	+ 0.000 D/V
# 4 Lakeville Hwy and Project Site	A	0.0	0.000	A	0.0	0.000	+ 0.000 D/V
# 5 SR 116 and Lakeville Hwy	D	27.8	0.000	D	27.8	0.000	+ 0.000 D/V
# 6 SR 116 and SR 121	E	71.6	1.035	E	71.6	1.035	+ 0.000 D/V
# 7 SR 37 and SR 121	C	20.7	0.758	C	20.7	0.758	+ 0.000 D/V
# 8 Walnut Ave and EB SR 37 On/Off	F	502.9	0.000	F	502.9	0.000	+ 0.000 D/V
# 9 Walnut Ave and WB SR 37	A	9.0	0.000	A	9.0	0.000	+ 0.000 D/V
# 10 Wilson Ave and EB SR 37 On/Off	F	753.9	0.000	F	753.9	0.000	+ 0.000 D/V
# 11 Wilson Ave and WB SR 37 Ramps	F	129.1	1.357	F	129.1	1.357	+ 0.000 V/C
# 12 SR 29 and Old SR 37	F	157.0	1.445	F	157.0	1.445	+ 0.000 D/V
# 13 SR 29 and WB SR 37 Off-Ramp	F	100.5	1.187	F	100.5	1.187	+ 0.000 D/V

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #1 Atherton Ave and Harbor Dr/ EB SR 37 Off-Ramp

Cycle (sec): 100 Critical Vol./Cap.(X): 0.364
Loss Time (sec): 0 (Y+R=0.0 sec) Average Delay (sec/veh): 9.7
Optimal Cycle: 0 Level Of Service: A

Street Name: Atherton Ave Harbor Dr/ EB SR 37 Off-Ramp
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Stop Sign Stop Sign
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 0 1 0 0 1 0 0 0 1 1 0 0 0 1

Volume Module:

Base Vol: 0 42 9 247 8 0 69 75 11 0 0 45
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 42 9 247 8 0 69 75 11 0 0 45
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 42 9 247 8 0 69 75 11 0 0 45
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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 0 44 9 260 8 0 73 79 12 0 0 47
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 44 9 260 8 0 73 79 12 0 0 47
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 0 44 9 260 8 0 73 79 12 0 0 47

Saturation Flow Module:

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 0.00 0.82 0.18 0.97 0.03 0.00 0.48 0.52 1.00 1.00 0.00 1.00
Final Sat.: 0 598 128 713 23 0 296 322 736 569 0 702

Capacity Analysis Module:

Vol/Sat: xxxx 0.07 0.07 0.36 0.36 xxxx 0.25 0.25 0.02 0.00 xxxx 0.07
Crit Moves: **** **** ****
Delay/Veh: 0.0 8.1 8.1 10.3 10.3 0.0 10.0 10.0 7.4 0.0 0.0 7.8
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 8.1 8.1 10.3 10.3 0.0 10.0 10.0 7.4 0.0 0.0 7.8
LOS by Move: * A A B B * A A A * * A
ApproachDel: 8.1 10.3 9.8 7.8
Delay Adj: 1.00 1.00 1.00
ApprAdjDel: 8.1 10.3 9.8 7.8
LOS by Appr: A B A
AllWayAvgQ: 0.1 0.1 0.1 0.5 0.5 0.5 0.3 0.3 0.0 0.0 0.0 0.1

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Atherton Ave and Glen Ln/ WB SR 37 Ramps

Average Delay (sec/veh): 4.8 Worst Case Level Of Service: C[16.1]

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes. Rows include Glen Ln/ WB SR 37 Ramps and Atherton Ave with various movement and control details.

Volume Module: Table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Vol. Rows include various volume and adjustment factors.

Critical Gap Module: Table with columns for Critical Gp and FollowUpTim. Rows include gap and follow-up time values.

Capacity Module: Table with columns for Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap. Rows include capacity and volume/capacity values.

Level Of Service Module: Table with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS. Rows include level of service and delay values.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
 2000 HCM Operations Method (Future Volume Alternative)

 Intersection #3 Lakeville Hwy and SR 37

Cycle (sec): 100 Critical Vol./Cap. (X): 0.875
 Loss Time (sec): 12 (Y+R=0.0 sec) Average Delay (sec/veh): 30.7
 Optimal Cycle: 99 Level Of Service: C

Street Name:	Lakeville Hwy						SR 37											
Approach:	North Bound			South Bound			East Bound			West Bound								
Movement:	L	T	R	L	T	R	L	T	R	L	T	R						
Control:	Split Phase			Split Phase			Protected			Protected								
Rights:	Include			Include			Include			Include								
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0						
Lanes:	0	0	1	0	0	1	0	1	0	1	2	0	1	1	0	2	0	1

Volume Module:

Base Vol:	6	23	59	431	21	56	583	1784	29	1	1067	568
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:	6	23	59	431	21	56	583	1784	29	1	1067	568
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	6	23	59	431	21	56	583	1784	29	1	1067	568
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	6	24	62	454	22	59	614	1878	31	1	1123	598
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	6	24	62	454	22	59	614	1878	31	1	1123	598
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	6	24	62	454	22	59	614	1878	31	1	1123	598

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.89	0.89	0.89	0.92	0.92	0.92	0.90	0.93	0.93	0.93	0.93	0.83
Lanes:	0.07	0.26	0.67	1.81	0.08	1.11	2.00	1.97	0.03	1.00	2.00	1.00
Final Sat.:	115	442	1133	3189	140	1943	3432	3474	56	1769	3538	1583

Capacity Analysis Module:

Vol/Sat:	0.05	0.05	0.05	0.14	0.16	0.03	0.18	0.54	0.54	0.00	0.32	0.38
Crit Moves:			****		****		****					****
Green/Cycle:	0.06	0.06	0.06	0.18	0.18	0.18	0.20	0.64	0.64	0.00	0.43	0.43
Volume/Cap:	0.87	0.87	0.87	0.79	0.87	0.17	0.87	0.85	0.85	0.85	0.74	0.87
Uniform Del:	46.5	46.5	46.5	39.1	39.8	34.6	38.5	14.5	14.5	50.0	23.7	25.9
IncrcmntDel:	50.2	50.2	50.2	6.0	13.3	0.0	11.9	3.3	3.3	618.0	1.9	12.1
IntQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	96.7	96.7	96.7	45.1	53.2	34.6	50.4	17.8	17.8	668.0	25.5	38.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	96.7	96.7	96.7	45.1	53.2	34.6	50.4	17.8	17.8	668.0	25.5	38.1
LOS by Move:	F	F	F	D	D	C	D	B	B	F	C	D
HCM2kAvgQ:	5	5	5	9	11	1	13	27	27	0	16	20

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Lakeville Hwy and Project Site

Average Delay (sec/veh): 0.0 Worst Case Level Of Service: A[0.0]

Street Name: Lakeville Hwy Project Site

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: 1 0 2 0 0 0 0 2 0 1 1 0 0 0 1 0 0 0 0

Volume Module:
Base Vol: 0 1144 0 0 470 0 0 0 0 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
Initial Bse: 0 1144 0 0 470 0 0 0 0 0 0 0 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 1144 0 0 470 0 0 0 0 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
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 0 1204 0 0 495 0 0 0 0 0 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 0 1204 0 0 495 0 0 0 0 0 0 0 0

Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Capacity Module:
Cnflct Vol: xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
Move Cap.: xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
Volume/Cap: xxxx xxxx xxxx xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx

Level Of Service Module:
2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
LOS by Move: *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxxx xxxx xxxxx xxxxx
Shared LOS: *
ApproachDel: xxxxxx xxxxxx xxxxxx xxxxxx
ApproachLOS: * * * *

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #5 SR 116 and Lakeville Hwy

Average Delay (sec/veh): 2.3 Worst Case Level Of Service: D[27.8]

Table with columns for Street Name, Approach, Movement, Control, Rights, Lanes, and Volume Module. Rows include SR 116 and Lakeville Hwy with various movement and control details.

Table with columns for Volume Module. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Vol.

Table with columns for Critical Gap Module. Rows include Critical Gp, FollowUpTim, and Capacity Module.

Table with columns for Capacity Module. Rows include Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap.

Table with columns for Level Of Service Module. Rows include 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 SR 116 and SR 121

Cycle (sec): 100 Critical Vol./Cap. (X): 1.035
Loss Time (sec): 12 (Y+R=0.0 sec) Average Delay (sec/veh): 71.6
Optimal Cycle: 180 Level Of Service: E

Table with columns for Street Name (SR 116, SR 121), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InstQueueDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 SR 37 and SR 121

Cycle (sec): 100 Critical Vol./Cap. (X): 0.758
Loss Time (sec): 12 (Y+R=0.0 sec) Average Delay (sec/veh): 20.7
Optimal Cycle: 68 Level Of Service: C

Table with columns for Street Name (SR 121, SR 37), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Split Phase, Protected), Rights (Include, Ignore), and Lanes.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol. across various approaches.

Saturation Flow Module table showing Sat/Lane, Adjustment, Lanes, and Final Sat. for different movements.

Capacity Analysis Module table showing Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncrementDel, InitQueueDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #8 Walnut Ave and EB SR 37 On/Off Ramps

Average Delay (sec/veh): 176.9 Worst Case Level Of Service: F[502.9]

Street Name:	Walnut Ave						EB SR 37 Ramps					
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:	1	0	2	0	0	0	1	0	0	0	0	0

Volume Module:

Base Vol:	381	2906	0	0	0	9	0	0	1779	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:	381	2906	0	0	0	9	0	0	1779	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	381	2906	0	0	0	9	0	0	1779	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	401	3059	0	0	0	9	0	0	1873	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	401	3059	0	0	0	9	0	0	1873	0	0	0

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	9	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0	xxxx	xxxx	xxxxx
Potent Cap.:	1610	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	900	xxxx	xxxx	xxxxx
Move Cap.:	1610	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	900	xxxx	xxxx	xxxxx
Volume/Cap:	0.25	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	2.08	xxxx	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	1.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	66.1	xxxx	xxxx	xxxxx
Control Del:	8.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	502.9	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	*	*	*	*	*	F	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			502.9			xxxxxx		
ApproachLOS:	*			*			F			*		

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #9 Walnut Ave and WB SR 37

Average Delay (sec/veh): 0.0 Worst Case Level Of Service: A[9.0]

Table with columns for Street Name, Approach, Movement, Control, Rights, Lanes. Rows include Wilson Ave and WB SR 37 with various movement and control details.

Table with columns for Volume Module. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Vol.

Table with columns for Critical Gap Module. Rows include Critical Gp, FollowUpTim.

Table with columns for Capacity Module. Rows include Cnflct Vol, Potent Cap., Move Cap., Volume/Cap.

Table with columns for Level Of Service Module. Rows include 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., Shred Queue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #10 Wilson Ave and EB SR 37 On/Off Ramps

Average Delay (sec/veh): 430.6 Worst Case Level Of Service: F[753.9]

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes. Rows include Wilson Ave and EB SR 37 On/Off Ramps with details on North and South Bound movements.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Vol. across various movement categories.

Critical Gap Module table showing Critical Gap and FollowUpTim values for different movement types.

Capacity Module table showing Conflict Vol, Potent Cap., Move Cap., and Volume/Cap. for various movement types.

Level Of Service Module table showing 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #11 Wilson Ave and WB SR 37 Ramps

Cycle (sec): 100 Critical Vol./Cap. (X): 1.357
Loss Time (sec): 0 (Y+R=0.0 sec) Average Delay (sec/veh): 129.1
Optimal Cycle: 0 Level Of Service: F

Table with columns for Street Name (WB SR 37 Ramps, Wilson Ave), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Stop Sign), Rights (Include), Min. Green (0), and Lanes (1 0 0 0 1).

Volume Module: Table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol. across four approaches.

Saturation Flow Module: Table with columns for Adjustment, Lanes, and Final Sat. across four approaches.

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, and AllWayAvgQ across four approaches.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
 2000 HCM Operations Method (Future Volume Alternative)

 Intersection #12 SR 29 and Old SR 37

Cycle (sec): 100 Critical Vol./Cap. (X): 1.445
 Loss Time (sec): 12 (Y+R=0.0 sec) Average Delay (sec/veh): 157.0
 Optimal Cycle: 180 Level Of Service: F

Street Name: SR 29 Old SR 37

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	2	0	1	0	1	1	0	0	0	1

Volume Module:

Base Vol:	0	1515	151	200	1053	0	597	96	604	102	0	451
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	1515	151	200	1053	0	597	96	604	102	0	451
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	1515	151	200	1053	0	597	96	604	102	0	451
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	1595	159	211	1108	0	628	101	636	107	0	475
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1595	159	211	1108	0	628	101	636	107	0	475
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	1595	159	211	1108	0	628	101	636	107	0	475

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.93	0.83	0.93	0.93	1.00	0.94	0.94	0.83	0.90	1.00	0.83
Lanes:	0.00	2.00	1.00	1.00	2.00	0.00	1.72	0.28	1.00	2.00	0.00	1.00
Final Sat.:	0	3538	1583	1769	3538	0	3077	495	1583	3432	0	1583

Capacity Analysis Module:

Vol/Sat:	0.00	0.45	0.10	0.12	0.31	0.00	0.20	0.20	0.40	0.03	0.00	0.30
Crit Moves:	****			****			****			****		
Green/Cycle:	0.00	0.31	0.31	0.08	0.39	0.00	0.28	0.28	0.28	0.21	0.00	0.21
Volume/Cap:	0.00	1.44	0.32	1.44	0.79	0.00	0.73	0.73	1.44	0.15	0.00	1.44
Uniform Del:	0.0	34.4	26.3	45.9	26.7	0.0	32.8	32.8	36.1	32.4	0.0	39.6
IncrcmntDel:	0.0	205	0.4	234.4	3.2	0.0	2.9	2.9	212.7	0.1	0.0	216.6
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00
Delay/Veh:	0.0	240	26.7	280.3	29.9	0.0	35.6	35.6	248.8	32.5	0.0	256.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	240	26.7	280.3	29.9	0.0	35.6	35.6	248.8	32.5	0.0	256.2
LOS by Move:	A	F	C	F	C	A	D	D	F	C	A	F
HCM2kAvgQ:	0	59	4	16	18	0	12	12	45	1	0	34

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #13 SR 29 and WB SR 37 Off-Ramp

Cycle (sec): 100 Critical Vol./Cap. (X): 1.187
Loss Time (sec): 9 (Y+R=0.0 sec) Average Delay (sec/veh): 100.5
Optimal Cycle: 180 Level Of Service: F

Street Name: SR 29 WB SR 37 Off-Ramp
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Ignore Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 2 0 1 0 0 2 0 1 0 0 0 0 2

Volume Module:
Base Vol: 0 1707 104 0 1802 676 0 0 0 460 0 1499
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 1707 104 0 1802 676 0 0 0 460 0 1499
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 1707 104 0 1802 676 0 0 0 460 0 1499
User Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.00 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 0 1797 109 0 1897 0 0 0 0 484 0 1578
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 1797 109 0 1897 0 0 0 0 484 0 1578
PCE Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 0 1797 109 0 1897 0 0 0 0 484 0 1578

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 1.00 0.95 0.85 1.00 0.95 1.00 1.00 1.00 1.00 0.92 1.00 0.75
Lanes: 0.00 2.00 1.00 0.00 2.00 1.00 0.00 0.00 0.00 2.00 0.00 2.00
Final Sat.: 0 3610 1615 0 3610 1900 0 0 0 3502 0 2842

Capacity Analysis Module:
Vol/Sat: 0.00 0.50 0.07 0.00 0.53 0.00 0.00 0.00 0.00 0.14 0.00 0.56
Crit Moves: **** ****
Green/Cycle: 0.00 0.44 0.44 0.00 0.44 0.00 0.00 0.00 0.00 0.47 0.00 0.47
Volume/Cap: 0.00 1.12 0.15 0.00 1.19 0.00 0.00 0.00 0.00 0.30 0.00 1.19
Uniform Del: 0.0 27.9 16.7 0.0 27.9 0.0 0.0 0.0 0.0 16.5 0.0 26.6
IncrementDel: 0.0 65.0 0.1 0.0 91.0 0.0 0.0 0.0 0.0 0.1 0.0 92.2
InitQueueDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 0.00 1.00 1.00 0.00 1.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00
Delay/Veh: 0.0 92.8 16.8 0.0 119 0.0 0.0 0.0 0.0 16.6 0.0 118.8
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 92.8 16.8 0.0 119 0.0 0.0 0.0 0.0 16.6 0.0 118.8
LOS by Move: A F B A F A A A A B A F
HCM2kAvgQ: 0 46 2 0 52 0 0 0 0 5 0 48

**CUMULATIVE 2020 + ALTERNATIVE F
TRAFFIC CONDITIONS
(TRAFFIX)**

 Impact Analysis Report
 Level Of Service

Intersection		Base		Future		Change in
		Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C	
# 1 Atherton Ave and Harbor Dr/ EB	A	9.7	0.364	A 10.0	0.398	+ 0.034 V/C
# 2 Atherton Ave and Glen Ln/ WB S	C	16.1	0.000	C 16.8	0.000	+ 0.735 D/V
# 3 Lakeville Hwy and SR 37	C	30.7	0.875	F 183.6	1.786	+152.912 D/V
# 4 Lakeville Hwy and Project Site	A	0.0	0.000	F OVRFL	0.000	+ 2.7E+0307
# 5 SR 116 and Lakeville Hwy	D	27.8	0.000	F 225.8	0.000	+197.964 D/V
# 6 SR 116 and SR 121	E	73.5	1.035	E 72.7	1.035	-0.749 D/V
# 7 SR 37 and SR 121	C	20.7	0.758	C 28.6	0.945	+ 7.970 D/V
# 8 Walnut Ave and EB SR 37 On/Off	F	502.9	0.000	F 502.9	0.000	+ 0.000 D/V
# 9 Walnut Ave and WB SR 37	A	9.0	0.000	A 9.0	0.000	+ 0.000 D/V
# 10 Wilson Ave and EB SR 37 On/Off	F	753.9	0.000	F 934.3	0.000	+180.343 D/V
# 11 Wilson Ave and WB SR 37 Ramps	F	129.1	1.357	F 157.0	1.443	+ 0.087 V/C
# 12 SR 29 and Old SR 37	F	157.0	1.445	F 173.5	1.506	+16.562 D/V
# 13 SR 29 and WB SR 37 Off-Ramp	F	100.5	1.187	F 104.1	1.187	+ 3.581 D/V

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

 Intersection #1 Atherton Ave and Harbor Dr/ EB SR 37 Off-Ramp

Cycle (sec): 100 Critical Vol./Cap. (X): 0.398
 Loss Time (sec): 0 (Y+R=0.0 sec) Average Delay (sec/veh): 10.0
 Optimal Cycle: 0 Level Of Service: A

Street Name: Atherton Ave Harbor Dr/ EB SR 37 Off-Ramp
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Stop Sign Stop Sign
 Rights: Include Include Include Include
 Min. Green: 0 0 0 0 0 0 0 0 0 0 C 0
 Lanes: 0 0 0 1 0 0 1 0 0 0 1 0 0 0 1

Volume Module:
 Base Vol: 0 42 9 247 8 0 69 75 11 0 0 45
 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 42 9 247 8 0 69 75 11 0 0 45
 Added Vol: 0 0 12 12 11 0 0 0 0 0 0 0
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
 Initial Fut: 0 42 21 259 19 0 69 75 11 0 0 45
 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: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
 PHF Volume: 0 44 22 273 20 0 73 79 12 0 0 47
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 Reduced Vol: 0 44 22 273 20 0 73 79 12 0 0 47
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Final Vol.: 0 44 22 273 20 0 73 79 12 0 0 47

Saturation Flow Module:
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Lanes: 0.00 0.67 0.33 0.93 0.07 0.00 0.48 0.52 1.00 1.00 0.00 1.00
 Final Sat.: C 489 245 685 50 0 290 316 719 557 0 685

Capacity Analysis Module:
 Vol/Sat: xxxx 0.09 0.09 0.40 0.40 xxxx 0.25 0.25 0.02 0.00 xxxx 0.07
 Crst Moves: **** **** **** ****
 Delay/Veh: 0.0 8.1 8.1 10.8 10.8 0.0 10.1 10.1 7.5 0.0 0.0 7.9
 Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 AdjDel/Veh: 0.0 8.1 8.1 10.8 10.8 0.0 10.1 10.1 7.5 0.0 0.0 7.9
 LOS by Move: * A A B B * B B A * * A
 ApproachDel: 8.1 10.8 10.0 7.9
 Delay Adj: 1.00 1.00 1.00
 ApprAdjDel: 8.1 10.8 10.0 7.9
 LOS by Appr: A B A
 AllWayAvgQ: 0.1 0.1 0.1 0.6 0.6 0.6 0.3 0.3 0.0 0.0 0.0 0.1

 Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Atherton Ave and Glen Ln/ WB SR 37 Ramps

Average Delay (sec/veh): 5.3 Worst Case Level Of Service: C[16.8]

Street Name:	Glen Ln/ WB SR 37 Ramps						Atherton Ave										
Approach:	North Bound			South Bound			East Bound			West Bound							
Movement:	L	T	R	L	T	R	L	T	R	L	T	R					
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled							
Rights:	Include			Include			Include			Include							
Lanes:	0	0	1	0	0	0	0	0	1	0	0	1	1	0	0	1	0

Volume Module:

Base Vol:	137	0	7	0	2	1	2	248	36	59	95	2
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:	137	0	7	0	2	1	2	248	36	59	95	2
Added Vol:	11	0	11	0	0	0	0	12	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	148	0	18	0	2	1	2	260	36	59	95	2
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	156	0	19	0	2	1	2	274	38	62	100	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	156	0	19	0	2	1	2	274	38	62	100	2

Critical Gap Module:

Critical Gp:	7.1	xxxx	6.2	xxxxx	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	xxxx	3.3	xxxxx	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	505	xxxx	274	xxxx	541	101	102	xxxx	xxxxx	312	xxxx	xxxxx
Potent Cap.:	478	xxxx	765	xxxx	448	954	1490	xxxx	xxxxx	1249	xxxx	xxxxx
Move Cap.:	457	xxxx	765	xxxx	425	954	1490	xxxx	xxxxx	1249	xxxx	xxxxx
Volume/Cap:	0.34	xxxx	0.02	xxxx	0.00	0.00	0.00	xxxx	xxxx	0.05	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.2	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.4	xxxx	xxxxx	8.0	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	478	xxxxx	xxxx	xxxx	522	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	1.7	xxxxx	xxxxx	xxxx	0.0	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	16.8	xxxxx	xxxxx	xxxx	11.9	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	C	*	*	*	B	A	*	*	*	*	*
ApproachDel:	16.8			11.9			xxxxxxx			xxxxxxx		
ApproachLOS:	C			B			*			*		

 Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
 2000 HCM Operations Method (Future Volume Alternative)

 Intersection #3 Lakeville Hwy and SR 37

Cycle (sec): 100 Critical Vol./Cap. (X): 1.786
 Loss Time (sec): 12 (Y+R=0.0 sec) Average Delay (sec/veh): 183.6
 Optimal Cycle: 180 Level Of Service: F

Street Name:	Lakeville Hwy				SR 37					
Approach:	North Bound		South Bound		East Bound		West Bound			
Movement:	L	T	R	L	T	R	L	T	R	
Control:	Split Phase		Split Phase		Protected		Protected			
Rights:	Include		Include		Include		Include			
Min. Green:	0	0	0	0	0	0	0	0	0	
Lanes:	0	0	1	0	0	1	0	1	0	1

Volume Module:

Base Vol:	6	23	59	431	21	56	583	1784	29	1	1067	568
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:	6	23	59	431	21	56	583	1784	29	1	1067	568
Added Vol:	0	0	0	495	0	420	473	0	0	0	0	558
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	6	23	59	926	21	476	1056	1784	29	1	1067	1126
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	6	24	62	975	22	501	1112	1878	31	1	1123	1185
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	6	24	62	975	22	501	1112	1878	31	1	1123	1185
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	6	24	62	975	22	501	1112	1878	31	1	1123	1185

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.89	0.89	0.89	0.90	0.90	0.90	0.90	0.93	0.93	0.93	0.93	0.83
Lanes:	0.07	0.26	0.67	1.64	0.03	1.33	2.00	1.97	0.03	1.00	2.00	1.00
Final Sat.:	115	442	1133	2810	50	2277	3432	3474	56	1769	3538	1583

Capacity Analysis Module:

Vol/Sat:	0.05	0.05	0.05	0.35	0.44	0.22	0.32	0.54	0.54	0.00	0.32	0.75
Crit Moves:	****		****		****		****		****		****	
Green/Cycle:	0.03	0.03	0.03	0.25	0.25	0.25	0.18	0.60	0.60	0.00	0.42	0.42
Volume/Cap:	1.79	1.79	1.79	1.40	1.79	0.89	1.79	0.90	0.90	0.90	0.76	1.79
Uniform Del:	48.5	48.5	48.5	37.6	37.6	36.2	40.9	17.4	17.4	50.0	24.7	29.0
IncrcmntDel:	420.0	420	420.0	183.7	358	6.0	360.1	5.7	5.7	702.7	2.3	359.7
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	468.5	468	468.5	221.3	396	42.2	401.0	23.1	23.1	752.6	27.0	388.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	468.5	468	468.5	221.3	396	42.2	401.0	23.1	23.1	752.6	27.0	388.7
LOS by Move:	F	F	F	F	F	D	F	C	C	F	C	F
HCM2kAvgQ:	9	9	9	41	65	15	50	31	31	0	17	100

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Lakeville Hwy and Project Site

Average Delay (sec/veh): OVERFLOW Worst Case Level Of Service: F[xxxxx]

Street Name: Lakeville Hwy Project Site

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: 1 0 2 0 0 0 0 2 0 1 1 0 0 0 1 0 0 0 0 0

Volume Module:

Base Vol: 0 1144 0 0 470 0 0 0 0 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

Initial Bse: 0 1144 0 0 470 0 0 0 0 0 0 0 0

Added Vol: 1031 0 0 0 0 182 161 0 915 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 1031 1144 0 0 470 182 161 0 915 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

PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95

PHF Volume: 1085 1204 0 0 495 192 169 0 963 0 0 0 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0

Final Vol.: 1085 1204 0 0 495 192 169 0 963 0 0 0 0

Critical Gap Module:

Critical Gp: 4.1 xxxxx xxxxx xxxxx xxxxx xxxxx 6.8 xxxxx 6.9 xxxxx xxxxx xxxxx

FollowUpTim: 2.2 xxxxx xxxxx xxxxx xxxxx xxxxx 3.5 xxxxx 3.3 xxxxx xxxxx xxxxx

Capacity Module:

Conflict Vol: 686 xxxxx xxxxx xxxxx xxxxx xxxxx 3267 xxxxx 247 xxxxx xxxxx xxxxx

Potent Cap.: 903 xxxxx xxxxx xxxxx xxxxx xxxxx 7 xxxxx 753 xxxxx xxxxx xxxxx

Move Cap.: 903 xxxxx xxxxx xxxxx xxxxx xxxxx 0 xxxxx 753 xxxxx xxxxx xxxxx

Volume/Cap: 1.20 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 1.28 xxxxx xxxxx xxxxx

Level Of Service Module:

2Way95thQ: 34.5 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 36.3 xxxxx xxxxx xxxxx

Control Del:119.2 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 154.6 xxxxx xxxxx xxxxx

LOS by Move: F * * * * * * * * * * F * * * *

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

SharedQueue: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Shrd ConDel: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Shared LOS: *

ApproachDel: xxxxxx xxxxxx xxxxxx xxxxxx

ApproachLOS: * * * * * F * * * *

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #5 SR 116 and Lakeville Hwy

Average Delay (sec/veh): 17.1 Worst Case Level Of Service: F[225.8]

Table with columns for Street Name (SR 116, Lakeville Hwy), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Uncontrolled, Stop Sign), Rights (Include), and Lanes (0, 0, 2, 0, 1).

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Vol. Rows include various volume and adjustment factors.

Critical Gap Module table with columns for Critical Gp, FollowUpTim, and values like 4.1, 6.8, 6.9, 2.2, 3.5, 3.3.

Capacity Module table with columns for Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap. Values include 1368, 498, 498, 0.25, 1757, 76, 61, 1.46, 614, 435, 435, 0.16.

Level Of Service Module table with columns for 2Way95thQ, Control Del, LCS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS. Values include 1.0, 14.6, 7.8, 0.6, 389.6, 14.8, 225.8, F.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 SR 116 and SR 121

Cycle (sec): 100 Critical Vol./Cap. (X): 1.035
Loss Time (sec): 12 (Y+R=0.0 sec) Average Delay (sec/veh): 72.7
Optimal Cycle: 180 Level Of Service: E

Table with columns for Street Name (SR 116, SR 121), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Protected, Split Phase), Rights (Ignore, Include), and Min. Green values.

Table for Volume Module showing Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol. across various approaches.

Table for Saturation Flow Module showing Sat/Lane, Adjustment, Lanes, and Final Sat. values for different approaches.

Table for Capacity Analysis Module showing Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueueDel, Delay Adj, Delay/Veh, User DelAdj, Ad-Del/Veh, LOS by Move, and HCM2kAvgQ values.

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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)
*****
Intersection #7 SR 37 and SR 121
*****
Cycle (sec):          100          Critical Vol./Cap.(X):          0.945
Loss Time (sec):      12 (Y+R=0.0 sec) Average Delay (sec/veh):      28.6
Optimal Cycle:        135          Level Of Service:          C
*****
Street Name:          SR 121          SR 37
Approach:             North Bound      South Bound      East Bound      West Bound
Movement:             L - T - R      L - T - R      L - T - R      L - T - R
-----|-----|-----|-----|
Control:              Split Phase      Split Phase      Protected      Protected
Rights:               Include          Ignore          Include          Ignore
Min. Green:           0 0 0          0 0 0          0 0 0          0 0 0
Lanes:                0 1 0 0 0      1 1 0 0 1      2 0 1 1 0      1 0 2 0 1
-----|-----|-----|-----|
Volume Module:
Base Vol:             5 3 0          199 1 476      878 1400      3 1 1122 102
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:          5 3 0          199 1 476      878 1400      3 1 1122 102
Added Vol:            0 0 0          0 0 0          61 54 441      0 0 497 0
PasserByVol:         0 0 0          0 0 0          0 0 0          0 0 0 0
Initial Fut:          5 3 0          199 1 537      932 1841      3 1 1619 102
User Adj:             1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 0.00
PHF Adj:              0.95 0.95 0.95 0.95 0.95 0.00 0.95 0.95 0.95 0.95 0.95 0.00
PHF Volume:           5 3 0          209 1 0          981 1938      3 1 1704 0
Reduct Vol:          0 0 0          0 0 0          0 0 0          0 0 0 0
Reduced Vol:          5 3 0          209 1 0          981 1938      3 1 1704 0
PCE Adj:              1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 0.00
MLF Adj:              1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 0.00
Final Vol.:           5 3 0          209 1 0          981 1938      3 1 1704 0
-----|-----|-----|-----|
Saturation Flow Module:
Sat/Lane:             1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment:           0.95 0.95 1.00 0.93 0.93 1.00 0.90 0.93 0.93 0.93 0.93 1.00
Lanes:                0.63 0.37 0.00 1.99 0.01 1.00 2.00 1.99 0.01 1.00 2.00 1.00
Final Sat.:           1129 677 0 3531 18 1900 3432 3532 6 1769 3538 1900
-----|-----|-----|-----|
Capacity Analysis Module:
Vol/Sat:              0.00 0.00 0.00 0.06 0.06 0.00 0.29 0.55 0.55 0.00 0.48 0.00
Crnt Moves:          ****          ****          ****          ****
Green/Cycle:          0.00 0.00 0.00 0.06 0.06 0.00 0.30 0.81 0.81 0.00 0.51 0.00
Volume/Cap:           0.94 0.94 0.00 0.94 0.94 0.00 0.94 0.68 0.68 0.68 0.94 0.00
Uniform Del:          49.7 49.7 0.0 46.7 46.7 0.0 34.1 3.9 3.9 49.9 23.2 0.0
IncrementDel:         267.8 268 0.0 44.9 44.9 0.0 16.4 0.7 0.7 353.6 10.9 0.0
InntQueueDel:         0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj:            1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 0.00
Delay/Veh:            317.5 318 0.0 91.6 91.6 0.0 50.4 4.6 4.6 403.6 34.1 0.0
User DelAdj:          1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh:           317.5 318 0.0 91.6 91.6 0.0 50.4 4.6 4.6 403.6 34.1 0.0
LOS by Move:          F F A F F A D A A F C A
HCM2kAvgQ:            1 1 0 6 6 0 20 14 14 0 31 0
*****

```

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #8 Walnut Ave and EB SR 37 On/Off Ramps

Average Delay (sec/veh): 176.5 Worst Case Level Of Service: F[502.9]

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes. Rows include Walnut Ave and EB SR 37 Ramps.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Vol.

Critical Gap Module table with columns for Critical Gp and FollowUpTim.

Capacity Module table with columns for Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap.

Level Of Service Module table with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., Shared Queue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #9 Walnut Ave and WB SR 37

Average Delay (sec/veh): 0.0 Worst Case Level Of Service: A[9.0]

Street Name: Wilson Ave WB SR 37

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R). Rows include Control, Rights, and Lanes.

Volume Module: Table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Vol. Rows include various volume and adjustment factors.

Critical Gap Module: Table with columns for Critical Gp and FollowUpTim, containing placeholder text (xxxx).

Capacity Module: Table with columns for Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap, containing placeholder text (xxxx).

Level Of Service Module: Table with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS, containing placeholder text (xxxx).

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #10 Wilson Ave and EB SR 37 On/Off Ramps

Average Delay (sec/veh): 528.6 Worst Case Level Of Service: F[934.3]

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes. Rows include Wilson Ave and EB SR 37 On/Off Ramps with various movement and control details.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Vol. Rows include various volume and adjustment factors.

Critical Gap Module table with columns for Critical Gp and FollowUpTim. Rows include gap and follow-up time values.

Capacity Module table with columns for Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap. Rows include capacity and volume per capacity values.

Level Of Service Module table with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., Shared Queue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS. Rows include level of service and delay metrics.

Note: Queue reported is the number of cars per lane.

 Level Of Service Computation Report
 2000 HCM 4-Way Stop Method (Future Volume Alternative)

 Intersection #11 Wilson Ave and WB SR 37 Ramps

 Cycle (sec): 100 Critical Vol./Cap. (X): 1.443
 Loss Time (sec): 0 (Y+R=0.0 sec) Average Delay (sec/veh): 157.0
 Optimal Cycle: 0 Level Of Service: F

Street Name:	WB SR 37 Ramps						Wilson Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	0	0	0	0	0	1	1	0	0

Volume Module:

Base Vol:	145	0	169	0	0	0	0	539	348	66	53	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:	145	0	169	0	0	0	0	539	348	66	53	0
Added Vol:	0	0	0	0	0	0	0	0	61	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	145	0	169	0	0	0	0	539	409	66	53	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	153	0	178	0	0	0	0	567	431	69	56	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	153	0	178	0	0	0	0	567	431	69	56	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	153	0	178	0	0	0	0	567	431	69	56	0

Saturation Flow Module:

Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.57	0.43	1.00	1.00	0.00
Final Sat.:	508	0	610	0	0	0	0	393	298	521	562	0

Capacity Analysis Module:

Vol/Sat:	0.30	xxxx	0.29	xxxx	xxxx	xxxx	xxxx	1.44	1.44	0.13	0.10	xxxx
Crit Moves:	****							****		****		
Delay/Veh:	12.7	0.0	10.9	0.0	0.0	0.0	0.0	223	223.5	10.5	9.6	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	12.7	0.0	10.9	0.0	0.0	0.0	0.0	223	223.5	10.5	9.6	0.0
LOS by Move:	B	*	B	*	*	*	*	F	F	B	A	*
ApproachDel:		11.8		xxxxxx				223.5			10.1	
Delay Adj:		1.00		xxxxxx				1.00			1.00	
ApprAdjDel:		11.8		xxxxxx				223.5			10.1	
LOS by Appr:		B		*				F			B	
AllWayAvgQ:	0.4	0.0	0.4	0.0	0.0	0.0	41.3	41.3	41.3	0.1	0.1	0.0

 Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #12 SR 29 and Old SR 37

Cycle (sec): 100 Critical Vol./Cap. (X): 1.506
Loss Time (sec): 12 (Y+R=0.0 sec) Average Delay (sec/veh): 173.5
Optimal Cycle: 180 Level Of Service: F

Table with columns for Street Name (SR 29, Old SR 37), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueueDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2<AvgQ.

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #13 SR 29 and WB SR 37 Off-Ramp

Cycle (sec): 100 Critical Vol./Cap. (X): 1.187
Loss Time (sec): 9 (Y+R=0.0 sec) Average Delay (sec/veh): 104.1
Optimal Cycle: 180 Level Of Service: F

Table with columns for Street Name (SR 29, WB SR 37 Off-Ramp), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Protected), Rights (Include, Ignore), and Lanes.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, Added Vol, FasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol. for various movements.

Saturation Flow Module table showing Sat/Lane, Adjustment, Lanes, and Final Sat. for various movements.

Capacity Analysis Module table showing Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueueDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

SIGNAL WARRANT ANALYSIS

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME Alberton Avenue / Harbor Drive & SR-37 EB Of-Ramp

COUNT DATE Existing

MAJOR STREET SR-37 EB Of-Ramp

OF APPROACH LANES 2

MINOR STREET Alberton Avenue

OF APPROACH LANES 1

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N) N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N) N

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	150		900	75			
06 00 AM TO 07 00 AM										
07 00 AM TO 08 00 AM	187	72								
08 00 AM TO 09 00 AM										
09 00 AM TO 10 00 AM										
10 00 AM TO 11 00 AM										
11 00 AM TO 12 00 PM										
12 00 PM TO 01 00 PM										
01 00 PM TO 02 00 PM										
02 00 PM TO 03 00 PM										
03 00 PM TO 04 00 PM										
04 00 PM TO 05 00 PM										
05 00 PM TO 06 00 PM	306	155		Y			Y			
06 00 PM TO 07 00 PM										
07 00 PM TO 08 00 PM										
08 00 PM TO 09 00 PM										
09 00 PM TO 10 00 PM										
	493	227	0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions Based on 2000 MUTCD

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME Atherton Avenue / Glen Lane & SR-37 WB Ramps

COUNT DATE Existing

MAJOR STREET Atherton Avenue

OF APPROACH LANES 2

MINOR STREET SR 37 WB Off-Ramp

OF APPROACH LANES 1

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N) N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N) N

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	150		900	75			
06 00 AM	TO	07 00 AM								
07 00 AM	TO	08 00 AM								
08 00 AM	TO	09 00 AM	276	222	Y		Y			
09 00 AM	TO	10 00 AM								
10 00 AM	TO	11 00 AM								
11 00 AM	TO	12 00 PM								
12 00 PM	TO	01 00 PM								
01 00 PM	TO	02 00 PM								
02 00 PM	TO	03 00 PM								
03 00 PM	TO	04 00 PM								
04 00 PM	TO	05 00 PM								
05 00 PM	TO	06 00 PM	442	144			Y			
06 00 PM	TO	07 00 PM								
07 00 PM	TO	08 00 PM								
08 00 PM	TO	09 00 PM								
09 00 PM	TO	10 00 PM								
			718	366	0	0	0	0	0	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: Based on 2009 MUTCD

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME Lakeville Highway / Main Project Access

COUNT DATE Existing

MAJOR STREET Lakeville Highway

OF APPROACH LANES 1

MINOR STREET Main Project Access

OF APPROACH LANES 1

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N) N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N) Y

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			350	105		525	53			
06 00 AM TO 07 00 AM										
07 00 AM TO 08 00 AM	* 217	0	Y			Y				
08 00 AM TO 09 00 AM										
09 00 AM TO 10 00 AM										
10 00 AM TO 11 00 AM										
11 00 AM TO 12 00 PM										
12 00 PM TO 01 00 PM										
01 00 PM TO 02 00 PM										
02 00 PM TO 03 00 PM										
03 00 PM TO 04 00 PM										
04 00 PM TO 05 00 PM										
05 00 PM TO 06 00 PM	* 545	0	Y			Y				
06 00 PM TO 07 00 PM										
07 00 PM TO 08 00 PM										
08 00 PM TO 09 00 PM										
09 00 PM TO 10 00 PM										
	2,762	0	0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-2

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-4

Conditions Based on 2000 MUTCD

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME Lakeville Highway / SR-116

COUNT DATE Existing

MAJOR STREET Lakeville Highway

OF APPROACH LANES 2

MINOR STREET SR 116

OF APPROACH LANES 2

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N) N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N) Y

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			420	140		630	70			
06 00 AM TO 07 00 AM										
07 00 AM TO 08 00 AM	+ 29%	77	Y			Y	Y	Y		
08 00 AM TO 09 00 AM										
09 00 AM TO 10 00 AM										
10 00 AM TO 11 00 AM										
11 00 AM TO 12 00 PM										
12 00 PM TO 01 00 PM										
01 00 PM TO 02 00 PM										
02 00 PM TO 03 00 PM										
03 00 PM TO 04 00 PM										
04 00 PM TO 05 00 PM										
05 00 PM TO 06 00 PM	+ 62%	40	Y			Y				
06 00 PM TO 07 00 PM										
07 00 PM TO 08 00 PM										
08 00 PM TO 09 00 PM										
09 00 PM TO 10 00 PM										
	2,917	117	0			1			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-2

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-4

Conditions Based on 2009 MUTCD

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME SR-121 / SR-116

COUNT DATE Existing

MAJOR STREET SR 121

OF APPROACH LANES 2

MINOR STREET SR 116

OF APPROACH LANES 2

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N) N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N) Y

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			420	140		630	70			
06 00 AM TO 07 00 AM										
07 00 AM TO 08 00 AM	259	891	Y	Y	Y	Y	Y	Y	Y	
08 00 AM TO 09 00 AM										
09 00 AM TO 10 00 AM										
10 00 AM TO 11 00 AM										
11 00 AM TO 12 00 PM										
12 00 PM TO 01 00 PM										
01 00 PM TO 02 00 PM										
02 00 PM TO 03 00 PM										
03 00 PM TO 04 00 PM										
04 00 PM TO 05 00 PM										
05 00 PM TO 06 00 PM	510	843	Y	Y	Y	Y	Y	Y	Y	
06 00 PM TO 07 00 PM										
07 00 PM TO 08 00 PM										
08 00 PM TO 09 00 PM										
09 00 PM TO 10 00 PM										
	2,869	1,534	2			2			2	2
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-2

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-4

Conditions Based on 2003 MUTCD

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME Walnut Avenue / SR-37 EB Ramps

COUNT DATE Existing

MAJOR STREET SR-37 EB Ramps

OF APPROACH LANES 3

MINOR STREET Walnut Avenue

OF APPROACH LANES 3

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N) N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N) N

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	200		900	100			
06 00 AM TO 07 00 AM										
07 00 AM TO 08 00 AM	117	112					Y			
08 00 AM TO 09 00 AM										
09 00 AM TO 10 00 AM										
10 00 AM TO 11 00 AM										
11 00 AM TO 12 00 PM										
12 00 PM TO 01 00 PM										
01 00 PM TO 02 00 PM										
02 00 PM TO 03 00 PM										
03 00 PM TO 04 00 PM										
04 00 PM TO 05 00 PM										
05 00 PM TO 06 00 PM	255	57								
06 00 PM TO 07 00 PM										
07 00 PM TO 08 00 PM										
08 00 PM TO 09 00 PM										
09 00 PM TO 10 00 PM										
	382	169	0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions Based on 2003 MUTCD

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME Wilson Avenue / SR-37 EB Ramps

COUNT DATE Existing

MAJOR STREET Wilson Avenue

OF APPROACH LANES 2

MINOR STREET SR 37 EB Ramps

OF APPROACH LANES 1

Project Drivey

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N) N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N) N

	MAJOR ST BOTH APPROACH ES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	150		900	75			
06 00 AM	TO	07 00 AM								
07 00 AM	TO	08 00 AM	361	190			Y			
08 00 AM	TO	09 00 AM								
09 00 AM	TO	10 00 AM								
10 00 AM	TO	11 00 AM								
11 00 AM	TO	12 00 PM								
12 00 PM	TO	01 00 PM								
01 00 PM	TO	02 00 PM								
02 00 PM	TO	03 00 PM								
03 00 PM	TO	04 00 PM								
04 00 PM	TO	05 00 PM								
05 00 PM	TO	06 00 PM	607	213	Y	Y	Y	Y		
06 00 PM	TO	07 00 PM								
07 00 PM	TO	08 00 PM								
08 00 PM	TO	09 00 PM								
09 00 PM	TO	10 00 PM								
			1,068	403	1			0		
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C 3

Conditions Based on 2000 MUTCD

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME Wilson Avenue / SR-37 WB Off-Ramp

COUNT DATE Existing

MAJOR STREET SR-37 WB Off-Ramp

OF APPROACH LANES 2

MINOR STREET Wilson Avenue

OF APPROACH LANES 2

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N) N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N) N

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	200		900	100			
06 00 AM TO 07 00 AM										
07 00 AM TO 08 00 AM	281	142					Y			
08 00 AM TO 09 00 AM										
09 00 AM TO 10 00 AM										
10 00 AM TO 11 00 AM										
11 00 AM TO 12 00 PM										
12 00 PM TO 01 00 PM										
01 00 PM TO 02 00 PM										
02 00 PM TO 03 00 PM										
03 00 PM TO 04 00 PM										
04 00 PM TO 05 00 PM										
05 00 PM TO 06 00 PM	336	288		Y			Y			
06 00 PM TO 07 00 PM										
07 00 PM TO 08 00 PM										
08 00 PM TO 09 00 PM										
09 00 PM TO 10 00 PM										
	617	440	0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions Based on 2030 MUTC

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME Atherton Avenue / Harbor Drive & SR-37 Eb Off-Ramp

COUNT DATE 2008 No Action

MAJOR STREET SR-37 Eb Off-Ramp

OF APPROACH LANES 2

MINOR STREET Atherton Avenue

OF APPROACH LANES 1

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N) N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N) N

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	150		900	75			
06 00 AM TO 07 00 AM										
07 00 AM TO 08 00 AM										
08 00 AM TO 09 00 AM										
09 00 AM TO 10 00 AM										
10 00 AM TO 11 00 AM										
11 00 AM TO 12 00 PM										
12 00 PM TO 01 00 PM										
01 00 PM TO 02 00 PM										
02 00 PM TO 03 00 PM										
03 00 PM TO 04 00 PM										
04 00 PM TO 05 00 PM										
05 00 PM TO 06 00 PM	306	155		Y			Y			
06 00 PM TO 07 00 PM										
07 00 PM TO 08 00 PM										
08 00 PM TO 09 00 PM										
09 00 PM TO 10 00 PM										
	306	155	0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions Based on 2000 MUTCD

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME Atherton Avenue - Glen Lane & SR-37 WB Ramps

COUNT DATE 2008 No Action

MAJOR STREET Atherton Avenue

OF APPROACH LANES 2

MINOR STREET SR 37 WB Off Ramp

OF APPROACH LANES 1

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N) N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N) N

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	150		900	75			
06 00 AM TO 07 00 AM										
07 00 AM TO 08 00 AM										
08 00 AM TO 09 00 AM										
09 00 AM TO 10 00 AM										
10 00 AM TO 11 00 AM										
11 00 AM TO 12 00 PM										
12 00 PM TO 01 00 PM										
01 00 PM TO 02 00 PM										
02 00 PM TO 03 00 PM										
03 00 PM TO 04 00 PM										
04 00 PM TO 05 00 PM										
05 00 PM TO 06 00 PM	442	144					Y			
06 00 PM TO 07 00 PM										
07 00 PM TO 08 00 PM										
08 00 PM TO 09 00 PM										
09 00 PM TO 10 00 PM										
	442	144	0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions Based on 2010 MUTCD

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME Lakeville Highway / Main Project Access

COUNT DATE 2008 No Action

MAJOR STREET Lakeville Highway

OF APPROACH LANES 1

MINOR STREET Main Project Access

OF APPROACH LANES 1

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N) N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N) Y

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			350	105		525	53			
06 00 AM TO 07 00 AM										
07 00 AM TO 08 00 AM										
08 00 AM TO 09 00 AM										
09 00 AM TO 10 00 AM										
10 00 AM TO 11 00 AM										
11 00 AM TO 12 00 PM										
12 00 PM TO 01 00 PM										
01 00 PM TO 02 00 PM										
02 00 PM TO 03 00 PM										
03 00 PM TO 04 00 PM										
04 00 PM TO 05 00 PM										
05 00 PM TO 06 00 PM	1,553	0	Y			Y				
06 00 PM TO 07 00 PM										
07 00 PM TO 08 00 PM										
08 00 PM TO 09 00 PM										
09 00 PM TO 10 00 PM										
	1,553	0	0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-2

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-4

Conditions Based on 2010 MUTCD

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME Lakeville Highway / SR-116

COUNT DATE 2008 No. Action

MAJOR STREET Lakeville Highway

OF APPROACH LANES 2

MINOR STREET SR 116

OF APPROACH LANES 2

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N) N

35TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N) Y

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			420	140		630	70			
06 00 AM TO 07 00 AM										
07 00 AM TO 08 00 AM										
08 00 AM TO 09 00 AM										
09 00 AM TO 10 00 AM										
10 00 AM TO 11 00 AM										
11 00 AM TO 12 00 PM										
12 00 PM TO 01 00 PM										
01 00 PM TO 02 00 PM										
02 00 PM TO 03 00 PM										
03 00 PM TO 04 00 PM										
04 00 PM TO 05 00 PM										
05 00 PM TO 06 00 PM	1,633	45	Y			Y				
06 00 PM TO 07 00 PM										
07 00 PM TO 08 00 PM										
08 00 PM TO 09 00 PM										
09 00 PM TO 10 00 PM										
	1,633	45	0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-2

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-4

Conditions Based on 2009 MUTCD

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME SR-121 / SR-116

COUNT DATE 2008 Nov. Action

MAJOR STREET SR 121

OF APPROACH LANES 2

MINOR STREET SR 116

OF APPROACH LANES 2

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N) N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N) Y

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			420	140		630	70			
06 00 AM TO 07 00 AM										
07 00 AM TO 08 00 AM										
08 00 AM TO 09 00 AM										
09 00 AM TO 10 00 AM										
10 00 AM TO 11 00 AM										
11 00 AM TO 12 00 PM										
12 00 PM TO 01 00 PM										
01 00 PM TO 02 00 PM										
02 00 PM TO 03 00 PM										
03 00 PM TO 04 00 PM										
04 00 PM TO 05 00 PM										
05 00 PM TO 06 00 PM	1,634	843	Y	Y	Y	Y	Y	Y	Y	
06 00 PM TO 07 00 PM										
07 00 PM TO 08 00 PM										
08 00 PM TO 09 00 PM										
09 00 PM TO 10 00 PM										
	1,634	843	1			1			1	1
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-2

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-4

Conditions Based on 2003 MUTCD

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME Walnut Avenue / SR-27 EB Ramps

COUNT DATE 2/20/09 No. Action

MAJOR STREET SR-37 EB Ramps

OF APPROACH LANES 3

MINOR STREET Walnut Avenue

OF APPROACH LANES 3

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N) N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N) N

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	200		900	100			
06 00 AM TO 07 00 AM										
07 00 AM TO 08 00 AM										
08 00 AM TO 09 00 AM										
09 00 AM TO 10 00 AM										
10 00 AM TO 11 00 AM										
11 00 AM TO 12 00 PM										
12 00 PM TO 01 00 PM										
01 00 PM TO 02 00 PM										
02 00 PM TO 03 00 PM										
03 00 PM TO 04 00 PM										
04 00 PM TO 05 00 PM										
05 00 PM TO 06 00 PM	279	60								
06 00 PM TO 07 00 PM										
07 00 PM TO 08 00 PM										
08 00 PM TO 09 00 PM										
09 00 PM TO 10 00 PM										
	279	60	0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions Based on 2009 MUTCD

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME Mare Island / SR-37 WB Ramps

COUNT DATE 2008 No Action

MAJOR STREET Mare Island

OF APPROACH LANES 2

MINOR STREET SR 37 WB Ramps

OF APPROACH LANES 1

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N) N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N) N

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	150		900	75			
06 00 AM TO 07 00 AM										
07 00 AM TO 08 00 AM										
08 00 AM TO 09 00 AM										
09 00 AM TO 10 00 AM										
10 00 AM TO 11 00 AM										
11 00 AM TO 12 00 PM										
12 00 PM TO 01 00 PM										
01 00 PM TO 02 00 PM										
02 00 PM TO 03 00 PM										
03 00 PM TO 04 00 PM										
04 00 PM TO 05 00 PM										
05 00 PM TO 06 00 PM	141	0								
06 00 PM TO 07 00 PM										
07 00 PM TO 08 00 PM										
08 00 PM TO 09 00 PM										
09 00 PM TO 10 00 PM										
	141	0	0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions Based on 2008 MUTCD

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME Wilson Avenue / SR-37 EB Ramps

COUNT DATE 2008 No Action

MAJOR STREET Wilson Avenue

OF APPROACH LANES 2

MINOR STREET SR-37 EB Ramps

OF APPROACH LANES 1

Project Driveay

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N) N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N) N

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	150		900	75			
06 00 AM	TO	07 00 AM								
07 00 AM	TO	08 00 AM								
08 00 AM	TO	09 00 AM								
09 00 AM	TO	10 00 AM								
10 00 AM	TO	11 00 AM								
11 00 AM	TO	12 00 PM								
12 00 PM	TO	01 00 PM								
01 00 PM	TO	02 00 PM								
02 00 PM	TO	03 00 PM								
03 00 PM	TO	04 00 PM								
04 00 PM	TO	05 00 PM								
05 00 PM	TO	06 00 PM	638	224	Y	Y	Y	Y		
06 00 PM	TO	07 00 PM								
07 00 PM	TO	08 00 PM								
08 00 PM	TO	09 00 PM								
09 00 PM	TO	10 00 PM								
			638	224	1		0	0	0	
					8 HOURS NEEDED NOT SATISFIED		8 HOURS NEEDED NOT SATISFIED	4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED	

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions Based on 2003 MUTCD

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME Wilson Avenue / SR-37 WB Off-Ramp

COUNT DATE 2008 No Action

MAJOR STREET SR-37 WB Off-Ramp

OF APPROACH LANES 2

MINOR STREET Wilson Avenue

OF APPROACH LANES 2

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N) N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N) N

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	200		900	100			
06 00 AM TO 07 00 AM										
07 00 AM TO 08 00 AM										
08 00 AM TO 09 00 AM										
09 00 AM TO 10 00 AM										
10 00 AM TO 11 00 AM										
11 00 AM TO 12 00 PM										
12 00 PM TO 01 00 PM										
01 00 PM TO 02 00 PM										
02 00 PM TO 03 00 PM										
03 00 PM TO 04 00 PM										
04 00 PM TO 05 00 PM										
05 00 PM TO 06 00 PM	352	314		Y			Y			
06 00 PM TO 07 00 PM										
07 00 PM TO 08 00 PM										
08 00 PM TO 09 00 PM										
09 00 PM TO 10 00 PM										
	352	314	0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions Based on 2003 MUTCD

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME Atherton Avenue / Harbor Drive & SR-37 EB Off-Ramp

COUNT DATE 2008 - At -

MAJOR STREET SR-37 EB Off-Ramp

OF APPROACH LANES 2

MINOR STREET Atherton Avenue

OF APPROACH LANES 1

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N) N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N) N

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	150		900	75			
06 00 AM TO 07 00 AM										
07 00 AM TO 08 00 AM										
08 00 AM TO 09 00 AM										
09 00 AM TO 10 00 AM										
10 00 AM TO 11 00 AM										
11 00 AM TO 12 00 PM										
12 00 PM TO 01 00 PM										
01 00 PM TO 02 00 PM										
02 00 PM TO 03 00 PM										
03 00 PM TO 04 00 PM										
04 00 PM TO 05 00 PM										
05 00 PM TO 06 00 PM	341	155		Y			Y			
06 00 PM TO 07 00 PM										
07 00 PM TO 08 00 PM										
08 00 PM TO 09 00 PM										
09 00 PM TO 10 00 PM										
	341	155	0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: Based on 2003 MUTCD

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME Atherton Avenue / Glen Lane & SR-37 WB Ramps

COUNT DATE 2/08 / ALP

MAJOR STREET Atherton Avenue

OF APPROACH LANES 2

MINOR STREET SR-37 WB Off-Ramp

OF APPROACH LANES 1

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N) N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N) N

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	150		900	75			
06 00 AM TO 07 00 AM										
07 00 AM TO 08 00 AM										
08 00 AM TO 09 00 AM										
09 00 AM TO 10 00 AM										
10 00 AM TO 11 00 AM										
11 00 AM TO 12 00 PM										
12 00 PM TO 01 00 PM										
01 00 PM TO 02 00 PM										
02 00 PM TO 03 00 PM										
03 00 PM TO 04 00 PM										
04 00 PM TO 05 00 PM										
05 00 PM TO 06 00 PM	454	166		Y			Y			
06 00 PM TO 07 00 PM										
07 00 PM TO 08 00 PM										
08 00 PM TO 09 00 PM										
09 00 PM TO 10 00 PM										
	454	166	0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions Based on 2000 MUTCD

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME Lakeville Highway - Main Project Access

COUNT DATE 2008 - All

MAJOR STREET Lakeville Highway

OF APPROACH LANES 1

MINOR STREET Main Project Access

OF APPROACH LANES 1

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N) N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N) Y

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			350	105		525	53			
06 00 AM TO 07 00 AM										
07 00 AM TO 08 00 AM										
08 00 AM TO 09 00 AM										
09 00 AM TO 10 00 AM										
10 00 AM TO 11 00 AM										
11 00 AM TO 12 00 PM										
12 00 PM TO 01 00 PM										
01 00 PM TO 02 00 PM										
02 00 PM TO 03 00 PM										
03 00 PM TO 04 00 PM										
04 00 PM TO 05 00 PM										
05 00 PM TO 06 00 PM	2,766	1,076	Y	Y	Y	Y	Y	Y	Y	
06 00 PM TO 07 00 PM										
07 00 PM TO 08 00 PM										
08 00 PM TO 09 00 PM										
09 00 PM TO 10 00 PM										
	2,766	1,076	1			1			1	1
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-2

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-4

Conditions Based on 2003 MJTCD

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME Lakeville Highway SR-116

COUNT DATE 2/20/11

MAJOR STREET Lakeville Highway

OF APPROACH LANES 2

MINOR STREET SR 116

OF APPROACH LANES 2

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N) N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N) Y

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			420	140		630	70			
06 00 AM TO 07 00 AM										
07 00 AM TO 08 00 AM										
08 00 AM TO 09 00 AM										
09 00 AM TO 10 00 AM										
10 00 AM TO 11 00 AM										
11 00 AM TO 12 00 PM										
12 00 PM TO 01 00 PM										
01 00 PM TO 02 00 PM										
02 00 PM TO 03 00 PM										
03 00 PM TO 04 00 PM										
04 00 PM TO 05 00 PM										
05 00 PM TO 06 00 PM	1916	106	Y			Y	Y	Y	Y	
06 00 PM TO 07 00 PM										
07 00 PM TO 08 00 PM										
08 00 PM TO 09 00 PM										
09 00 PM TO 10 00 PM										
	1,916	106	0			1			1	1
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-2

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-4

Conditions Based on 2003 MUTCD

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME SR-121 / SR-116

COUNT DATE 2008 + A1 +

MAJOR STREET SR 121 # OF APPROACH LANES 2
 MINOR STREET SR 116 # OF APPROACH LANES 2

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N) N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N) Y

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			420	140		630	70			
06 00 AM TO 07 00 AM										
07 00 AM TO 08 00 AM										
08 00 AM TO 09 00 AM										
09 00 AM TO 10 00 AM										
10 00 AM TO 11 00 AM										
11 00 AM TO 12 00 PM										
12 00 PM TO 01 00 PM										
01 00 PM TO 02 00 PM										
02 00 PM TO 03 00 PM										
03 00 PM TO 04 00 PM										
04 00 PM TO 05 00 PM										
05 00 PM TO 06 00 PM	1,688	904	Y	Y	Y	Y	Y	Y	Y	
06 00 PM TO 07 00 PM										
07 00 PM TO 08 00 PM										
08 00 PM TO 09 00 PM										
09 00 PM TO 10 00 PM										
	1,688	904	1			1			1	1
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-2

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-4

Conditions Based on 2009 MUTCD

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME Warrick Avenue / SR-37 EB Ramps

COUNT DATE 2008 - A11

MAJOR STREET SR-37 EB Ramps

OF APPROACH LANES 3

MINOR STREET Warrick Avenue

OF APPROACH LANES 3

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N) N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N) N

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			800	200		900	100			
06 00 AM TO 07 00 AM										
07 00 AM TO 08 00 AM										
08 00 AM TO 09 00 AM										
09 00 AM TO 10 00 AM										
10 00 AM TO 11 00 AM										
11 00 AM TO 12 00 PM										
12 00 PM TO 01 00 PM										
01 00 PM TO 02 00 PM										
02 00 PM TO 03 00 PM										
03 00 PM TO 04 00 PM										
04 00 PM TO 05 00 PM										
05 00 PM TO 06 00 PM	291	60								
06 00 PM TO 07 00 PM										
07 00 PM TO 08 00 PM										
08 00 PM TO 09 00 PM										
09 00 PM TO 10 00 PM										
	291	60	0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions Based on 2003 MUTCD

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME Mare Island / SR-37 WB Ramps

COUNT DATE 2008 + 41 +

MAJOR STREET Mare Island # OF APPROACH LANES 2

MINOR STREET SR 37 WB Ramps # OF APPROACH LANES 1

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N) N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N) N

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	150		900	75			
06 00 AM TO 07 00 AM										
07 00 AM TO 08 00 AM										
08 00 AM TO 09 00 AM										
09 00 AM TO 10 00 AM										
10 00 AM TO 11 00 AM										
11 00 AM TO 12 00 PM										
12 00 PM TO 01 00 PM										
01 00 PM TO 02 00 PM										
02 00 PM TO 03 00 PM										
03 00 PM TO 04 00 PM										
04 00 PM TO 05 00 PM										
05 00 PM TO 06 00 PM	153	0								
06 00 PM TO 07 00 PM										
07 00 PM TO 08 00 PM										
08 00 PM TO 09 00 PM										
09 00 PM TO 10 00 PM										
	153	0	0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions Based on 2009 MUTCD

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME Wilson Avenue / SR-37 EB Ramps

COUNT DATE 2009 + A1 +

MAJOR STREET Wilson Avenue

OF APPROACH LANES 2

MINOR STREET SR 37 EB Ramps

OF APPROACH LANES 1

Project Drivey

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N) N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N) N

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	150		900	75			
06 00 AM TO 07 00 AM										
07 00 AM TO 08 00 AM										
08 00 AM TO 09 00 AM										
09 00 AM TO 10 00 AM										
10 00 AM TO 11 00 AM										
11 00 AM TO 12 00 PM										
12 00 PM TO 01 00 PM										
01 00 PM TO 02 00 PM										
02 00 PM TO 03 00 PM										
03 00 PM TO 04 00 PM										
04 00 PM TO 05 00 PM										
05 00 PM TO 06 00 PM	699	278	Y	Y	Y		Y			
06 00 PM TO 07 00 PM										
07 00 PM TO 08 00 PM										
08 00 PM TO 09 00 PM										
09 00 PM TO 10 00 PM										
	699	278	1			0			1	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A - Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B - Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions Based on 2009 MUTCD

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME Wilson Avenue / SR-37 WB Off-Ramp

COUNT DATE 2008 + AI +

MAJOR STREET SR-37 WB Off-Ramp

OF APPROACH LANES 2

MINOR STREET Wilson Avenue

OF APPROACH LANES 2

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N) N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N) N

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	200		900	100			
06 00 AM TO 07 00 AM										
07 00 AM TO 08 00 AM										
08 00 AM TO 09 00 AM										
09 00 AM TO 10 00 AM										
10 00 AM TO 11 00 AM										
11 00 AM TO 12 00 PM										
12 00 PM TO 01 00 PM										
01 00 PM TO 02 00 PM										
02 00 PM TO 03 00 PM										
03 00 PM TO 04 00 PM										
04 00 PM TO 05 00 PM										
05 00 PM TO 06 00 PM	413	314		Y			Y			
06 00 PM TO 07 00 PM										
07 00 PM TO 08 00 PM										
08 00 PM TO 09 00 PM										
09 00 PM TO 10 00 PM										
	413	314	0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions Based on 2011 MJC'D

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME Alherton Avenue / Harbor Drive & SR-37 EB Off-Ramp

COUNT DATE 2020 No Action

MAJOR STREET SR-37 EB Off-Ramp

OF APPROACH LANES 2

MINOR STREET Alherton Avenue

OF APPROACH LANES 1

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N) N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N) N

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	150		900	75			
06 00 AM TO 07 00 AM										
07 00 AM TO 08 00 AM										
08 00 AM TO 09 00 AM										
09 00 AM TO 10 00 AM										
10 00 AM TO 11 00 AM										
11 00 AM TO 12 00 PM										
12 00 PM TO 01 00 PM										
01 00 PM TO 02 00 PM										
02 00 PM TO 03 00 PM										
03 00 PM TO 04 00 PM										
04 00 PM TO 05 00 PM										
05 00 PM TO 06 00 PM	305	155		Y			Y			
06 00 PM TO 07 00 PM										
07 00 PM TO 08 00 PM										
08 00 PM TO 09 00 PM										
09 00 PM TO 10 00 PM										
	306	155			0		0	0	0	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions Based on 2010 MUTCD

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME Alherton Avenue / Glen Lane & SR-37 WB Ramps

COUNT DATE 2020 No Action

MAJOR STREET Alherton Avenue

OF APPROACH LANES 2

MINOR STREET SR 37 WB Off Ramp

OF APPROACH LANES 1

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N) N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N) N

	MAJOR ST BOTH APPROAC HES	MINOR ST HIGHEST APPROAC H	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	150		900	75			
06 00 AM TO 07 00 AM										
07 00 AM TO 08 00 AM										
08 00 AM TO 09 00 AM										
09 00 AM TO 10 00 AM										
10 00 AM TO 11 00 AM										
11 00 AM TO 12 00 PM										
12 00 PM TO 01 00 PM										
01 00 PM TO 02 00 PM										
02 00 PM TO 03 00 PM										
03 00 PM TO 04 00 PM										
04 00 PM TO 05 00 PM										
05 00 PM TO 06 00 PM	442	144					Y			
06 00 PM TO 07 00 PM										
07 00 PM TO 08 00 PM										
08 00 PM TO 09 00 PM										
09 00 PM TO 10 00 PM										
	442	144	0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions Based on 2003 MUTCD

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME Lakeville Highway / Main Project Access

COUNT DATE 2020 No. Action

MAJOR STREET Lakeville Highway

OF APPROACH LANES 3

MINOR STREET Main Project Access

OF APPROACH LANES 2

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N) N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N) Y

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			420	140		630	70			
06 00 AM TO 07 00 AM										
07 00 AM TO 08 00 AM										
08 00 AM TO 09 00 AM										
09 00 AM TO 10 00 AM										
10 00 AM TO 11 00 AM										
11 00 AM TO 12 00 PM										
12 00 PM TO 01 00 PM										
01 00 PM TO 02 00 PM										
02 00 PM TO 03 00 PM										
03 00 PM TO 04 00 PM										
04 00 PM TO 05 00 PM										
05 00 PM TO 06 00 PM	1,614	0	Y			Y				
06 00 PM TO 07 00 PM										
07 00 PM TO 08 00 PM										
08 00 PM TO 09 00 PM										
09 00 PM TO 10 00 PM										
	1,614	0			0		0	0	0	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-2

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-4

Conditions: Based on 2009 MUTCD

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME Lakeville Highway / SR-116

COUNT DATE 2020 No Action

MAJOR STREET Lakeville Highway

OF APPROACH LANES 3

MINOR STREET SR 116

OF APPROACH LANES 2

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N) N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N) Y

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			420	140		630	70			
06 00 AM TO 07 00 AM										
07 00 AM TO 08 00 AM										
08 00 AM TO 09 00 AM										
09 00 AM TO 10 00 AM										
10 00 AM TO 11 00 AM										
11 00 AM TO 12 00 PM										
12 00 PM TO 01 00 PM										
01 00 PM TO 02 00 PM										
02 00 PM TO 03 00 PM										
03 00 PM TO 04 00 PM										
04 00 PM TO 05 00 PM										
05 00 PM TO 06 00 PM	1,666	90	Y			Y	Y	Y		
06 00 PM TO 07 00 PM										
07 00 PM TO 08 00 PM										
08 00 PM TO 09 00 PM										
09 00 PM TO 10 00 PM										
	1,666	90	0			1			1	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-2

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-4

Conditions Based on 2009 MUTCD

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME Walnut Avenue / SR-37 EB Ramps

COUNT DATE 2020 No Action

MAJOR STREET SR-37 EB Ramps

OF APPROACH LANES 3

MINOR STREET Walnut Avenue

OF APPROACH LANES 3

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N) N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N) N

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	200		900	100			
06 00 AM TO 07 00 AM										
07 00 AM TO 08 00 AM										
08 00 AM TO 09 00 AM										
09 00 AM TO 10 00 AM										
10 00 AM TO 11 00 AM										
11 00 AM TO 12 00 PM										
12 00 PM TO 01 00 PM										
01 00 PM TO 02 00 PM										
02 00 PM TO 03 00 PM										
03 00 PM TO 04 00 PM										
04 00 PM TO 05 00 PM										
05 00 PM TO 06 00 PM	3,287	1,779	Y	Y	Y	Y	Y	Y	Y	
06 00 PM TO 07 00 PM										
07 00 PM TO 08 00 PM										
08 00 PM TO 09 00 PM										
09 00 PM TO 10 00 PM										
	3,287	1,779	1			1			1	1
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED SATISFIED

WARRANT 1 - Condition A - Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions Based on 2000 MUTCD

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: Mare Island / SR-37 WB Ramps

COUNT DATE: 2020 No Action

MAJOR STREET: Mare Island

OF APPROACH LANES: 2

MINOR STREET: SR-37 WB Ramps

OF APPROACH LANES: 1

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): N

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	150		900	75			
06 00 AM TO 07 00 AM										
07 00 AM TO 08 00 AM										
08 00 AM TO 09 00 AM										
09 00 AM TO 10 00 AM										
10 00 AM TO 11 00 AM										
11 00 AM TO 12 00 PM										
12 00 PM TO 01 00 PM										
01 00 PM TO 02 00 PM										
02 00 PM TO 03 00 PM										
03 00 PM TO 04 00 PM										
04 00 PM TO 05 00 PM										
05 00 PM TO 06 00 PM	2,161	0	Y			Y				
06 00 PM TO 07 00 PM										
07 00 PM TO 08 00 PM										
08 00 PM TO 09 00 PM										
09 00 PM TO 10 00 PM										
	2,161	0	0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions: Based on 2003 MUTCD

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME Wilson Avenue / SR-37 EB Ramps

COUNT DATE 2/20/20

MAJOR STREET Wilson Avenue # OF APPROACH LANES 2

MINOR STREET SR 37 EB Ramps # OF APPROACH LANES 1

Project Driveway

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N) N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N) N

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	150		900	75			
06 00 AM TO 07 00 AM										
07 00 AM TO 08 00 AM										
08 00 AM TO 09 00 AM										
09 00 AM TO 10 00 AM										
10 00 AM TO 11 00 AM										
11 00 AM TO 12 00 PM										
12 00 PM TO 01 00 PM										
01 00 PM TO 02 00 PM										
02 00 PM TO 03 00 PM										
03 00 PM TO 04 00 PM										
04 00 PM TO 05 00 PM										
05 00 PM TO 06 00 PM	1188	651	Y	Y	Y	Y	Y	Y	Y	
06 00 PM TO 07 00 PM										
07 00 PM TO 08 00 PM										
08 00 PM TO 09 00 PM										
09 00 PM TO 10 00 PM										
	1,188	651	1			1			1	1
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions Based on 2000 MUTCD

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME Wilson Avenue / SR-37 WB Off-Ramp

COUNT DATE 2020 No Action

MAJOR STREET SR-37 WB Off-Ramp

OF APPROACH LANES 2

MINOR STREET Wilson Avenue

OF APPROACH LANES 2

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N) N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N) N

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	200		900	100			
06 00 AM TO 07 00 AM										
07 00 AM TO 08 00 AM										
08 00 AM TO 09 00 AM										
09 00 AM TO 10 00 AM										
10 00 AM TO 11 00 AM										
11 00 AM TO 12 00 PM										
12 00 PM TO 01 00 PM										
01 00 PM TO 02 00 PM										
02 00 PM TO 03 00 PM										
03 00 PM TO 04 00 PM										
04 00 PM TO 05 00 PM										
05 00 PM TO 06 00 PM	1,006	314	Y	Y	Y	Y	Y	Y		
06 00 PM TO 07 00 PM										
07 00 PM TO 08 00 PM										
08 00 PM TO 09 00 PM										
09 00 PM TO 10 00 PM										
	1,006	314	1			1			1	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions Based on 2000 MUTCD

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME Atherton Avenue / Harbor Drive & SR-37 EB Off-Ramp

COUNT DATE 2020 + A1 +

MAJOR STREET SR-37 EB Off-Ramp

OF APPROACH LANES 2

MINOR STREET Atherton Avenue

OF APPROACH LANES 1

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N) N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N) N

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	150		900	75			
06 00 AM TO 07 00 AM										
07 00 AM TO 08 00 AM										
08 00 AM TO 09 00 AM										
09 00 AM TO 10 00 AM										
10 00 AM TO 11 00 AM										
11 00 AM TO 12 00 PM										
12 00 PM TO 01 00 PM										
01 00 PM TO 02 00 PM										
02 00 PM TO 03 00 PM										
03 00 PM TO 04 00 PM										
04 00 PM TO 05 00 PM										
05 00 PM TO 06 00 PM	341	155		Y			Y			
06 00 PM TO 07 00 PM										
07 00 PM TO 08 00 PM										
08 00 PM TO 09 00 PM										
09 00 PM TO 10 00 PM										
	341	155			0		0	0	0	
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions Based on 2000 MUTCD

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME Atherton Avenue / Glen Lane & SR-37 WB Ramps

COUNT DATE 2020 + A1 1

MAJOR STREET Atherton Avenue # OF APPROACH LANES 2

MINOR STREET SR 37 WB Off Ramp # OF APPROACH LANES 1

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N) N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N) N

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	150		900	75			
06 00 AM TO 07 00 AM										
07 00 AM TO 08 00 AM										
08 00 AM TO 09 00 AM										
09 00 AM TO 10 00 AM										
10 00 AM TO 11 00 AM										
11 00 AM TO 12 00 PM										
12 00 PM TO 01 00 PM										
01 00 PM TO 02 00 PM										
02 00 PM TO 03 00 PM										
03 00 PM TO 04 00 PM										
04 00 PM TO 05 00 PM										
05 00 PM TO 06 00 PM	454	166		Y			Y			
06 00 PM TO 07 00 PM										
07 00 PM TO 08 00 PM										
08 00 PM TO 09 00 PM										
09 00 PM TO 10 00 PM										
	454	166	0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions Based on 2000 MUTCD

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME Lakeville Highway Main Project Access

COUNT DATE 2020 + A F

MAJOR STREET Lakeville Highway

OF APPROACH LANES 3

MINOR STREET Main Project Access

OF APPROACH LANES 2

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N) N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N) Y

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			420	140		630	70			
06 00 AM TO 07 00 AM										
07 00 AM TO 08 00 AM										
08 00 AM TO 09 00 AM										
09 00 AM TO 10 00 AM										
10 00 AM TO 11 00 AM										
11 00 AM TO 12 00 PM										
12 00 PM TO 01 00 PM										
01 00 PM TO 02 00 PM										
02 00 PM TO 03 00 PM										
03 00 PM TO 04 00 PM										
04 00 PM TO 05 00 PM										
05 00 PM TO 06 00 PM	2,827	1,076	Y	Y	Y	Y	Y	Y	Y	
06 00 PM TO 07 00 PM										
07 00 PM TO 08 00 PM										
08 00 PM TO 09 00 PM										
09 00 PM TO 10 00 PM										
	2,827	1,076	1			1			1	1
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-2

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-4

Conditions Based on 2011 MUTCD

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME Lakeville Highway / SR-116

COUNT DATE 2020 + A.I.P.

MAJOR STREET Lakeville Highway

OF APPROACH LANES 3

MINOR STREET SR 116

OF APPROACH LANES 2

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N) N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N) Y

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			420	140		630	70			
06 00 AM TO 07 00 AM										
07 00 AM TO 08 00 AM										
08 00 AM TO 09 00 AM										
09 00 AM TO 10 00 AM										
10 00 AM TO 11 00 AM										
11 00 AM TO 12 00 PM										
12 00 PM TO 01 00 PM										
01 00 PM TO 02 00 PM										
02 00 PM TO 03 00 PM										
03 00 PM TO 04 00 PM										
04 00 PM TO 05 00 PM										
05 00 PM TO 06 00 PM	1,949	151	Y	Y	Y	Y	Y	Y	Y	
06 00 PM TO 07 00 PM										
07 00 PM TO 08 00 PM										
08 00 PM TO 09 00 PM										
09 00 PM TO 10 00 PM										
	1,949	151	1			1			1	1
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-2

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-4

Conditions Based on 2020 MUTCD

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME Walnut Avenue / SR-37 EB Ramps

COUNT DATE 2020 - All

MAJOR STREET SR-37 EB Ramps

OF APPROACH LANES 3

MINOR STREET Walnut Avenue

OF APPROACH LANES 3

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N) N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N) N

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	200		900	100			
06 00 AM TO 07 00 AM										
07 00 AM TO 08 00 AM										
08 00 AM TO 09 00 AM										
09 00 AM TO 10 00 AM										
10 00 AM TO 11 00 AM										
11 00 AM TO 12 00 PM										
12 00 PM TO 01 00 PM										
01 00 PM TO 02 00 PM										
02 00 PM TO 03 00 PM										
03 00 PM TO 04 00 PM										
04 00 PM TO 05 00 PM										
05 00 PM TO 06 00 PM	3,299	1,779	Y	Y	Y	Y	Y	Y	Y	
06 00 PM TO 07 00 PM										
07 00 PM TO 08 00 PM										
08 00 PM TO 09 00 PM										
09 00 PM TO 10 00 PM										
	3,299	1,779	1			1			1	1
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions Based on 2003 MUTCD

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME Mare Island / SR-37 WB Ramps

COUNT DATE 2020 + AL +

MAJOR STREET Mare Island

OF APPROACH LANES 2

MINOR STREET SR 37 WB Ramps

OF APPROACH LANES 1

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N) N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N) N

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	150		900	75			
06 00 AM TO 07 00 AM										
07 00 AM TO 08 00 AM										
08 00 AM TO 09 00 AM										
09 00 AM TO 10 00 AM										
10 00 AM TO 11 00 AM										
11 00 AM TO 12 00 PM										
12 00 PM TO 01 00 PM										
01 00 PM TO 02 00 PM										
02 00 PM TO 03 00 PM										
03 00 PM TO 04 00 PM										
04 00 PM TO 05 00 PM										
05 00 PM TO 06 00 PM	2,173	0	Y			Y				
06 00 PM TO 07 00 PM										
07 00 PM TO 08 00 PM										
08 00 PM TO 09 00 PM										
09 00 PM TO 10 00 PM										
	2,173	0	0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions Based on 2000 MUTCD

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME Wilson Avenue / SR-37 EB Ramps

COUNT DATE 2020 + A1 +

MAJOR STREET Wilson Avenue

OF APPROACH LANES 2

MINOR STREET SR-37 EB Ramps

OF APPROACH LANES 1

Project Driveway

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N) N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N) N

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	150		900	75			
06 00 AM TO 07 00 AM										
07 00 AM TO 08 00 AM										
08 00 AM TO 09 00 AM										
09 00 AM TO 10 00 AM										
10 00 AM TO 11 00 AM										
11 00 AM TO 12 00 PM										
12 00 PM TO 01 00 PM										
01 00 PM TO 02 00 PM										
02 00 PM TO 03 00 PM										
03 00 PM TO 04 00 PM										
04 00 PM TO 05 00 PM										
05 00 PM TO 06 00 PM	* 242	712	Y	Y	Y	Y	Y	Y	Y	
06 00 PM TO 07 00 PM										
07 00 PM TO 08 00 PM										
08 00 PM TO 09 00 PM										
09 00 PM TO 10 00 PM										
	1,242	712	1			1			1	1
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions Based on 2000 MUTCD

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME Wilson Avenue / SR-37 WB Off-Ramp

COUNT DATE 2020 + A1 F

MAJOR STREET SR-37 WB Off-Ramp

OF APPROACH LANES 2

MINOR STREET Wilson Avenue

OF APPROACH LANES 2

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N) N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N) N

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	200		900	100			
06 00 AM TO 07 00 AM										
07 00 AM TO 08 00 AM										
08 00 AM TO 09 00 AM										
09 00 AM TO 10 00 AM										
10 00 AM TO 11 00 AM										
11 00 AM TO 12 00 PM										
12 00 PM TO 01 00 PM										
01 00 PM TO 02 00 PM										
02 00 PM TO 03 00 PM										
03 00 PM TO 04 00 PM										
04 00 PM TO 05 00 PM										
05 00 PM TO 06 00 PM	* 057	314	Y	Y	Y	Y	Y	Y		
06 00 PM TO 07 00 PM										
07 00 PM TO 08 00 PM										
08 00 PM TO 09 00 PM										
09 00 PM TO 10 00 PM										
	1,067	314	1			1			1	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

Conditions Based on 2010 MUTCD